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VARIETAL IMPROVEMENT

All India Coordinated Rice Improvement Project

ICAR – Indian Institute of Rice Research
Rajendranagar, Hyderabad-500030, T.S., India

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PREFACE

ICAR-Indian Institute of Rice Research (IIRR), a premier institute for rice research in the country, through All India Coordinated Rice Improvement Project (AICRIP) coordinates the multi-disciplinary and multi-location testing of varietal improvement, crop protection and crop management technologies across diverse ecosystems for increasing and stabilizing rice production in India. IIRR is the nodal agency for facilitating collective planning, supply and exchange of experimental material and for monitoring the trials, data collection, compilation, analysis and documentation. More than 300 scientists at 42 funded cooperating research centres and about 84 voluntary centres affiliated to various State Agricultural Universities, State Departments of Agriculture, ICAR Institutions and private sector organizations carry out the planned activities of Breeding, Entomology, Pathology, Agronomy, Soil Science and Plant Physiology disciplines.

The results of 42 breeding and 3 hybrid trials were organized at various locations in all rice growing ecosystems of the country during *Kharif,* 2015 are presented in this volume. Development of suitable varieties/hybrids for most of the diverse rice ecologies in which rice crop is grown, combining biotic stress tolerance and desirable quality, is a daunting task before the rice breeders which is pursued with utmost perseverance. Concerted efforts are being made to usher in green revolution to eastern India where fragile ecosystems like rainfed uplands, lowlands, semi deep and deep water ecologies are more prevalent by testing and validating suitable varietal technologies. Varieties for various soil stresses and cold tolerant for high altitude hill regions under upland and irrigated conditions is being addressed. Intensive efforts are being made through conventional, hybrid and molecular breeding approaches to break the hither to stagnated yield levels in the irrigated ecology which contributes to more than 60% of total rice production. Not only efforts are directed towards developing rice hybrids with high magnitude of heterosis of various duration groups, but also medium slender grain hybrids to satisfy the discerning south Indian farmers and consumers. Emphasis is on to develop export quality basmati and indigenous short grain aromatic varieties to satisfy the quality preference of the export and domestic markets. Also Near Isogenic Lines (NILs) developed for blast, submergence, drought and bacterial blight resistant genes QTLs are in advance stage of testing. While emphasis on boro rice improvement continues, trials to identify suitable materials for newly emerging limited water situation such as aerobic is also being addressed. NILs developed by the introgressing yield QTLs under drought (q*DTY*) along with submergence QTLs (Sub-1) were evaluated for the first time in a separate trial. In addition, the strong partnership with IRRI, Philippines continues to provide access to global elite rice germplasm with the exchange of breeding lines through the conduct of The International Network for Genetic Evaluation of Rice (INGER) at various centres in India. Due to change in climate delayed monsoon has been a regular phenomenon therefore, an attempt was made to identify suitable varieties for late sown conditions.

I greatly appreciate the efforts of the principal investigator, scientists, technical, administrative, project and field staff in the Crop Improvement Section of this Institute and all the cooperating scientists from both funded & voluntary centres for bringing out this volume.

(V. Ravindra Babu)
Director

Contents of Progress Report

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SUMMARY

Under All India Coordinated Rice Improvement Project (AICRIP), Indian Institute of Rice Research (IIRR) organizes multi-disciplinary and multi location testing of elite lines and improved management practices for all the rice growing ecosystems to enhance the rice production and productivity based on the guidelines for Crop Variety Testing. During the year 2015 which is the 51th year of AICRIP testing, 41 varietal trials, 1 screening nursery and 3 hybrid rice trials were conducted as 648 experiments at 110 locations (42 funded, 84 voluntary centres) in 27 states and 2 union Territories in all the 7 zones of the country. Hybrid rice experiments were conducted by 10 private seed companies. The 42 trials were constituted with 1226 entries including 141 checks and 104 experimental hybrids. The receipt of data has been 93.43% for funded, 68.93% for voluntary with the overall being 81% in case of varietal trials, while for hybrid trials 96.7% and 92.3% data was received from funded and voluntary centres respectively. In addition, 14 INGER nurseries involving 666 entries were tested at 58 centres. The three tier AICRIP testing programme is organized as Initial Variety Trial, Advance Variety Trial-1 and Advance Variety Trial-2 in order to identify the best elite lines with consistent high yield potential for various durations to fit into the prevailing rice based cropping systems for various regions and rice growing ecologies. For the vast unfavourable lowland regions of eastern and north- eastern India long duration, submergence/drought tolerances are the pre-requisites for identifying suitable elite lines. For irrigated ecology, surmounting the yield barrier is a challenging and blending quality with biotic stress tolerance in various duration groups are the major objectives intensely pursued through conventional and heterosis breeding procedures. The Marker Assisted Selection (MAS) derived products are being validated for the triats introgressed such as drought, Submergence, BLB and blast through near isogenic lines trials. For the improvement of Basmati and other indigenous short grain aromatic rices quality is of prime importance along with high yield potential. Soil stress tolerant trials aim at identifying stress tolerant cultures for a range of complex problem soils such as salinity, alkalinity and coastal salinity. Since water is becoming a major limitation in the present situation for rice cultivation and more so in the years to come, new trials have been initiated to identify suitable genotypes for aerobic rice cultivation. Under the aegis of INGER global testing facilitated access of wide range Germplasm and testing of breeding lines with IRRI, Philippines is undertaken which is more than three decades old partnership.

LIST OF COORDINATED TRIALS, KHARIF 2016

Ecosystem	AVT 2	AVT 1	IVT	IHRT	Screening nursery
Upland- DS		AVT 1-E DS	IVT-E-DS		
Rainfed shallow	AVT 2-RSL	AVT 1-RSL	IVT-RSL		
Semi-deep water	AVT 2-SDW	AVT 1-SDW	IVT-SDW		NSDWSN
Deep water		AVT 1-DW	IVT-DW		
Early - TP	AVT2-E TP	AVT1-E TP	IVT-E TP	IHRT-E	
Medium	AVT2-IM	AVT1–IM	IVT-IM	IHRT-IM	
Late	AVT 2-Late	AVT1–Late	IVT–Late		
Boro		AVT 1-Boro	IVT-Boro		
Basmati	AVT 2-BT	AVT1-BT	IVT-BT		
Aromatic short grain	AVT 2-ASG	AVT1-ASG	IVT-ASG		
Saline alkaline	AL & ISTVT	AL & ISTVT	AL & ISTVT		
	CSTVT	CSTVT	CSTVT		
Hills	AVT 2-E (H)	AVT1-E (H)	IVT-E(H)		
	AVT 2-M (H)	AVT1-M (H)	IVT-M(H)		
	AVT 2-U (H)	AVT1-U (H)	IVT-U(H)		
Aerobic	AVT2-Aerobic	AVT1-Aerobic	IVT-Aerobic		
Near Isogenic lines (Sub& Drt)	AVT 2-NIL	AVT 1-NIL			
Near Isogenic Lines (Blast)	AVT 2-NIL	AVT 1-NIL			
Bio-fortification	AVT 2-Biofort	AVT 1-Biofort	IVT-Biofort.		
Medium Slender		AVT 1-MS	IVT-MS	IHRT-MS	
New Plant Type		AVT 1-NPT	IVT-NPT		
MLT			MLT-E		

Particulars of Zones, States and test Locations

Region / State	Locations	
	Funded	**Voluntary**
ZONE I – HILLY AREAS		
North Western Hills		
Jammu & Kashmir	Khudwani (1)	Rajouri, Wadura, Shalimar, Bandipore, Pombay (5)
Himachal Pradesh	Malan (1)	Katrain, Palampur, Dhaulakhan (3)
Uttarakhand		Almora, Bageshwar, Majhera, Ranichouri (4)
North Eastern Hills		
Arunachal Pradesh		Basar (1)
Nagaland	Kohima (1)	
Manipur		Langol, Imphal-CAU (2)
Mizoram		Kolasib (1)
Meghalaya	Upper Shillong (1)	ICAR-Umiam, CAU-Umiam (2)
Sikkim		Gangtok (1)
West Bengal		Kalimpong (1)
Southern Hills		
Andhra Pradesh		Chintapalli (1)
Tamil Nadu		Gudalur (1)
Karnataka		Sirsi (1)
ZONE II – NORTHERN		
New Delhi		IARI- New Delhi (1)
Uttarakhand	Pantnagar (1)	
Punjab	Ludhiana (1)	Gurdaspur, Kapurthala, Rauni (3)
Haryana	Kaul (1)	Karnal (CSSRI), Jind, Rohtak, Kurukshetra, Gautam Buddha Nagar, Panipat (6)
Uttar Pradesh	Nagina, Kanpur (2)	Modipuram (1)
Jammu & Kashmir	Chatha (R.S. Pura) (1)	
Rajasthan	Kota (1)	Banswara (1)
ZONE III – EASTERN		
Orissa	Jeypore, Chiplima (2)	Bhubaneswar, NRRI (Cuttack), Motto (3)
Bihar	Patna, Pusa (2)	Patna- ICAR, Sabour(2)
Jharkhand	Ranchi (1)	Hazaribagh (1)
West Bengal	Bankura, Chinsurah (2)	Canning, Pundibari, Chakdha, Hathwara, Gosaba, Kolkata (6)
Uttar Pradesh	Masodha ,Ghaghraghat, Varanasi (3)	Aligarh, Allahabad, Lucknow, Gorakhpur (4)
ZONE IV – NORTH EASTERN		
Assam	Titabar (1)	North Lakhimpur, Gerua, Karimganj (3)
Manipur	Wangbal (1)	Lamphalpat, Imphal (CAU) (2)
Tripura	Arundhutinagar (1)	Lembucherra (1)
ZONE V - CENTRAL		
Madhya Pradesh	Rewa (1)	Waraseoni, Jabalpur (2)
Chhattisgarh	Raipur, Jagadalpur (2)	Bilaspur, Ambikapur (2)
Maharashtra	Sakoli (1)	Sindewahi (1)
ZONE VI - WESTERN		
Maharashtra	Karjat, Tuljapur (2)	Panvel, Radhanagari, Palghar, Shirgaon, Phondaghat, Vadagaon, Parbhan, Igatpuri (8)
Gujarat	Nawagam, Navsari (2)	Derol, Vyra, Danti, Dabhoi, Bardoli (5)
Goa		Goa (1)
ZONE VII - SOUTHERN		
Andaman & Nicobar		Port Blair (1)
Andhra Pradesh	Maruteru (1)	Ragolu, Bapatla, Machilipatnam, Nellore, Nandyal(5)
Telangana	Rajendranagar, Warangal (2)	Jagtial, Kunaram, Rudrur, Kampasagar (4)
Tamil Nadu	Aduthurai, Coimbatore (2)	Ambasamudram, Paramakudi, Trichy, Annamalainagar, Tirur (5)
Kerala	Moncompu, Pattambi (2)	Vyttila (1)
Karnataka	Mandya, Mugad, Ponnampet, Brahmavar, Gangavati (5)	Sirsi, Mudigere, Bengaluru , Kathalgere (4)
Puducherry	Kurumbapet (1)	Karaikal (1)
Total locations	**45**	**97**

Underline: ICAR Institutions

Rainfed Upland Ecosystem:

Water is the main limiting factor in rainfed upland ecosystem compounded further by uneven rainfall distribution during the growing season. Short growth duration, good seedling vigour, weed competitiveness, in-built tolerance to drought and other biotic stresses are the main objectives to breed suitable varieties for this harsh ecology. Under direct seeded conditions genotypes with < 80 days to 50% flowering are grouped in early duration. One experiment with 49 entries was conducted as Initial Variety Trial (IVT-E) under direct seeded rainfed conditions. The superior drought tolerant genotypes are mentioned below.

- 44 test entries along with 5 checks were tested at 13 locations for drought, severe drought and normal conditions. Based on overall and Zonal performance under drought and normal conditions IETs 25103, 25113, 25115, 24692, 25121, 25123 and 25125 were promoted to AVT-1-E-DS.

RAINFED LOWLAND ECOSYSTEM

Flooding is a serious constraint to plant growth and survival in rainfed lowland and deep water areas because excessive water results in partial or complete submergence of the plant. The potential of the genotype under such conditions depends not only on yield but also on adaptability parameters like early seedling vigour, seedling survival, kneeing and elongation abilities, semi tall to tall stature with sturdy culm, low grain shattering, submergence and drought tolerance, good phenotypic acceptability and multiple resistance to pests and diseases which are some of the key traits to be pooled together during breeding varieties for getting high yields in this harsh ecology. With the objective of enhancing the yield potential of this ecosystem 6 trials viz., AVT-1-RSL, IVT RSL, AVT-1-SDW, IVT-SDW, NSDWSN and IVT-DW were conducted with 13, 58, 11, 14, 47 and 17 entries at 12, 12, 11, 11, 11 and 5 locations, respectively.

RAINFED SHALLOW LOW LAND

- In AVT 1-RSL, based on overall mean performance, IET 24474 and based on zonal performance, IET 23930 and IET 24367 in the Eastern zone, IETs 24451 and 24471 in the Southern zone were promoted to AVT 2-RSL.
- Based on three years performance IET 23565 found promising for the state of Karnataka.
- In IVT-RSL, based on 5% yield gain over the best check, 50% flowering duration (> 120 days) and plant height (>120 cm) suited for RSL conditions, three entries IET 25033, IET 25044 and IET 25038 were promoted to AVT-1 RSL.
- IET 24491 (Ciherang sub 1) is already notified, hence dropped from further testing.

SEMI DEEP WATER

- IET 23052 is found to be promising for the state of Andhra Pradesh.
- In AVT 1-SDW, three entries IETs 23895, 23906 and 23934 were promoted to AVT 2-SDW on overall basis.
- Five entries *viz*., IET 24519, IET 24495, IET 24486, IET 24496 and IET 24505 were promoted to AVT 1- SDW.

NATIONAL SEMI DEEP WATER SCREENING NURSERY

- On overall basis, six entries viz., IETs 25212, 25185, 25186, 25209, 25201 and 25211 promoted to IVT-SDW.
- On zonal basis, two entries IETs 25179 and 25196 in Eastern zone and five entries IETs 25200, 25203, 25206, 25178 and 25208 in the Southern zone were promoted to IVT-SDW.

DEEP WATER

- IET 25226 and IET 24525 were promoted to AVT 1-DW.

IRRIGATED ECOSYSTEM

Country Witnessed perceptible advances in rice production in the last 50 years especially in irrigated ecology mainly due to modern high yielding varieties with high input intensive agriculture, the main feature of green revolution. However yield stagnation in this ecology has been a serious concern. Land, labour and water have been limiting in this ecology in addition to varieties fortified with resistance to pests and diseases coupled with high yield potential. The change in climate has become another dimension to the already existing problems. Therefore to tide over the above mentioned constraints and to meet the challenge of producing more rice per unit area, innovative approaches such as designing new plant type, hybrid rice breeding, introgression of new genes from wild relatives and untapped germplasm through strong pre-breeding supported by molecular marker assisted breeding are emphasized to achieve the sustainable increase in production levels.

These trials included different maturity duration groups such as early (80-95 days), medium (96-105 days) and late (106-120 days) in flowering duration were organized in Six zones across the country. The trials conducted include Advanced Variety Trial- 2- Early (Transplanted)-AVT-2- E (TP) (17), Advance Variety Trial-1- Early (Transplanted)-AVT-1-E (TP) (31), Initial Variety Trial- Early -Transplanted-IVT-E (TP) (64), Advance Variety Trial 2- Irrigated Mid Early (AVT-2-IME) (12), Advance Variety Trial 2- Irrigated Medium (AVT-2-IM) (10), Advance Variety Trial 1- Irrigated Medium (AVT-1-IM) (58), Initial Variety Trial - Irrigated Medium (IVT-IM) (81), Advance Variety Trial 1- Late (AVT-1-L) (35), Initial Variety Trial-Late (IVT-L)(64), and IVT-Boro (IVT-B)(13).

Early trials-Transplanted

- Among 13 entries tested in AVT -2 –E(TP), IET 23356 in Odisha, Karnataka and Bihar, IET 23951, IET 23957 and IET 23976 in Bihar and Karnataka, IET 23979 in Bihar, Karnataka and Pudhucherry, IET 23996 in Karnataka, Bihar and Madhya Pradesh, IET 23354 in Haryana, Karnataka, Bihar and Madhya Pradesh, IET 23949 in Karnataka, IET 23947 in Madhya Pradesh and Haryana and IET 23392 in Bihar were found promising.
- Seven varietal cultures viz., IETs 24721, 24040, 24705, 24708, 24704 & 24796 in Zone II; IETs 24798, 24704 and 24705 in Zone III; IETs 24798, 24721 & 24040 in Zone IV; IET 24053 in Zone V, IET 24798 in Zone VI and IET 24040 in Zone VII were promoted to next year of testing.
- In IVT-E (TP) 56 entries were evaluated in six zones. The national check Gontra Bidhan 3 ranked first on overall mean basis and also in zone III and zone VII. 27 entries were promoted to 2nd year of testing based on their performance in zones II, IV, V and VI.

Irrigated Mid Early

- Of the 8 entries tested in the AVT- 2 –IME, only 4 entries exhibited superiority based on three years performance. They are IETs 24103 (XRA-27934), 23216 **(**TM 07278**),** 23770 (CN 2015-5-4) for the state of Bihar and IET 24122 (XRA-27936) for Rajasthan found promising.

Irrigated Medium

- In the final and third year of testing in the AVT -2-IM group six test entries were included. IET 24146 (NK 16520) for the states of Bihar and Chhattisgarh, IET 24142

(KPH 467) for the state of Chhattisgarh and IET 23272 (MTU 1155) for the states of Chhattisgarh and Odhisha were found promising.

- In the Second year of testing there were 52 test entries and they were promoted based on the Zonal performance. 2 entries (IETs 24817 & 24260) in Zone II, North Western; 6 entries (IETs 24879, 22919, 24817, 24844, 24331 & 24309) in Zone III, Eastern and 6 entries(IETs 24844, 24879, 24919, 24325, 23964 & 24347)in Zone V, Central exhibited superior performance over the best checks in the respective zones, Thus qualify for promotion to the third year of testing.
- 81 entries were tested in IVT-IM, two entries (IETs 25289 & 25330) were promoted on overall mean basis. A total of another 23 entries were promoted based on their performance in different zones. 4 entries to late duration group and 2 entries to early duration group were shifted based on days to 50% flowering.

Irrigated Late Trials

- In Advance Variety Trial-1-Late (AVT-1-L) 31 test entries were evaluated and one entry IET 23725 on overall mean basis promoted to third year of testing.
- IET 24395 in Zone III; 2 entries (IETs 24367 & 24297) in zone V; IET 24241 in zone VI and IET 23725 in zone VII were promoted to next year of testing.
- 60 entries were tested in Initial Variety Trial (IVT-L), of which 6 entries (IETs 25269, 25278, 25271, 25252, 25228 & 25261) were promoted to next year of testing based on overall performance.
- In addition 16 entries in Zone III, 6 entries in Zone and 5 in zone VI qualified for promotion to 2nd year of testing while 6 entries shifted to medium duration trial based on days to 50% flowering.

Hybrid Trials

During Kharif 2015, totally 104 hybrids were evaluated in three hybrid rice trials *viz.*, IHRT-EIHRT-M, IHRT-MS, in different locations representing North, East, Northeast, Central, West and South zones of the country. Hybrids with more than 10 percent yield advantage over the varietal check and 5 percent over the hybrid check are identified as promising. Details of the top three ranking hybrids in each of the trials are given below.

Promising hybrids identified in different hybrid rice trials (2015)

Name of the Hybrid	DFF	Promising in
IHRT-E		
SL-8H	93	Overall
NK- 17508	93	Zone III, V, VII
MEPH -123	93	Zone III, V
IHRT-M		
NK 5251-Plus	98	Overall
IRH-104	98	Overall
Bio-681	99	Overall
MEPH-125	101	Zone V, VI
MR-8333	102	Zone VI
PR-15103	101	Zone V
IHRT-MS		
PR-14109	105	Overall
PR-15108	105	Overall
SPH-1003	100	Overall

Boro Trials

- High yields are recorded in the eastern and north eastern parts of the country with the cultivation of Boro rice. It is grown during October-November to April-May in the low laying areas of eastern and north eastern states. Therefore, to identify suitable high yielding genotypes with cold tolerance during seedling stage, heat tolerance during grain filling stage and early maturing, Initial Variety Trial –Boro was conducted at 8 Locations with 9 entries.
- Among the 9 test entries IET 23494 was in 3rd year of testing and based on three year performance found promising in Assam.
- Among the remaining eight entries IET 24173 qualify for 3rd year and IET 24898 qualify for 2nd year of testing.

Basmati Trials

Basmati, a connoisseur delight and natures gift to Indian Sub-continent. Best quality basmati rice is endowed with unique quality features – pleasant aroma, long slender grains with delicate curvature, remarkable linear elongation which is more than double its original length combined with excellent flaky soft texture on cooking. To develop the lines with superior quality and higher potential to meet the exports, varietal improvement efforts continued and a total of 48 entries were evaluated in Advance Variety Trial 1- Basmati (AVT 1BT)and Initial Variety Trial- Basmati (IVT – BT) at 18 locations.

- Advance Variety Trial 1 – Basmati (AVT 1 BT) was constituted with 17 entries involving 7 NILs for BLB and Blast. Among the entries tested for 2nd year, none of the entries were superior to basmati check varieties.
- Among the 7 NILs evaluated for trait validation, IET 24565 and IET 24573 for BLB, IET 24575 and IET 24570 for blast trait has been verified and found promising as compared to their respective recurrent parent.
- Thirty five basmati cultures were evaluated in IVT- BT along with five checks based on yield and quality characteristics, none of the entries were superior to basmati check varieties.

Aromatic Short Grain Trials

Aromatic rices constitute a small but an important sub-group of quality rices. In spite of their importance, pace of improvement of this group of rice has been rather slow. With the objective of enhancing the yield potential of this group, Advance Variety Trial 1- Aromatic Short Grain (AVT 1 ASG) and Initial Variety Trial- Aromatic Short Grain (IVT ASG) was constituted with 48 entries and conducted at 38 locations.

- IET 23879 (R1656-1146-5-513-1), a semi dwarf culture with 109 days to 50% flowering, possessing good quality characteristics is promising in Tripura, Chhattisgarh, West Bengal, Maharashtra and Karnataka.
- IET 24613 (Zone III, IV and V), 24625 (Zone IV), 24619 (Zone IV), 24617 (Zone IV) and 24621 (Zone V) are promoted to AVT 2 ASG based on yield and quality.
- Among the 22 test entries, five cultures viz., IET 25419, 25433, 25424, 25431 based on yield and quality were promoted to AVT 1 ASG.

Saline and Alkaline Trials

Alkalinity, coastal and inland salinity are the major soil stresses causing significant yield reduction in irrigated rice. In order to identify promising salinity/alkalinity tolerant

cultures, four trials *viz*., AVT 1 - AL & ISTVT with 18 entries, IVT- AL & ISTVT with 36 entries, AVT-1-CSTVT with 16 cultures and IVT-CSTVT with 64 cultures were evaluated at 15, 19, 10 and 10 locations respectively.

ALKAINE and INLAND SALINE TOLERANT VARIRTY TRIALS

AVT-1 -AL&ISTVT

- The entries IET 24537 and IET 24545 were promoted to 3nd year of testing in AVT-2-AL& ISTVT under alkalinity. In Zone 2 (Northern), three entries, IET Nos. 24537, 24538 and 24547 were promoted to 3rd year of testing while IET Nos. 24545 and 24537 were promoted to 3nd year of testing in Zone 3 (Eastern) in AVT-2- AL& ISTVT under alkalinity. One entry, IET 23784 identified as promising in Haryana under alkalinity.
- None of the entries were found superior and so not promoted to AVT-2- AL & ISTVT under inland salinity.

IVT- AL&ISTVT

- Under moderate alkaline stress, four entries namely IET 25388, 25368, 25375 and 25361 were promoted to AVT-1- AL&ISTVT .
- Under severe alkaline stress, two entries, IET 25361 and IET 25360 were promoted to AVT-1 - AL&ISTVT
- Four entries namely IET 25378, IET 25387, IET 25369 and IET 25385 were promoted to AVT-1-AL&ISTVT under inland salinity.

COASTAL SALINE TOLERENT VARIETY TRIALS

AVT-1-CSTVT

- On overall mean, IET 24430 was promoted to 3rd year of testing in AVT-2-CSTVT
- Two entries, IET 24425 and IET 24439 in Zone 3 (Eastern) while one entry, IET 24434 in Zone 6 (Western) while three entries, IET 24441, IET 24430 and IET 24425 in Zone 7 (Southern) were promoted to 3rd year of testing in AVT-1-CSTVT.
- Under moderate coastal saline stress three entries, IET 24426, IET 24441 and IET 24425 were promoted to AVT-2-CSTVT.

IVT-CSTVT

- In Western zone (zone 6), twenty entries namely IET 25051, IET 23795 , IET 25054, IET 25055, IET 25058, IET 25059, IET 25060, IET 25066, IET 25068, IET 25074 , IET 25075 , IET 25077, IET 25079, IET 25083, IET 25089, IET 25091,IET 25095, IET 25096, IET 25097 and IET 25100 were promoted to second year of testing under AVT-1 coastal salinity
- In Southern zone (Zone 7) nineteen entries i.e IET 25049, IET 25050, IET 25051, IET 25054, IET 25056, IET 25067, IET 25068, IET 25074, IET 25078, IET 25083, IET 25086, IET 25087, IET 25089, IET 25094, IET 16904, IET 25097, IET 25100, IET 25101 and IET 25102 were promoted to second year of testing under AVT-1 coastal salinity.
- Among the near-isogenic lines, two entries namey IET 25062 and IET 25071 in the background of White ponny are promoted for 2nd year of testing in AVT-1-CSTVT.

Hill Trials

Rice cultivation in hill ecology is influenced by sloppy terraces with least mechanization, labour shortage and weed infestation. Rainfall is major source of irrigation and the crop is also affected by blast, bacterial blight, leaf blight, leaf scald, chaffer and hispa. Special breeding efforts are required to develop and identify the cultivars suitable for hill ecology. In order to identify the promising cultures for hill ecology, the trials were conducted in low (<950msl), medium (950-1500msl) and high hill (>1500msl) ecology. Four trials viz., IVT-E(H), AVT-1E(H), IVT-M(H), AVT-1M(H) for irrigated ecology and two trials IVT-U(H) and AVT-1U(H) for upland ecology were constituted with 18, 15, 13, 11, 9 and 9 test entries respectively. IVT-E(H) and AVT-1E(H) conducted at 11 locations (3 low, 5 medium, 3 high), whereas IVT M(H) and AVT-1M(H) at 10 locations (6 low, 3 medium, 1 high), IVT-U(H) at 8 locations (5 low, 3 medium), AVT-1-U(H) at 7 locations (5 low, 2 medium). The trials were sent to 25 locations to conduct 84 experiments.

- In AVT-1-EH, four entries under each low elevation (IET 24195, IET 24189, IET 24197 and IET 24192) and medium elevation (IET 24188, IET 24195, IET 24183 and IET 24197) have achieved required level of yield superiority over best check and promoted for 3rd year of testing.
- Considering the required yield superiority over best checks in IVT – EH, three entries under medium elevation (IET 25149, 25151 and 25158) and two entries under high elevation (*IET 25157, IET 25144)* have been promoted to second year of testing.
- On the basis of yield superiority in AVT-1-MH, IET 24207 under medium altitude (northern hills), while two entries, IET 24211 and IET under high altitude have been promoted to third year of testing.
- in IVT-MH, two entries (IET 25166 and IET 25164) under low altitude and three entries (IET 25161, IET 25166 and IET 25167) under medium altitude surpassed the best check and therefore, have been promoted to second year of testing.
- Two entry IET 24229 (low hills) and IET 23539 (medium hills) in AVT 1-UH have achieved required level of yield advantage and promoted to third year of testing.
- The entry **IET 23544** derived from cross Leimaphou/BR-1 was tested for three years under low and medium elevations hills (upland) in different states. It has performed consistently superior under low elevation in the states of Manipur and Meghalaya; Hence, identified as promising for both the states.
- On the basis of performance of test entries over best check in IVT-UH, IET 25170 is qualified for second of testing under medium elevation.

Aerobic Trials

Decline in water resources and erratic rainfall necessitate the need for identification of high water-use efficient rice cultivars suitable for aerobic condition. Aerobic rice cultivation reduces water use in rice production and increases the water use efficiency. Therefore, breeding cultivars suitable for aerobic condition has increasingly becoming popular to reduce the requirement for rice cultivation. Therefore, three trials viz., AVT2, AVT1 and IVT were conducted under aerobic condition. The trial was conducted at 18 locations under aerobic conditions. Advanced Varietal Trial 1 consist of 20 entries were evaluated at 19 locations. Initial Varietal Trial-Aerobic comprises of 67 entries conducted in 13 locations.

- Under aerobic condition, four entries viz., IET 24003 (Chhattisgarh and Bihar), hybrid IET 24028 (Tamil Nadu and Bihar), IET 24010 (Bihar), hybrid IET 24006 (Tamil Nadu) showed consistence performance and found promising in different states.
- In AVT 1, two entries namely, IET 24660 in Zone III & VII and IET 24665 in Zone V have been promoted to AVT 2 in the respective zones for third year of testing.
- In IVT, on overall mean basis, 10 entries (IET 25616, 25618, 25620, 25633, 25640, 25641, 25647, 25653, 25654, 25662), on zonal mean basis, five entries (IET 25610, 25619, 24704, 25630, 24721) in zone II and nine entries (IET 25607, 25611, 25613, 25614, 25625, 25636, 25637, 25642 and 25661) in zone III have achieved required level of yield advantage over best check, therefore have been promoted to second year of testing.

Bio fortification Trials

In order to assess the micronutrient dense breeding lines developed by different centers, a total of 83 entries were tested in AVT 2, AVT 1 and IVT in Kharif 2015.

- Based on high zinc and yield IET 23824 is found promising in the states of Punjab, Telangana & Karnataka, IET 23832 is found promising in the states of Andhra Pradesh (united), Karnataka and Tamil Nadu and IET 23829 is found promising in the state of Madhya Pradesh.
- Based on high zinc and yield, twelve test entries of AVT 1 are promoted to third year of testing and twelve test entries of IVT are promoted to second year of testing.

NIL trials

- Based on disease reaction better than Recurrent Parent(RP), yield superiority or on par performance on overall basis or zones with trait similarity, IET 25480 in the Eastern zone, IET 25483 and IET 25484 in the Southern zone were promoted to AVT 2-NIL (BLAST)
- 9 entries with drought QTLs in Swarna Sub-1 background, 3 entries in background of Samba Mashuri Sub-1 along with 5 Sub-1 NILs in background of CO 43, Ranjit and Bahadur were evaluated for drought and submergence tolerance at different locations.
- IETs 25667, 25668, 25670, 25673 and 25671 were promising for drought and submergence, promoted for next year of testing.
- IETs 25676, 25768 and 25265 were promoted for 2nd year of testing under submergence condition.

MEDIUM SLENDER GRAIN TRIAL

- On overall basis, three entries IET 25495 IET 25512 and IET 25492; one entry IET 25508 in North and Central zone; nine entries *viz*., IET 25485, IET 25488, IET 25489, IET 25505, IET 25517, IET 25519, IET 25520, IET 25521, and IET 25523 in Central zone; two entries IET 25515, IET 25493 in Central and Southern zones and two entries IET 25487 and IET 25501 in Southern zone were promoted to AVT 1-MS.

NEW PLANT TYPE

- On the basis of zonal mean yield of more than 5% over the best check, two entries IET 25530 and IET 25543 were promoted to AVT1-NPT

Multi-Location Late Sown trial-Early

- Multi-Location Late Sown – Early (MLSE) was constituted with 36 entries, mainly to evaluate the released varieties with less than 115 days duration for their suitability under late sown conditions i.e., last of week of August/1st week of September.

- Results suggested that CR Dhan 100, CR Dhan 203, Luit and IET 23356 recorded more than 2.3 ton/ha yield in the state of Chhattisgarh.
- CR Dhan 203, PR 124, NLR 40024, DRR Dhan 44, CR Dhan 100 with 4.5 ton/ha in Andhra Pradesh; CR Dhan 201, CR Dhan 101, NLR 40024, Luit, cotton Dora Sannalu with 6 t/ha in Telangana were found promising under late sown conditions.

INGER Observational Nurseries

In order to utilize elite breeding lines and varieties developed in different countries, INGER provide opportunities for free exchange of diverse rice germplasm and also to strengthen effective linkages among various national and international; rice improvement programmes. Fourteen IRRI coordinated INGER Observational Nurseries were evaluated during 2015. A total of 666 elite rice lines of different nurseries were evaluated at 58 locations. Based on yield, resistance/tolerance to biotic stresses, maturity duration, and overall phenotypic acceptability under respective situations promising lines were identified in different trials.

- **International Irrigated Rice Observational Nursery (IIRON)**
- **Module 1:** IR 10A270, IR 11A257, IR 11A293, IR 11A302 and IR 11A429
- **Module 2:** IR 10N389, IR 11A108, IR 11A307, IR 11A316, IR 11A546, IR 11N294 and IR 79643-23-3-3-3
- **International Temperate Rice Observational Nursery (IRTON):** IR 10K182, IRRI 102 and IR 13K177
- **International Rainfed Lowland Rice Observational Nursery (IRLON):** IR14L116, IR13L188 and IR 95836-14-3-1-2
- **International Upland Rice Observational Nursery (IURON):** IR13L114, IR12L369, IR13L406 and IR13L413
- **International Rice Heat Tolerant Nursery (IRHTN):** IR 11C208
- **International Rice Soil Stress Tolerance Nurseries (IRSSTN)**
    - **Module 1:** IR14T114, IR13T145 and IR 55179-3B-11-3
    - **Module 2:** IR 58443-6B-10-3, IR11T185 and A 69-1
- **International Rice Blast Nursery (IRBN):** IRBLKM-TS[CO], IRBLSH-B[CO], IRBLTA-ME[CO] and IR 09N127
- **International Rice Bacterial Blight Nursery (IRBBN):** IR-BB1, IR-BB13, IR-BB52 and HHZ-5-DT20-DT3-Y2
- **International Rice Brown Plant Hopper Nursery (IRBPHN):** MILYANG 46(CHEONGCHEONGBYEO, MILYANG 55(SAMGANGBYEO), BG 367-2, MUDGO (ACC 6663), MUT NS 1, PTB 33, IR 09A 235 and IR 09A 235
- **Green Super Rice for Irrigated Lowland (GSR-IRLL):** HHZ 10-DT5-LI1-LI1, HHZ 14-SAL19-Y1, HHZ 15-SAL13-Y1, HHZ 16-SAL13-LI1-LI1, HHZ 18-Y3-Y1-Y1, HHZ 21-Y4-Y2-Y1,
- **Green Super Rice Rainfed Lowland (GSR-RFLL):** HHZ 10-DT5-LI1-LI1, HHZ 15-DT7-SAL2, HHZ 15-SAL13-Y1, HHZ 15-SAL13-Y3 and HHZ 18-Y3-Y1-Y1,
- **MAGIC Global:** IR 104473:2-B-20-17-10-2-3-B, IR 104444:12-B-9-4-7-5-3-B, IR 104532:2-B-7-19-17-3-3-B, IR 104560:6-B-18-5-15-5-3-B and IR 104439:2-B-13-9-17-5-3-B

INITIAL VARIETY TRIAL –EARLY DIRECT SEEDED (IVT-E DS)

Locations : 13 **Entries : 49**
Checks : Sahbhagidhan and Vandana-National, Govind (North Western), Narendra 93 (Eastern), Varalu and Tulasi (Western and Southern)- Zonal Check, US 314-Hybrid and Local check. **Table : 1.1**

The trial was constituted with 49 entries involving 5 checks, Sahbhagidhan and Vandana (National), Zonal check viz., Govind (North Western), Narendra 97 (Eastern), Varalu and Tulasi (Western and Southern), US 314 (Hybrid) and local checks. The trial was sent at 22 locations but the data received from 13 locations covering Zone III, V, VI and VII. Drought was experienced at flowering to grain filling stage at Pusa, Nandyal and Mugad. The severe drought from tillering to maturity was experienced at Ranchi, Hazaribag, Rewa, Derol and Vyara resulted very poor yields. Under severe drought the entries with drought tolerance could reach to flowering stage and produced little seeds. The drought at Masodha was so severe, no entry could be harvested. The normal and well spread rains was received at Cuttack, Sabour, Jagdalpur, Raipur and Gangavathi, hence analyzed separately. The details of drought spell, duration and experimental mean yields are presented below:

Drought situation at the location

Location	Category	Exp. Mean	CV %	Best Check Mean	Drought Situation
NRRI, Cuttack	Normal	2431	20.41	5350	Normal rainfall was received during crop growth period.
BAU, Sabour	Normal	3273	7.05	4255	Normal rainfall was received during crop growth period.
RAU, Pusa	Drought	2026	29.24	2750	Drought at flowering stage for 25 days.
BAU, Ranchi	Severe Drought	222	32.19	215	Severe drought from tillering to harvest.
Rewa	Severe Drought	489	22.08	644	28 days drought at tillering stage (1st Sept - 28th Sept and 28 days at reproductive stage from 1st 28th October, 2015.
Jagdalpur	Normal	3455	9.75	4869	Normal Rainfall condition
Raipur	Normal	4604	5.71	6218	Normal Rainfall condition
Derol	Severe Drought	432	65.55	489	Drought from vegetative to reproductive stage.
Nandyal	Drought	4223	15.40	6133	Two dry spells- 30 days at tillering and 40 days (3rd Jan to 19th Jan, 2016) at grain filling.
Hazaribag	Severe Drought	70	77.04	131	August 10th to 30th, Sept 2nd to 18th and no rain after Sept.23rd.
Mugad	Drought	797	4.70	1528	Drought was severe from tillering to flowering.
Gangavathi	Normal	5119	5.21	6156	Normal rainfall condition
Vyara	Severe Drought	680	2193	1234	Severe drought from maximum tillering (21 days) and reproductive to maturity (35 days).

The performance of entries at drought, severe drought and normal rainfall locations are discussed.

Performance of entries under drought:

Three location viz., Pusa, Nandyal and Mugad categorised as drought locations. The locations Pusa and Mugad experienced drought at late tillering to grain filling while at Nandyal entries faced drought at flowering to grain filling, hence many of the entries yielded high. Among the entries 18 entries along with Vandana flowered before 70th day of sowing while rest of the entries flowered from 71 to 91 days. The mean yield at the locations ranged from 797 kg/ha (Mugad) to 4223 kg/ha (Nandyal). The CV of the experiments were under the limit (Tables 1.2, 1.3, 1.4 and 1.5).

In early direct seeded conditions the flowering duration of the entries need to be less than 80 days. Fourteen entries had flowering duration more than 80 days. Among the entries tested, yield ranged from 1042 kg/ha (IET 25140) to 4708 kg/ha (IET 25103). Eighteen entries having 50% flowering duration less than 70 days were compared with Vandana and Local check. In this group IET 25103, IET 25123, IET 25113, IET 24692, IET 24690, IET 24679 and IET 25125 yielded more than 5% higher than the best check under drought. The yield advantage over best check of the entries is presented in Table. Two hybrid entries IET 25211 and IET 25107 were tested in the trial, yielded 3291 and 3995 kg/ha with yield advantage of 17.2 and 42.27% over best varietal check (local), respectively in the group, but fail to show yield advantage over hybrid check. The IET 25121 with yield of 4158 kg/ha, ranked 3rd with 79 days of 50% flowering duration. It showed 6% yield advantage over best check on overall mean. It showed yield advantage of 9 and 12% over varietal and hybrid checks respectively. The other entries which yielded better in Zone III were IET 25109, IET 25130 and IET 25136 with more than 10% yield advantage, but flowered in more than 80 days.

Overall performance of promising entries in IVT-E DS, Kharif 2015

IET No.	Days to 50% flowering	Grain Yield (kg/ha)	% yield advantage over best check	
			On overall	On Zone-III
25103	70	4708	67.6	78.24
25113	69	3367	19.90	-
25115	63	1992	-	26.08
24692	68	3158	12.46	26.08
25121	79	4158	48.00	60.82
25123	69	3375	20.19	-
25125	59	3298	17.45	52.16
Days to 50% flowering and yield (kg/ha):				
Vandana	61	1658		1083
Sahbhagidhan	73	3192		2417
Zonal Check	73	3933		2833
Local Check	72	2808		1917

Performance of entries under severe drought: Under the severe drought, the yield at locations ranged from 70 kg/ha (Hazaribag) to 680 kg/ha (Vyara). At many of the locations CV was very high.

Normal Rainfall conditions:

Normal rainfall was received during crop growth stages at 5 locations viz., Cuttack, Sabour, Jagdalpur and Gangavathi. The experimental mean yield range from 2431 kg/ha at Cuttack to 5119 kg/ha at Gangavathi. The CV of the experiment ranged from 5.21% at Gangavathi to 20.41% at NRRI, Cuttack. At Cuttack the yield was less than 2500 kg/ha hence not included in the overall mean. Since the situation of the aerobic trials and direct seeded trials with normal rainfall are similar,

hence the entries showing better performance under normal rainfall viz., IET 25134, IET 25138, IEt 25142 and IET 25120 can be shifted to IVT-Aerobic trial.

- **Considering the overall and zonal performance under drought and normal conditions IET 25103, IET 25113, IET 25115, IET 24692, IET 25121, IET 25123 and IET 25125 promoted to AVT 1-E DS.**
- **The entries IET 25138, IET 25142 and IET 25120 performed well under direct seeded well moisture conditions can be shifted to IVT-E TP.**
- **The entries IET 25109, IET 25130 and IET 25136 performed better in Zone III with yield advantage more than 10% over best check having more than 80 days of 50% flowering duration can also be shifted to IVT-Aerobic.**

Table 1.1: Composition of entries in Initial Variety Trial–Early Direct Seeded(IVT-E-DS), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain Type
1st year of testing				
101	25103	CB 13 805	Norungan/(Swarna Sub-1/ Norungan)	MS
102	25104	CR3947-2-1-3-1-1	IR64/ PSB RC 18	MS
103	25105	GNV 05-01	Selection from MTU 1076	MS
104	25106	CRR 676-2	IR 79971-B-102-B-B/2*Vandana	LB
105	25107	RRX-021	-	SB
2nd year of testing				
106	24690	R-RF 105	Selection from IR 84887-B-153-CRA-25-1(74371-54-1-1/IR78877-208-B-1-1	MS
1st year of testing				
107	25108	REWA 966-1-5-1	GP 810/IET 18662	SB
108	**Local Check**			
109	25109	RP 5587-B-B-B-210-1	IR64/IR 75870-5-8-5-B-2-B	LS
110	25110	RP 5942-34-9-5-2-1-1	IR 64*2/O.glaberrima (TOG 5674)	LS
111	25111	ADV 1501	-	LS
112	25112	CR2908-262-1	IR20/Apo	MS
113	25113	CB 13 804	Norungan/(Swarna Sub-1 /Norungan)	MS
2nd year of testing				
114	24679	R 1672-126-1-24-1	R 1027-2282-2-1/Danteshwari	MS
1st year of testing				
115	25114	CR3949-1-2-2-1-1	IR64/PSB RC 28//Vandana	MS
116	25115	CRR 616-B-66-2-1	Vandana/ APO	LB
117	25116	RCPR-24-IR88867-4-1-1-4	IR11L101/IR05A235	LS
118	25117	CR3848-52-1-2-1-5	Vandana/BG90-2//PSB RC 18	LS
2nd year of testing				
119	24692	RCPR-16-IR84894-143-CRA-17-1	IR77080-B-34-3/ IRRI 132	MS
1st year of testing				
120	25118	CRR 747-16-3-B	Vandana*4/C101A51//IR 84984-83-15-862-B	LB
121	25119	RP 5588-B-B-B-B-177-2	IR64/IR 75870-5-8-5-B-2-B	LS
122	25120	R-RF-112(IR 8839-10-1-1-2)	Selection from IR 86931-B-400	LS
123	25121	CR3951-3-2-2-1-1	IR64/PSB RC 52	MS
124	25122	Rewa 843-1-1	GP 29/PNR 593-17	SB
125	**Sahbhagidhan (NC)**			
126	25123	RP 5943-68-17-6-3-1-1-1	RP 5124-11-4-3-2-1/IR 78877-208-B-1-1	SB

Entry No.	IET No.	Designation	Cross combination	Grain Type
127	25124	CR 2878-215-1	Apo/CR143-2-2	MB
128	25125	CRR 753-8-1	Anjali*3/IR 84984-83-15-18-B-B-93	SB
129	**Vandana (NC)**			
130	25126	CR3848-1-2-1-2-4	Vandana/BG90-2//PSB RC 18	LS
131	25127	CRR 752-9-1	Anjali*3/IR 81896-B-195	SB
132	25128	RP 5587-B-B-B-209-1	IR64/IR 75870-5-8-5-B-2-B	LS
133	**Govind (North Western), Narendra 97 (Eastern), Varalu and Tulasi (Western & Southern)-- ZC**			
134	25129	R1695-133-1-72-1	Danteshwari /Poornima	LS
135	25130	CR 3848-2-1-1-2	Vandana/BG90-2//PSB RC 18	LS
136	25131	RP 5940-20-3-2-1-1-1	MTU 1010//IR64*2/O.glaberrima	LS
137	**US 314 (HC)**			
138	25132	RP 5944-34-13-7-2-1-1	IR 64 *3/ O.rufipogon(acc.106412)	SB
139	25133	CRR 562-19-2-1	RR 51-1/CR 143-2-2	LS
140	25134	CR 3846-2-1-2-1-1	IR72/PSB RC 18	LS
141	25135	R-RF-111	Swarna Sub1/IR 86931-B-400	MB
142	25136	IR 95812-CR3948-1-2-1-2	IR 80376-12-2-3/1R84878-B-60-4	LS
143	25137	RP 5945-117-10-5-2-1-1	RP 5125-12-4-3-1-1/ IR 77080-B-34-3-1-1	LS
144	25138	RP 5946-43-9-2-1-1-B	RP 5125-12-4-1-1-1/IR 78878-53-2-2-2	LS
145	25139	CRR 688-25-B-1-B-4	IR 80501-25-B-1/Vandana	LB
146	25140	ODR-1-2-CR3945	Zhu11-26/Geetanjali	LS
147	25141	R 1670-3269-2-3926-1	Samaleshwari /Poornima	LS
148	25142	CR 2900-250-3	Naveen/Selumpikit	MS
149	25143	CRR 363-36	Gaurav/Kalinga III	LS

Table No. 1.2: Grain Yield (kg/ha) of entries in IVT-E DS Drought Kharif 2015

Entry No.	IET No.	III		VII				Zone VII Mean (1)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		BI		A.P.		KA								
		PSA		NND		@MGD								
101	25103	3417	2 ...21% _24%	6000	3 ...19%	571	#	6000	3 19%	4708	1 * 20% **6%**	70	82	268
102	25104	2500		3763		426	#	3763		3132		83	91	242
103	25105	1083		6017	2 ...20%	83		6017	2 20%	3550		91	81	256
104	25106	1417		2567		1088	#	2567		1992		63	90	257
105	25107	2500		5490	7 ...9%	679	#	5490	7 9%	3995	5 2%	72	76	273
106	24690	1333		4777		1029	#	4777		3055		67	89	276
107	25108	2250		5700	5 ...13%	706	#	5700	5 13%	3975	6 1%	81	70	230
108	Local Check	1917		3700		614	#	3700		2808		72	71	251
109	25109	3250	4 ...15% _18%	4400				4400		3825		87	82	252
110	25110	1917		4533				4533		3225		83	93	240
111	25111	2083		4498		1363	9 #	4498		3291		68	75	259
112	25112	1583		3367				3367		2475		86	112	280
113	25113	1667		5067	...1%	288		5067	1%	3367		69	69	283
114	24679	1583		4800		1081	#	4800		3192		66	85	193
115	25114	1500		3667		247		3667		2583		70	94	252
116	25115	2417		2867		213		2867		2642		65	94	237
117	25116	2750	8	5260	...5%	400	#	5260	5%	4005	4 2%	73	70	293
118	25117	2417		4767		161		4767		3592		85	82	285
119	24692	2417		3900		554	#	3900		3158		68	92	271
120	25118	1167		2693		854	#	2693		1930		57	87	260
121	25119	1583		4000		511	#	4000		2792		83	77	254
122	25120	1583		3433		1118	#	3433		2508		74	87	270
123	25121	3083	5 ...9% _12%	5233	...4%	472	#	5233	4%	4158	3 6%	79	79	288
124	25122	1417		4493		463	#	4493		2955		76	120	261
125	Sahbhagidhan (NC)	2417		3967		1160	#	3967		3192		73	80	267
126	25123	1250		5500	6 ...9%	1815	4 *#	5500	6 9%	3375		69	92	261
127	25124	2750	9	5197	...3%	172		5197	3%	3973	7 1%	80	100	237
128	25125	2917	6 ...3% _6%	3680		203		3680		3298		59	92	297
129	Vandana (NC)	1083		2233		550	#	2233		1658		61	90	266
130	25126	2167		5760	4 ...14%	679	#	5760	4 14%	3963	8 1%	77	94	249
131	25127	1083		4767		546	#	4767		2925		61	84	253
132	25128	2083		4427		1679	7 *#	4427		3255		82	74	243
133	Zonal Check	2833	7 _3%	5033		1528	8 #	5033		3933	9	73	82	256
134	25129	2250		5410	9 ...7%	635	#	5410	9 7%	3830		76	76	274
135	25130	3750	1 #...32% _36%	3733		386	#	3733		3742		83	86	271
136	25131	1833		1550		324		1550		1692		80	73	249
137	US 314 (HC)	2750		6133	1 * ...22%	317		6133	1 * 22%	4442	2 13%	71	72	234
138	25132	1500		4347		2013	2 *#	4347		2923		77	79	242
139	25133	1250		4340		1725	6 *#	4340		2795		61	83	252
140	25134	1083		5460	8 ...8%	1851	3 *#	5460	8 8%	3272		82	78	227
141	25135	2417		3700				3700		3058		90	61	248
142	25136	3417	3 ...21% _24%	2967		224		2967		3192		83	88	237
143	25137	2083		1600		1739	5 *#	1600		1842		75	87	252
144	25138	2417		5000		2372	1 *#	5000		3708		74	91	263
145	25139	1750		4100		1331	#	4100		2925		67	60	271
146	25140	1083		1000		506	#	1000		1042		62	56	244
147	25141	1333		5350	...6%	349		5350	6%	3342		80	89	223
148	25142	1500		2920				2920		2210		89	107	239
149	25143	1417		3767		64		3767		2592		61	72	241
	Exp Mean	**2026**		**4223**		**797**		**4223**		**3124**		**74**	**84**	**257**
	C.D. 5%	960		1054		61		1087		710		1	0	
	C.V.%	29.24		15.40		4.70		15.88		19.96		1.31	0.00	
	Sowing Date	07-Jul		22-Sep		29-Jun								
	Planting Date													
	Local ©	Rajendra		NDLR 7		MGD 101								

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 1.2: Grain Yield (kg/ha) of entries in IVT-E DS Severe Drought Kharif 2015

Entry No.	IET No.	III						Zone III (2)		V		VI					
		JH		JH		JH (2)				M.P.		GU		GU		GU (2)	
		RCI		HZB		Mean		Mean		REW		DRL		VYR		Mean	
101	25103									345		262		734		498	
102	25104			20		20		20				352		1789	1 *#	1071	3 *# 53% **72%**
103	25105									605	...10%	19		761		390	
104	25106	202	6	190	1	196	4	196	4	400		254		879		566	
105	25107											810	5 #	834		822	7 18% **32%**
106	24690			108	7	108		108		430		457		862		659	6%
107	25108											76		458		267	
108	Local Check	131	8	10		71		71		269		610		787		698	12%
109	25109													444		444	
110	25110													252		252	
111	25111	108				108	9	108	9	170		2130	1 *#	734		1432	1 *# 105% **130%**
112	25112													334		334	
113	25113			29		29		29		676	5 ...23% _5%	271		395		333	
114	24679											357		706		532	
115	25114			57		57		57		676	6 ...23% _5%	359		473		416	
116	25115	129	9	160	2	144	7	144	7	519		1219	2 *#	1339	3 *#	1279	2 *# 83% **105%**
117	25116											343		904	9	623	
118	25117											395		805		600	
119	24692			78	9	78		78		229		705	9	309		507	
120	25118	269	3	108	8	188	5	188	5	370		100		796		448	
121	25119											857	3 #	366		612	
122	25120			10		10		10				143		487		315	
123	25121									379		832	4 #	214		523	
124	25122									495		210		321		265	
125	Sahbhagidhan (NC)			15		15		15				19				19	
126	25123			46		46		46				797	8 #	897		847	6 21% **36%**
127	25124									262		105		665		385	
128	25125	268	4	127	4	198	3	198	3	553		543		617		580	
129	Vandana (NC)	215	5	131	3	173	6	173	6	552		362		885		623	
130	25126											371		1234	4 *#	803	8 15% **29%**
131	25127	407	1 *	29		218	1	218	1	705	4 ...28% _10%	90		427		259	
132	25128									1002	1 *#...82% _56%			502		502	
133	Zonal Check											489		788		639	3%
134	25129											83		669		376	
135	25130									410		444		544		494	
136	25131									886	2 *#...61% _38%			383		383	
137	US 314 (HC)									644	7 ...17%	270		976	7	623	
138	25132											152		232		192	
139	25133			10		10		10		494		83		1019	5	551	
140	25134									706	3 ...28% _10%	214		1375	2 *#	795	9 14% **28%**
141	25135									414		340		555		447	
142	25136									291		248		510		379	
143	25137									437		302		398		350	
144	25138			39		39		39		421		671		725		698	12%
145	25139			113	6	113	8	113	8	491		810	6 #	1014	6	912	4 # 31% **46%**
146	25140	184	7	12		98		98		617	8 ...12%			220		220	
147	25141									375		200				200	
148	25142									616	9 ...12%			379		379	
149	25143	308	2	118	5	213	2	213	2	220		800	7 #	968	8	884	5 # 27% **42%**
	Exp Mean	**222**		**70**		**121**		**121**		**489**		**432**		**680**		**563**	
	C.D. 5%	123		90		75		76		176		460		242		252	
	C.V.%	32.19		77.04		53.77		54.19		22.08		65.55		21.93		39.25	
	Sowing Date	27-Jun		15-Jul						16-Jul		04-Jul		26-Jun			
	Planting Date																
	Local ©	BVD 110		Anjali								AAUDR-1		PURNA			

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 1.2 Contd.: Grain Yield (kg/ha) of entries in IVT-E DS Severe Drought Kharif 2015

Entry No.	IET No.	Zone VI (2)		Overall (5)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		Mean		Mean				
101	25103	498		447		78	60	151
102	25104	1071	3 *# 53% **72%**	720	6 13% **14%**	87	78	150
103	25105	390		462		89	48	151
104	25106	566		385		78	77	144
105	25107	822	7 18% **32%**	822	1 *# 29% **30%**	83	67	123
106	24690	659	6%	464		86	77	140
107	25108	267		267		90	59	133
108	Local Check	698	12%	361		68	75	152
109	25109	444		444		91	61	137
110	25110	252		252		97	55	104
111	25111	1432	1 *# 105% **130%**	786	3 *# 23% **25%**	85	69	135
112	25112	334		334		95	76	141
113	25113	333		343		85	57	95
114	24679	532		532		87	66	141
115	25114	416		391		86	69	103
116	25115	1279	2 *# 83% **105%**	673	7 5% **7%**	78	78	152
117	25116	623		623		84	57	176
118	25117	600		600		93	64	137
119	24692	507		330		84	67	115
120	25118	448		328		72	80	176
121	25119	612		612		94	62	157
122	25120	315		213		91	60	105
123	25121	523		475		79	66	135
124	25122	265		342		90	76	168
125	Sahbhagidhan (NC)	19		17		89	67	59
126	25123	847	6 21% **36%**	580		84	79	91
127	25124	385		344		77	65	187
128	25125	580		422		73	69	170
129	Vandana (NC)	623		429		73	71	174
130	25126	803	8 15% **29%**	803	2 *# 26% **27%**	90	66	164
131	25127	259		332		70	67	191
132	25128	502		752	5 18% **19%**	88	51	153
133	Zonal Check	639	3%	639	8 **1%**	83	62	194
134	25129	376		376		94	58	148
135	25130	494		466		85	62	123
136	25131	383		635	9 **1%**	85	49	85
137	US 314 (HC)	623		630		81	62	160
138	25132	192		192		90	65	107
139	25133	551		401		85	66	94
140	25134	795	9 14% **28%**	765	4 # 20% **21%**	87	51	221
141	25135	447		436		89	45	153
142	25136	379		349		87	59	154
143	25137	350		379		84	66	178
144	25138	698	12%	464		84	65	94
145	25139	912	4 # 31% **46%**	607		86	75	98
146	25140	220		258		70	59	168
147	25141	200		288		85	50	96
148	25142	379		497		91	54	134
149	25143	884	5 # 27% **42%**	483		71	77	196
	Exp Mean	**563**		**460**		**83**	**65**	**143**
	C.D. 5%	252		129		2	8	33
	C.V.%	39.25		39.07		4.09	0.00	28.86
	Sowing Date							
	Planting Date							
	Local ©							

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 1.2: Grain Yield (kg/ha) of entries in IVT-E DS Normal Kharif 2015

Entry No.	IET No.	III						V							
		OD		BI		Zone III Mean (1)		CG		CG		CG (2)		Zone V Mean (2)	
		@CTK		SBR				JDP		RPR		Mean			
101	25103	1997		3600		3600		3526		3233 #		3380	2%	3380	2%
102	25104	1600		3400		3400		4314		4829 #		4572	# **37%**	4572	# **37%**
103	25105	1200		3250		3250		3807		3819 #		3813	# **15%**	3813	# **15%**
104	25106	2640		1600		1600		1545		4581 #		3063		3063	
105	25107	2577		3700		3700		5500	1 *#	2710		4105	# **23%**	4105	# **23%**
106	24690	1023		3600		3600		3032		5692 #		4362	# **31%**	4362	# **31%**
107	25108	2641		3410		3410		2780		4589 #		3685	# **11%**	3685	# **11%**
108	Local Check	1902		2965		2965		4869	5 #	5590 #		5230	5 # **57%**	5230	5 # **57%**
109	25109	1896		3450		3450		3373		5044 #		4208	# **26%**	4208	# **26%**
110	25110	2392		3600		3600		2793		3756 #		3274		3274	
111	25111	1659		4550	3 *	4550	3 * 18% **7%**	3920		3193 #		3557	7%	3557	7%
112	25112	1654		2300		2300		3573		6332	4 #	4952	7 # **49%**	4952	7 # **49%**
113	25113	1602		2500		2500		4150		4939 #		4545	# **37%**	4545	# **37%**
114	24679	2436		3950		3950	3%	5255	3 #	4100 #		4678	# **41%**	4678	# **41%**
115	25114	2644		4400	5 *	4400	5 * 14% **3%**	3949		3559 #		3754	# **13%**	3754	# **13%**
116	25115	4473	4	1600		1600		4021		4594 #		4308	# **29%**	4308	# **29%**
117	25116	2671		3750		3750		3337		5079 #		4208	# **26%**	4208	# **26%**
118	25117	1089		4300	6 *	4300	6 * 12% **1%**	3651		6122	7 #	4887	8 # **47%**	4887	8 # **47%**
119	24692	1666		3600		3600		3065		4439 #		3752	# **13%**	3752	# **13%**
120	25118	3269	9	1000		1000		1761		5993	9 #	3877	# **16%**	3877	# **16%**
121	25119	3718	7	3700		3700		3524		3894 #		3709	# **11%**	3709	# **11%**
122	25120	3055		3700		3700		4448	9	6459	3 #	5453	2 # 4% **64%**	5453	2 # 4% **64%**
123	25121	2357		4200	8	4200	8 9%	2385		5389 #		3887	# **17%**	3887	# **17%**
124	25122	4622	2	1450		1450		4243		3241 #		3742	# **12%**	3742	# **12%**
125	Sahbhagidhan (NC)	4049	6	3850		3850		3572		1364		2468		2468	
126	25123	1088		5550	1 *#	5550	1 *# 44% **30%**	3698		1814		2756		2756	
127	25124	2143		4150		4150	8%	3194		3071 #		3132		3132	
128	25125	3661	8	2545		2545		2430		2452		2441		2441	
129	Vandana (NC)	2932		1300		1300		2531		6218	6 #	4375	# **31%**	4375	# **31%**
130	25126	802		3900		3900	1%	3198		3997 #		3598	8%	3598	8%
131	25127	2026		1950		1950		4478	7	4672 #		4575	# **37%**	4575	# **37%**
132	25128	2329		3800		3800		3277		5866 #		4571	# **37%**	4571	# **37%**
133	Zonal Check	2493		2950		2950		4452	8	5538 #		4995	6 # **50%**	4995	6 # **50%**
134	25129	2919		3900		3900	1%	3243		5538 #		4391	# **32%**	4391	# **32%**
135	25130	1297		4200	9	4200	9 9%	3887		4799 #		4343	# **30%**	4343	# **30%**
136	25131	2611		2850		2850		1161		6057	8 #	3609	8%	3609	8%
137	US 314 (HC)	5350	1 *	4255	7 *	4255	7 * 11%	4083		2575		3329		3329	
138	25132	2849		2550		2550		2898		3697 #		3297		3297	
139	25133	4119	5	1650		1650		2963		4641 #		3802	# **14%**	3802	# **14%**
140	25134	2316		4450	4 *	4450	4 * 16% **5%**	4546	6	6294	5 #	5420	3 # 4% **63%**	5420	3 # 4% **63%**
141	25135	1276		3500		3500		2894		6551	2 #	4722	9 # **42%**	4722	9 # **42%**
142	25136	1379		4050		4050	5%	2813		5903 #		4358	# **31%**	4358	# **31%**
143	25137	2208		3100		3100		2675		3200 #		2938		2938	
144	25138	1722		4800	2 *#	4800	2 *# 25% **13%**	4346		4514 #		4430	# **33%**	4430	# **33%**
145	25139	4479	3	3200		3200		2725		3082 #		2903		2903	
146	25140	2386		2550		2550		1190		5894 #		3542	6%	3542	6%
147	25141	1889		3250		3250		4994	4 #	5628 #		5311	4 # 2% **60%**	5311	4 # 2% **60%**
148	25142	1750		3445		3445		5363	2 #	6793	1 *#	6078	1 *# 16% **83%**	6078	1 *# 16% **83%**
149	25143	2269		1070		1070		1876		4253 #		3065		3065	
	Exp Mean	**2431**		**3273**		**3273**		**3455**		**4604**		**4029**		**4029**	
	C.D. 5%	804		374		374		546		426		353		328	
	C.V.%	20.41		7.05		7.06		9.75		5.71		7.69		7.15	
	Sowing Date	03-Jul		08-Jul				04-Jul		27-Jun					
	Local ©	Satyabama		Prabhat				Sahbhagidhan		Samleshwari					

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 1.2 Contd. : Grain Yield (kg/ha) of entries in IVT-E DS Normal Kharif 2015

Entry No.	IET No.	VII KA GNV		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
101	25103	5555	#	3978	1%	72	95	267
102	25104	5125		4417	# **12%**	80	106	253
103	25105	4727		3901		87	106	283
104	25106	3453		2795		72	104	246
105	25107	4586		4124	5%	80	105	260
106	24690	5516	#	4460	# **13%**	77	100	266
107	25108	3977		3689		90	97	263
108	Local Check	5445	#	4717	# **20%**	77	102	318
109	25109	5086		4238	# **8%**	85	91	320
110	25110	4305		3613		90	99	303
111	25111	5188		4213	# **7%**	76	91	293
112	25112	6031	9 #	4559	# **16%**	92	114	291
113	25113	4805		4099	4%	78	101	288
114	24679	5742	#	4762	9 # **21%**	84	105	288
115	25114	3930		3959	1%	83	100	263
116	25115	3234		3362		73	113	244
117	25116	4438		4151	6%	78	94	339
118	25117	4367		4610	# **17%**	79	96	278
119	24692	6242	7 #	4337	# **10%**	80	108	309
120	25118	2727		2870		72	99	285
121	25119	5531	#	4162	# **6%**	84	103	307
122	25120	5602	#	5052	4 *# 6% **29%**	82	99	329
123	25121	5422	#	4349	# **11%**	78	102	288
124	25122	4188		3280		84	122	262
125	Sahbhagidhan	4859		3411		78	101	271
126	25123	5539	#	4150	6%	81	110	247
127	25124	5617	#	4008	2%	89	108	278
128	25125	4813		3060		77	106	279
129	Vandana (NC)			3350		71	107	234
130	25126	6617	3 *#	4428	# **13%**	85	107	281
131	25127	3727		3706		72	106	298
132	25128	6445	4 #	4847	6 # 2% **23%**	87	101	311
133	Zonal Check	6156	8 #	4774	8 # **21%**	82	97	302
134	25129	5234		4479	# **14%**	81	99	302
135	25130	6320	6 #	4802	7 # 1% **22%**	85	100	285
136	25131	4961		3757		86	94	269
137	US 314 (HC)	4805		3929		81	98	262
138	25132	5414	#	3640		81	98	272
139	25133	4727		3495		81	100	295
140	25134	6344	5 #	5408	1 *# 13% **38%**	80	96	299
141	25135	4742		4422	# **13%**	90	87	282
142	25136	6922	1 *#	4922	5 # 3% **25%**	89	102	280
143	25137	5766	#	3685		81	102	264
144	25138	6883	2 *#	5136	3 *# 8% **31%**	77	110	275
145	25139	5305	#	3578		81	106	272
146	25140	3969		3401		76	96	282
147	25141	5156		4757	# **21%**	79	100	297
148	25142	5188		5197	2 *# 9% **32%**	87	117	284
149	25143	4977		3044		73	108	252
	Exp Mean	**5119**		**4108**		**81**	**102**	**282**
	C.D. 5%	432		227		1		22
	C.V.%	5.21		6.89		1.82		10.93
	Sowing Date	13-Aug						
	Local ©	IET 19251						

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 1.3 : Days to 50% flowering of entries in IVT-E DS Drought Kharif 2015

Entry No.	IET No.	III	VII		Zone VII (1)	Overall (2)
		BI	A.P.	KA		
		PSA	NND	@MGD	Mean	Mean
101	25103	72	69	91	69	70
102	25104	96	70	103	70	83
103	25105	110	71	126	71	91
104	25106	72	54	78	54	63
105	25107	71	73	95	73	72
106	24690	72	62	91	62	67
107	25108	90	73		73	81
108	Local Check	81	64		64	72
109	25109	100	74	112	74	87
110	25110	92	75	124	75	83
111	25111	73	62	91	62	68
112	25112	99	74	117	74	86
113	25113	71	68	95	68	69
114	24679	58	74	114	74	66
115	25114	75	65		65	70
116	25115	70	61	92	61	65
117	25116	74	72	97	72	73
118	25117	95	75	118	75	85
119	24692	71	65	94	65	68
120	25118	59	55	75	55	57
121	25119	94	72	112	72	83
122	25120	80	69	98	69	74
123	25121	86	72	102	72	79
124	25122	87	65	102	65	76
125	Sahbhagidhan (NC)	81	65	81	65	73
126	25123	75	64	98	64	69
127	25124	87	74	114	74	80
128	25125	56	63	79	63	59
129	Vandana (NC)	64	57	78	57	61
130	25126	86	68	98	68	77
131	25127	60	63	78	63	61
132	25128	91	73	98	73	82
133	Zonal Check	72	74	107	74	73
134	25129	81	72	103	72	76
135	25130	92	75	118	75	83
136	25131	88	73	111	73	80
137	US 314 (HC)	74	69	103	69	71
138	25132	81	73	97	73	77
139	25133	67	55	89	55	61
140	25134	92	73	97	73	82
141	25135	106	75	112	75	90
142	25136	96	70	119	70	83
143	25137	77	74	95	74	75
144	25138	80	69	97	69	74
145	25139	71	63	89	63	67
146	25140	67	56	76	56	62
147	25141	88	72		72	80
148	25142	104	75	127	75	89
149	25143	60	62	87	62	61
	Exp Mean	**80**	**68**	**100**	**68**	**74**
	C.D. 5%	1	2	0	2	1
	C.V.%	1.15	1.50	0.00	1.51	1.31

Table No. 1.4: Plant Height (cm) of entries in IVT-E DS Drought Kharif 2015

Entry No.	IET No.	III	VII		Zone VII (2)	Overall (3)
		BI	A.P.	KA		
		PSA	NND	MGD	Mean	Mean
101	25103	89	90	67	79	82
102	25104	105	107	61	84	91
103	25105	80	82		82	81
104	25106	91	98	80	89	90
105	25107	90	92	46	69	76
106	24690	111	88	68	78	89
107	25108	90	74	46	60	70
108	Local Check	84	77	52	64	71
109	25109	90	74		74	82
110	25110	98	88		88	93
111	25111	91	75	60	68	75
112	25112	102	121		121	112
113	25113	69	81	58	69	69
114	24679	78	93		93	85
115	25114	103	102	78	90	94
116	25115	107	111	63	87	94
117	25116	80	72	58	65	70
118	25117	94	92	60	76	82
119	24692	115	101	61	81	92
120	25118	92	95	75	85	87
121	25119	86	77	68	72	77
122	25120	100	86	75	81	87
123	25121	84	88	65	76	79
124	25122	145	119	96	108	120
125	Sahbhagidhan (NC)	85	94	60	77	80
126	25123	102	109	64	86	92
127	25124	124	111	63	87	100
128	25125	112	113	50	82	92
129	Vandana (NC)	103	93	73	83	90
130	25126	124	95	62	78	94
131	25127	88	101	62	82	84
132	25128	84	86	52	69	74
133	Zonal Check	96	90	61	75	82
134	25129	89	86	53	70	76
135	25130	100	91	68	80	86
136	25131	98	76	46	61	73
137	US 314 (HC)	95	77	44	61	72
138	25132	92	84	61	72	79
139	25133	83	95	71	83	83
140	25134	90	86	58	72	78
141	25135	70	62	50	56	61
142	25136	105	94	65	80	88
143	25137	100	99	63	81	87
144	25138	96	112	65	88	91
145	25139			60	60	60
146	25140	72	54	41	48	56
147	25141	83	94		94	89
148	25142	100	114		114	107
149	25143	107		37	37	72
	Exp Mean	**95**	**92**	**61**	**78**	**84**

Table No. 1.3: Days to 50% flowering of entries in IVT-E DS Severe Drought Kharif 2015

Entry No.	IET No.	III			Zone III (2)	V	VI			Zone VI (2)	Overall (5)
		JH	JH	JH (2)		M.P.	GU	GU	GU (2)		
		RCI	HZB	Mean	Mean	REW	DRL	VYR	Mean	Mean	Mean
101	25103	86		86	86	64	89	73	81	81	78
102	25104	92	90	91	91		92	72	82	82	87
103	25105					69	117	81	99	99	89
104	25106	68	75	71	71	73	86	90	88	88	78
105	25107						87	79	83	83	83
106	24690	92	84	88	88	84	91	77	84	84	86
107	25108						102	78	90	90	90
108	Local Check	61	75	68	68	59	73	74	73	73	68
109	25109						108	74	91	91	91
110	25110						110	84	97	97	97
111	25111	87		87	87	81	88	84	86	86	85
112	25112						112	78	95	95	95
113	25113	86	92	89	89	83	86	77	81	81	85
114	24679						96	78	87	87	87
115	25114	92	89	91	91	83	86	78	82	82	86
116	25115	75	82	79	79	80	82	72	77	77	78
117	25116						89	78	84	84	84
118	25117						106	81	93	93	93
119	24692	92	85	88	88	73	91	82	86	86	84
120	25118	67	70	69	69	71	76	78	77	77	72
121	25119						108	79	94	94	94
122	25120	92	92	92	92		96	83	89	89	91
123	25121	91		91	91	71	73	81	77	77	79
124	25122					72	110	88	99	99	90
125	Sahbhagidhan (NC)		88	88	88		89	90	90	90	89
126	25123		87	87	87		88	76	82	82	84
127	25124					70	74	86	80	80	77
128	25125	73	77	75	75	69	74	70	72	72	73
129	Vandana (NC)	66	73	70	70	69	76	82	79	79	73
130	25126						101	79	90	90	90
131	25127	69	76	73	73	75	62	68	65	65	70
132	25128					75	104	84	94	94	88
133	Zonal Check	90		90	90		75	85	80	80	83
134	25129						104	83	94	94	94
135	25130					74	104	76	90	90	85
136	25131					68	104	82	93	93	85
137	US 314 (HC)					70	91	81	86	86	81
138	25132	92		92	92		94	83	89	89	90
139	25133		90	90	90	83	91	75	83	83	85
140	25134					75	108	77	93	93	87
141	25135					73	114	80	97	97	89
142	25136					77	107	77	92	92	87
143	25137	92		92	92	71	91	84	87	87	84
144	25138		89	89	89	76	88	83	85	85	84
145	25139	91	86	89	89	84	87	81	84	84	86
146	25140	64	74	69	69	81	60	71	65	65	70
147	25141					77	103	74	88	88	85
148	25142					68	112	92	102	102	91
149	25143	69	73	71	71	61	72	79	75	75	71
	Exp Mean	**81**	**82**	**82**	**82**	**74**	**92**	**80**	**86**	**86**	**83**
	C.D. 5%	2	3	2	2	4	4	9	5	5	2
	C.V.%	1.68	2.40	2.22	2.16	3.08	2.51	6.65	4.76	4.76	4.09

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Table No. 1.3: Days to 50% flowering of entries in IVT-E DS Normal Kharif 2015

Entry No.	IET No.	III		Zone III (2)	V			Zone V (2)	VII	Overall (5)
		OD	BI		CG	CG	CG (2)		KA	
		CTK	SBR	Mean	JDP	RPR	Mean	Mean	GNV	Mean
101	25103	71	67	69	77	61	69	69	82	72
102	25104	79	76	78	78	86	82	82	81	80
103	25105	74	96	85	90	88	89	89	85	87
104	25106	62	65	63	66	90	78	78	78	72
105	25107	73	69	71	77	98	88	88	85	80
106	24690	68	70	69	77	88	82	82	84	77
107	25108	82	93	87	86	90	88	88	101	90
108	Local Check	81	67	74	76	84	80	80	77	77
109	25109	81	77	79	82	88	85	85	99	85
110	25110	81	80	81	91	96	94	94	100	90
111	25111	74	67	70	75	87	81	81	77	76
112	25112	73	88	80	101	94	98	98	105	92
113	25113	77	68	72	76	88	82	82	85	78
114	24679	76	76	76	80	88	84	84	103	84
115	25114	79	75	77	85	95	90	90	80	83
116	25115	68	68	68	69	80	75	75	78	73
117	25116	75	72	73	76	88	82	82	82	78
118	25117	76	85	80	79	76	77	77	79	79
119	24692	70	70	70	79	98	88	88	82	80
120	25118	84	64	74	64	72	68	68	76	72
121	25119	81	75	78	94	87	90	90	86	84
122	25120	81	75	78	83	88	85	85	83	82
123	25121	81	75	78	83	72	78	78	80	78
124	25122	81	81	81	86	89	87	87	85	84
125	Sahbhagidhan (NC)	77	74	76	85	76	81	81	76	78
126	25123	78	74	76	89	63	76	76	104	81
127	25124	80	81	81	90	86	88	88	107	89
128	25125	82	64	73	70	88	79	79	81	77
129	Vandana (NC)	70	65	67	64	85	75	75		71
130	25126	80	77	78	85	99	92	92	85	85
131	25127	63	63	63	71	88	79	79	78	72
132	25128	81	79	80	83	91	87	87	102	87
133	Zonal Check	68	65	67	76	101	88	88	99	82
134	25129	75	72	73	88	89	88	88	84	81
135	25130	73	86	79	92	88	90	90	88	85
136	25131	82	82	82	95	90	92	92	84	86
137	US 314 (HC)	75	74	75	85	86	85	85	85	81
138	25132	76	72	74	76	101	88	88	82	81
139	25133	82	65	73	74	94	84	84	92	81
140	25134	82	76	79	79	78	78	78	85	80
141	25135	79	94	86	90	85	87	87	103	90
142	25136	80	83	81	91	90	90	90	104	89
143	25137	77	75	76	85	86	86	86	80	81
144	25138	81	73	77	80	68	74	74	82	77
145	25139	74	70	72	78	80	79	79	102	81
146	25140	82	57	70	60	94	77	77	86	76
147	25141	73	72	73	82	81	82	82	87	79
148	25142	72	95	83	98	84	91	91	86	87
149	25143	65	64	65	68	88	78	78	82	73
	Exp Mean	**76**	**74**	**75**	**81**	**86**	**83**	**83**	**87**	**81**
	C.D. 5%	4	1	2	2	3	2	2	2	1
	C.V.%	2.85	0.73	2.12	1.30	1.96	1.68	1.68	1.58	1.82

Table No. 1.4: Plant Height (cm) of entries in IVT-E DS Severe Drought Kharif 2015

Entry No.	IET No.	III			Zone III Mean (2)	V	VI			Zone VI Mean (2)	Overall Mean (5)
		JH	JH	JH (2)		M.P.	GU	GU	GU (2)		
		RCI	HZB	Mean		REW	DRL	VYR	Mean		
101	25103	68	45	56	56	53	61	74	67	67	60
102	25104		55	55	55		86	93	90	90	78
103	25105		35	35	35	36	51	72	61	61	48
104	25106	79	49	64	64	68	59	128	94	94	77
105	25107		47	47	47		74	80	77	77	67
106	24690					63	77	91	84	84	77
107	25108		43	43	43		59	74	67	67	59
108	Local Check	86	47	66	66	59	87	95	91	91	75
109	25109		40	40	40		51	91	71	71	61
110	25110		34	34	34		55	76	66	66	55
111	25111	62		62	62	51	80	83	81	81	69
112	25112		53	53	53		94	80	87	87	76
113	25113	66	40	53	53	43	67	69	68	68	57
114	24679		38	38	38		71	88	80	80	66
115	25114		67	67	67	44	83	84	83	83	69
116	25115	82	62	72	72	66	82	95	89	89	78
117	25116		35	35	35		62	75	68	68	57
118	25117		46	46	46		73	73	73	73	64
119	24692		51	51	51	51	84	84	84	84	67
120	25118	88	59	74	74	67	93	94	93	93	80
121	25119		41	41	41		52	92	72	72	62
122	25120		42	42	42		59	78	69	69	60
123	25121		40	40	40	44	97	84	90	90	66
124	25122		61	61	61	55	97	91	94	94	76
125	Sahbhagidhan (NC)		51	51	51		82		82	82	67
126	25123		51	51	51		89	97	93	93	79
127	25124		42	42	42	41	86	89	88	88	65
128	25125	78	53	65	65	52	83	77	80	80	69
129	Vandana (NC)	82	53	68	68	62	77	79	78	78	71
130	25126		44	44	44		70	83	77	77	66
131	25127	78	50	64	64	47	78	81	79	79	67
132	25128		36	36	36	44	50	75	62	62	51
133	Zonal Check		33	33	33		72	80	76	76	62
134	25129		43	43	43		59	73	66	66	58
135	25130		45	45	45	44	76	83	79	79	62
136	25131		30	30	30	38	61	69	65	65	49
137	US 314 (HC)		43	43	43	51	71	82	77	77	62
138	25132		43	43	43		77	74	75	75	65
139	25133		60	60	60	52	60	90	75	75	66
140	25134		33	33	33	42	52	78	65	65	51
141	25135		32	32	32	35	49	66	57	57	45
142	25136		41	41	41	45	77	75	76	76	59
143	25137		51	51	51	50	77	88	82	82	66
144	25138		49	49	49	48	86	79	82	82	65
145	25139		56	56	56	61	86	98	92	92	75
146	25140	71	51	61	61	48	50	74	62	62	59
147	25141		42	42	42	51	57		57	57	50
148	25142		36	36	36	46	53	80	66	66	54
149	25143	82	55	69	69	68	87	92	90	90	77
	Exp Mean	**77**	**46**	**52**	**52**	**51**	**72**	**83**	**77**	**77**	**65**
	C.D. 5%			5	5						8

Table No. 1.4 : Plant Height (cm) of entries in IVT-E DS Normal Kharif 2015

Entry No.	IET No.	III		Zone III (2)	V			Zone V (2)	VII	Overall (5)
		OD	BI		CG	CG	CG (2)		KA	
		CTK	SBR	Mean	JDP	RPR	Mean	Mean	GNV	Mean
101	25103	91	108	99	87	105	96	96	86	95
102	25104	103	121	112	110	99	105	105	99	106
103	25105	103	120	111	101	116	109	109	89	106
104	25106	97	120	108	108	103	105	105	93	104
105	25107	101	118	110	106	107	106	106	93	105
106	24690	102	114	108	100	88	94	94	96	100
107	25108	97	128	113	91	95	93	93	76	97
108	Local Check	104	103	103	101	108	105	105	94	102
109	25109	92	104	98	74	101	87	87	83	91
110	25110	103	114	108	82	106	94	94	93	99
111	25111	93	109	101	79	97	88	88	77	91
112	25112	94	136	115	106	121	113	113	116	114
113	25113	102	106	104	93	113	103	103	89	101
114	24679	107	103	105	119	119	119	119	80	105
115	25114	105	116	111	91	96	94	94	94	100
116	25115	101	132	117	118	115	116	116	100	113
117	25116	102	97	99	71	101	86	86	101	94
118	25117	105	109	107	91	89	90	90	88	96
119	24692	105	117	111	100	99	100	100	118	108
120	25118	102	127	115	92	86	89	89	90	99
121	25119	102	110	106	94	115	105	105	93	103
122	25120	105	112	108	95	101	98	98	84	99
123	25121	104	105	105	94	122	108	108	84	102
124	25122	109	153	131	128	102	115	115	116	122
125	Sahbhagidhan (NC)	108	117	112	101	84	92	92	95	101
126	25123	106	137	121	113	81	97	97	112	110
127	25124	103	134	119	100	101	101	101	102	108
128	25125	109	122	115	100	111	106	106	88	106
129	Vandana (NC)	104	128	116	95	99	97	97		107
130	25126	107	125	116	94	112	103	103	97	107
131	25127	90	119	105	111	109	110	110	99	106
132	25128	103	115	109	89	109	99	99	88	101
133	Zonal Check	107	101	104	80	101	90	90	96	97
134	25129	105	109	107	83	108	96	96	91	99
135	25130	89	112	101	87	105	96	96	105	100
136	25131	102	97	99	84	101	93	93	87	94
137	US 314 (HC)	108	112	110	87	100	94	94	82	98
138	25132	106	113	110	85	96	90	90	88	98
139	25133	113	116	114	91	90	91	91	90	100
140	25134	103	106	104	89	97	93	93	84	96
141	25135	102	86	94	70	105	88	88	70	87
142	25136	104	106	105	89	106	97	97	105	102
143	25137	106	114	110	97	88	92	92	104	102
144	25138	103	120	111	111	102	106	106	115	110
145	25139	94	121	108	106	98	102	102	114	106
146	25140	104	91	97	80	118	99	99	89	96
147	25141	108	106	107	95	103	99	99	91	100
148	25142	103	137	120	118	113	115	115	112	117
149	25143	102	135	119	103	97	100	100	103	108
	Exp Mean	**102**	**116**	**109**	**96**	**103**	**99**	**99**	**95**	**102**
	C.D. 5%		0		0				0	
	C.V.%		0.00		0.00				0.00	

Table No. 1.5: Panicles/ M^2 of entries in IVT-E DS Drought Kharif 2015

Entry No.	IET No.	III	VII		Zone VII (1)	Overall (2)
		BI	A.P.	KA		
		PSA	@NND	MGD	Mean	Mean
101	25103	264	929	272	272	268
102	25104	213	690	272	272	242
103	25105	256	722			256
104	25106	256	433	259	259	257
105	25107	258	454	288	288	273
106	24690	276	673	275	275	276
107	25108	242	555	218	218	230
108	Local Check	254	1024	248	248	251
109	25109	252	743			252
110	25110	240	505			240
111	25111	223	510	295	295	259
112	25112	280	691			280
113	25113	261	819	305	305	283
114	24679	193	815			193
115	25114	220	432	285	285	252
116	25115	243	745	232	232	237
117	25116	270	432	317	317	293
118	25117	262	481	308	308	285
119	24692	260	476	282	282	271
120	25118	254	562	266	266	260
121	25119	260	823	248	248	254
122	25120	219	512	322	322	270
123	25121	256	551	320	320	288
124	25122	213	456	310	310	261
125	Sahbhagidhan (NC)	239	609	295	295	267
126	25123	215	862	307	307	261
127	25124	239	521	235	235	237
128	25125	288	378	307	307	297
129	Vandana (NC)	253	717	280	280	266
130	25126	260	776	238	238	249
131	25127	226	623	280	280	253
132	25128	238	1055	248	248	243
133	Zonal Check	254	1572	258	258	256
134	25129	241	616	308	308	274
135	25130	255	602	288	288	271
136	25131	267	354	230	230	249
137	US 314 (HC)	262	471	205	205	234
138	25132	234	714	250	250	242
139	25133	225	704	280	280	252
140	25134	212	569	242	242	227
141	25135	220	732	277	277	248
142	25136	236	587	238	238	237
143	25137	258	223	247	247	252
144	25138	285	683	242	242	263
145	25139	232	561	310	310	271
146	25140	224	783	265	265	244
147	25141	223	1151			223
148	25142	239	653			239
149	25143	246	753	235	235	241
	Exp Mean	**244**	**659**	**271**	**232**	**257**
	C.D. 5%	40	450	53	53	
	C.V.%	10.04	42.13	12.14	12.07	

Table No. 1.5: Panicles/ M² of entries in IVT-E DS Severe Drought Kharif 2015

Entry No.	IET No.	III			Zone III (2)	VI			Zone VI (2)	Overall (4)
		JH	JH	JH (2)		GU	GU	GU (2)		
		RCI	HZB	Mean	Mean	DRL	VYR	Mean	Mean	Mean
101	25103					101	201	151	151	151
102	25104		52	52	52	73	324	198	198	150
103	25105					77	224	151	151	151
104	25106	238	57	147	147	92	188	140	140	144
105	25107					69	176	123	123	123
106	24690		61	61	61	72	288	180	180	140
107	25108					74	193	133	133	133
108	Local Check	291	35	163	163	92	190	141	141	152
109	25109					73	202	137	137	137
110	25110					61	147	104	104	104
111	25111	70		70	70	104	231	167	167	135
112	25112	123		123	123	100	200	150	150	141
113	25113		22	22	22	97	164	131	131	95
114	24679					105	177	141	141	141
115	25114		45	45	45	104	158	131	131	103
116	25115	222	77	150	150	107	201	154	154	152
117	25116					84	269	176	176	176
118	25117					62	211	137	137	137
119	24692		46	46	46	104	196	150	150	115
120	25118	352	132	242	242	46	172	109	109	176
121	25119					102	212	157	157	157
122	25120		16	16	16	115	185	150	150	105
123	25121					109	161	135	135	135
124	25122					74	262	168	168	168
125	Sahbhagidhan (NC)		33	33	33	86		86	86	59
126	25123		46	46	46	71	155	113	113	91
127	25124					107	266	187	187	187
128	25125	330	68	199	199	117	164	141	141	170
129	Vandana (NC)	298	58	178	178	66	274	170	170	174
130	25126					118	210	164	164	164
131	25127	395	57	226	226	94	216	155	155	191
132	25128					67	238	153	153	153
133	Zonal Check					103	284	194	194	194
134	25129					58	238	148	148	148
135	25130					55	190	123	123	123
136	25131					56	114	85	85	85
137	US 314 (HC)					52	268	160	160	160
138	25132					52	162	107	107	107
139	25133		61	61	61	73	149	111	111	94
140	25134					119	323	221	221	221
141	25135					89	216	153	153	153
142	25136					94	214	154	154	154
143	25137					95	261	178	178	178
144	25138		19	19	19	67	196	132	132	94
145	25139		55	55	55	66	173	119	119	98
146	25140	334	67	201	201	84	188	136	136	168
147	25141					96		96	96	96
148	25142					81	187	134	134	134
149	25143	385	91	238	238	106	204	155	155	196
	Exp Mean	**276**	**55**	**133**	**133**	**85**	**209**	**146**	**146**	**143**
	C.D. 5%	126	40	87	54	10	59	30	30	33
	C.V.%	26.74	44.30	56.53	35.35	7.34	17.53	17.92	17.92	28.86

Table 1.6 Grain Quality Characteristics of entries in IVT-E DS, Kharif 2015

		IIRR											NRRI		
Entry No.	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**GT**	**Grain Chalk**	**ASV**	**AC**	**GC**	**ASV**	**AC**	**GC**
106	24690	78.4	69.9	59.6	5.81	2.30	2.52	MS	VOC	4.0	22.76	46	4.0	20.55	48
114	24679	79.2	68.2	58.6	5.61	2.14	2.62	MS	VOC	4.0	25.69	42	5.0	23.40	36
119	24692	77.4	69.4	67.1	5.82	2.25	2.58	MS	VOC	4.0	22.26	50	4.0	21.15	44
125	Sahbhagi Dhan	78.9	68.6	49.7	5.61	2.30	2.43	SB	VOC	7.0	22.99	22	7.0	21.60	48
129	Vandana	76.3	65.4	37.4	5.88	2.27	2.59	MS	VOC	4.0	25.49	47	4.0	23.10	47
133	Tulasi(ZC)	79.6	69.7	58.2	6.99	2.13	3.28	LS	VOC	7.0	24.52	30	6.3	24.22	45
137	US 314 (HC)	81.0	70.2	55.0	5.60	2.27	2.46	SB	VOC	3.0	25.02	51	4.0	18.82	53

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; GT: Grain Type; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

RAINFED LOWLAND TRIALS

Rice crop is grown in monsoon ridden low land situations under constant threat of inundation and submergence. Rainfed lowland rice including deep water, of which 92 percent is distributed in eastern India (Assam, Bihar, West Bengal, Eastern Uttar Pradesh and Chhattisgarh) and North Eastern states. Flooding is a serious constraint to plant growth and survival in rainfed lowland and deep water areas because excessive water results in partial or complete submergence of the plant. The potential of the genotype under such conditions depends not only on yield but also on adaptability parameters like early seedling vigour, seedling survival, kneeing and elongation abilities, semi tall to tall stature with sturdy culm, low grain shattering, submergence and drought tolerance, good phenotypic acceptability and multiple resistance to pests and diseases which are some of the key traits to be pooled together during breeding varieties for getting high yields in this harsh ecology. About 40% of the total rice area in the country is occupied by rainfed lowlands (15.3 m.ha.) and the yield levels are very low compared to irrigated ecosystem. To increase the productivity of this ecology, we need highly productive and submergence/drought tolerant varieties coupled with good adaptability parameters. Various water depths of 30-100 cm and above, recurrent submergence with drought spells characterize this difficult ecosystem and classified as shallow water (up to 40 cm), semi deep water (41-75 cm) and deep water (76-120 cm). With the objective of enhancing the yield potential of this ecosystem 6 trials viz., AVT-1-RSL, IVT RSL, AVT-1-SDW, IVT-SDW, NSDWSN and IVT-DW were conducted with 13, 58, 11, 14, 47 and 17 entries at 12, 12, 11, 11, 11 and 5 locations, respectively and the results are summarized in this chapter.

ADVANCED VARIETY TRIAL 1-RAINFED SHALLOW LOWLAND (AVT 1-RSL)

Locations:	**12**	**Entries: 13**
Checks:	**National: Dhanrasi; Zonal: Pooja-(Eastern), Bahadur-(North Eastern), Savitri- (Southern) and Local**	**Tables: 2.1**

The trial was constituted with 13 entries including three checks *viz*., Dhanrasi (NC), Pooja for the Eastern zone, Bahadur for North Eastern and Savitri for the Southern zone and a local check. Of the ten test entries, eight were in second year and two in third year of testing. The trial was sent to 12 locations; however data was not received from Chakda. CV of the experiments ranged from 1.57 % (Mugad) to 27.57 % (Ranchi). Experimental mean yield varied from 849 kg/ha at Mugad to 5453 kg/ha at Patna. Mean yield of entries varied from 3623 kg/ha (IET 23561) to 5155 kg/ha (IET 24474). Mean days to 50% flowering ranged from 114 days (IET 24450) to 135 days (IET 23561). Mean panicles/m^2 varied from 247 (IET 23930) to 289 (Zonal check) and mean plant height ranged from 83 cm (IET 24450) to 132 cm (IET 24471). Data from four locations viz., Ranchi, Masodha, Gerua and Mugad was not included in overall mean yield analysis as the experimental mean yield at these locations was less than 2500 kg/ha. On overall mean yield performance, two entries *viz*., IETs 24474 and 23565 recorded yield superiority over the best check. In addition to these, two more entries IET 23930 and IET 24367 in the eastern and three entries (IETs 24451, 23565 and 24471) in the southern zone recorded yield superiority of more than 5% over the best check. The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.2, 2.3, 2.4 and 2.5.

On overall basis:

IET 24474 (OR 2330-1-1), a cross between OR 1530-1 and NDR 8003 with short bold grains and 130 days to 50% flowering recorded a mean yield of 5155 kg/ha with yield superiority of 35.82 %, 10.91 ***%*** and 23.30 % over NC, RC and LC, respectively. It ranked first with 10 and 41 % higher yield than best check in Odisha and West Bengal, respectively. It yielded 6762 kg/ha at Cuttack and 6734 kg/ha at Chinsurah. It ranked first in the Eastern zone with 25.02 % yield superiority over the best check. It has quality characters like high HRR (70.4 %), ASV (4.0), AC (24.93%) and GC (22) (Table 2.6)

Overall performance of promising entries in AVT 1-RSL, Kharif 2015

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield advantage over NC/ ZC/ LC	Superior to check/yield (kg/ha)/rank	% Increase over the best check			
					State		Zone	
				3 checks	Rank/ Yield	% BC	Rank/ yield	% BC
1	24474 (OR 2330-1-1) OR 1530-1/ NDR 8003	5155 130 SB	35.82 ***10.91*** 23.30	CTK 6762 (1) CHN 6734 (1)	OD-1 WB-1	9.59 41.00	Z III-1	25.02
2	23565 (OR 2380-2) Mahanadi/ RAYADA-B3	5009 130 LB	31.97 ***7.76*** 19.80	PTN 7156 (1) CHN 6117 (2) SRS 6648 (1)	BI-1 WB-2 KA-3	9.90 28.00 6.00	Z III-2 Z VII-3	20.05 5.76
	Dhanrasi (NC)	3796						
	Zonal Check	***4648***						
	Local Check	4181						

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BC- Best Check

IET 23565 (OR 2380-2), a cross of Mahanadi/RAYADA-B3 with long bold grains and 130 days to 50% flowering recorded a mean yield of 5009 kg/ha and yield superiority of 31.97, 7.76 and 19.80 % over NC, ZC and LC, respectively. It ranked first in Bihar, second in West Bengal and third in Karnataka with 9.9, 28 and 6 % superiority over the best check respectively. It yielded 7156 kg/ha at Patna, 6117 kg/ha at Chinsurah and 6648 kg/ha at Sirsi centers. It ranked second and third with 20.05 and 5.76 % higher yield than best check in Eastern and Southern zones respectively. It has quality characters like high HRR (64.8 %), ASV (5), AC (25.66%) and GC (44 mm).

In addition to IETs 24474 and 23565, IETs 23930 and 24367 showed more than 5 % yield advantage over best check in Eastern zone and three entries IETs 24451, 24471 and 23565 in the Southern zone.

Zonal performance of promising entries in AVT 1- RSL, Kharif 2015

Rank	IET No./ Designation/ Cross Combination	GY/ FD/ GT	Yield Adv. (%) over NC/ZC/LC	Superior to check/Yield (kg/ha)/Rank	% increase over the best check			
					State		Zone	
				3 checks	Rank/ Yield	% BC	Rank/ Yield	% BC
Zone III (Eastern)								
1	24474 (OR 2330-1-1) OR 1530-1/ NDR 8003	5800 128 SB	40.63 ***25.02*** 25.85	CTK 6762 (1) CHN 6734 (1)	OD-1 WB-1	9.59 41.00	Z III-1	25.02
2	23565 (OR 2380-2) Mahanadi/ RAYADA-B3	5569 125 LB	35.05 ***20.05*** 20.85	PTN 7156 (1) CHN 6117 (2)	BI-1 WB-2	9.90 28.00	Z III-2	20.05

Rank	IET No./ Designation/ Cross Combination	GY/ FD/ GT	Yield Adv. (%) over NC/ZC/LC	Superior to check/Yield (kg/ha)/Rank	% increase over the best check			
					State		Zone	
				3 checks	Rank/ Yield	% BC	Rank/ Yield	% BC
3	24367 OR 2344-1 Jagannath/ IR 21567-1-18-3	5013 122 SB	21.55 ***8.05*** 8.77	PTN 6933 (2)	BI-2	6.48	Z III-3	8.05
4	23930 (MTU 1169) PLA 1100/ CR 1009	4885 126 MS	18.46 ***5.30*** 6.00	CHN 5135 (4)	WB-4	8.00	Z III-4	5.30
	Dhanrasi (NC)	4124						
	Zonal Check	***4639***						
	Local Check	4608						
Zone VII (Southern)								
1	24451 (MGD-1403) IR-43581/IR 26940-20-3-3-3/KDML-105	4475 109 LB	51.49 ***11.21*** 43.90	SRS 5150 (2) PNP 3799 (1)	KA-1	11.00	Z VII-1	11.00
2	24471 (CR2683-45-1-2-2-1) CRLC 899/ Ac.38700	4287 118 LB	45.14 ***6.54*** 37.86	PNP 3734 (2)	KA-2	7.00	Z VII-2	7.00
3	23565 (OR 2380-2) Mahanadi/ RAYADA-B3	4256 126 LB	44.08 ***5.76*** 36.85	6648 SRS (1)	KA-3	6.00	Z VII-3	6.00
	Dhanrasi (NC)	2954						
	Zonal Check	***4024***						
	Local Check	3110						

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BC- Best Check

The following entries were promoted to AVT2-RSL based on overall/zonal mean performance:

Based on overall mean performance, only one entry IET 24474 (OR 2330-1-1) is promoted to AVT2-RSL.

Based on zonal performance:

Eastern Zone (Z - III): IET 23930 (MTU 1169) and IET 24367 (OR 2344-1);

Southern Zone (Z -VII): IETs 24451 (MGD-1403) and 24471 (CR 2683-45-1-2-2-1**) are promoted to AVT 2-RSL.**

Other entry IET 23565 (OR 2380-2) completed three years testing with more than 5% superiority and is discussed below.

Three year performance of promising entries in AVT 1-RSL, Kharif 2015

IET No./ Designation/ Cross Combination	Year	GY/ FD/GT	Yield Adv. (%) over NC/ZC/LC	% increase over the best check			
				State		Zone/Region	
				Rank/ Yield	% BC	Rank/ Yield	% BC
23565 (OR 2380-2) Mahanadi/ RAYADA-B3	2015 (Overall basis)	5009 130 LB	31.97 ***7.76*** 19.80	BI-1 WB-2 KA-3	9.90 28.00 6.00	Z III-2 Z VII-3	20.05 5.76
	2014 (Zonal basis)	6681 117 MS	16.6 23.27 ***12.87***	KA-1	12.87	RV-1	12.87
	2013 (Regional basis)	5028 124 MS	23.32 14.32 ***5.56***				

Three years performance of entries in RSL

IET 23565 (OR 2380-2), a cross between Mahanadi/RAYADA-B3 with long bold grains had shown superiority of more than 5% over the best check in all the three years of testing. However it has not shown consistency in performance neither on overall basis or in any region/zone/state. It recorded 7.76 % yield advantage over the best check on overall basis only in 2015, while it showed 5.56 % superiority in eastern region in 2013 and 12.87 % superiority over best check in 2014 in Southern zone (Zone VII-erstwhile Region V). It ranked 3rd and 1st in Karnataka state in 2015 and 2014. It showed superiority over best check with 9.9% in Bihar state and 28% in West Bengal only during 2015. Hence, it is identified as promising for Karnataka state only.

INITIAL VARIETY TRIAL-RAINFED SHALLOW LOWLAND (IVT-RSL)

Locations:	**12**	**Entries: 58**
Checks:	**National: Dhanrasi; Zonal: Pooja (Eastern), Bahadur (North Eastern) and Savitri (Southern) and Local**	**Tables: 2.7**

The trial was constituted with 58 entries including three checks *viz*., Dhanrasi (NC), Puja for the Eastern zone, Bahadur for North eastern zone, Savitri for the Southern zone and a local check. Remaining fifty five entries were new nominations. Data was received from all the 12 centres.

CV of the experiments ranged from 2.44 % (Mugad) to 26.06 % (Ranchi). Experimental mean yield varied from 275 kg/ha at Mugad to 4761 kg/ha at Titabar. Mean yield of the entries varied from 2425 kg/ha (IET 25010) to 4818 kg/ha (Zonal check)). Days to 50% flowering ranged from 102 days (IET 25008) to 139 days (IET 25019). Mean panicles/m^2 varied from 240 (IETs 25024 and 25025) to 326 (IET 25006) and mean plant height ranged from 78 cm (IET 25006) to 142 cm (IET 25019). Data from Ranchi was not included in the analysis of overall mean yield as CV% at this location was higher than 25%. Similarly data from Masodha and Mugad was also not included in the analysis, as experimental mean yield at these locations was lower than the minimum of 2500 kg/ha. At Mugad many of the entries could not survive due to severe drought at all stages of crop growth. The drought was also experienced at Masodha hence yield was very poor. The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.8, 2.9, 2.10 and 2.11.

On overall yield basis, none of the entry was superior in yield performance than the best check, however in the Southern zone, fourteen entries *viz*., IETs 25048, 25015, 25013, 25040, 25031, 25033, 25014, 25044, 25038, 25042, 25046, 24491, 25037 and 24998 recorded yield superiority of more than 5% over the best check.

IET 25048 (VNR-217) derived from the cross between VNRF-83/VNRB-412 with medium slender grains and 107 days to 50% flowering, recorded a mean yield of 4936 kg/ha with yield superiority of 41.07, 28.58 and 50.12 % over National, Zonal and Local checks, respectively. It ranked first in Sirsi and yielded 6042 kg/ha.

Overall performance of promising entries in IVT-RSL, Kharif 2014

Rank	IET No./Designation/ Cross combination	GY/ FD/ GT	Yield adv. (%) over NC/ZC/LC	Superior to check / yield (kg/ha) / rank	Increase over the best check	
					State	
				3 checks	Rank/ Yield	% BC
1	25048 (VNR-217) VNRF-83/ VNRB-412	4936 107 MS	41.07 ***28.58*** 50.12	SRS 6042 (1) PNP 3830	KA-1	28.58
2	25015 (OR(T)-30) Lalat Mutant	4871 MS 113	39.21 ***26.88*** 48.14	SRS 5764 (2) PNP 3978 (7)	KA-2	26.88
3	25013 (CIARI Dhan 6) IR730112-137-2-22/ PSBRC 10	4466 112 LS	27.64 ***16.33*** 35.83	SRS 5081 PNP 3852 (9)	KA-3	16.33
4	25040 (CR 3549-8-1-1-1-1-1) ADT 43/Annapurna	4444 116 MS	27.01 ***15.76*** 35.16	SRS 5036 PNP 3852 (9)	KA-4	15.76
5	25031 (CIARI Dhan 2) Milyang 55	4354 113 MB	24.44 ***13.41*** 32.42	SRS 5315 (8)	KA-5	13.42
	Dhanrasi (NC)	3499				
	Regional Check	***3839***				
	Local Check	3288				

Bold italic: Best check and over the best check; NC-National check, ZC-Zonal check, LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type; BC- Best Check

IET 25015 (OR(T)-30) a mutant selection from the variety 'Lalat' with medium slender grains and 113 days to 50% flowering, recorded a mean yield of 4871 kg/ha and yield gain of 39.21, 26.88 and 48.14 % over National, Zonal and Local checks, respectively. It ranked second at Sirsi location with 5764 kg/ha, while at Ponnampet it yielded 3978 kg/ha with 7th rank.

Entries with more than 5% yield advantage over the best check in IVT-RSL, Kharif 2015

Rank	IET No	Yield (kg/ha)	% Yield adv. over BC	FD	PH (cm)	Remarks
1	25048	4936	29	107	96	Shifted to IVT-IM
2	25015	4871	27	113	80	Shifted to IVT-L
3	25013	4466	16	112	80	Shifted to IVT-L
4	25040	4444	16	116	87	Shifted to IVT-L
5	25031	4354	13	113	73	Shifted to IVT-L
6	25033	4311	12	115	98	Promoted to AVT1-RSL
7	25014	4300	12	117	84	Shifted to IVT-L
8	25044	4287	12	123	88	Promoted to AVT1-RSL
9	25038	4235	10	122	90	Promoted to AVT1-RSL
10	25042	4203	9	118	79	Shifted to IVT-L
11	25046	4187	9	116	78	Shifted to IVT-L
12	24491	4066	6	116	78	Shifted to IVT-L
13	25037	4055	6	114	78	Shifted to IVT-L
14	24998	4036	5	112	81	Shifted to IVT-L

FD: Days to 50% flowering; PH: Plant Height

IET 25013 (CIARI Dhan 6) developed from the cross between IR 730112-137-2-22/PSBRC 10 with long slender grains and 112 days to 50% flowering recorded a mean yield of 4466 kg/ha. It showed yield advantage of 27.64, 16.33 and 35.83 % over the national, zonal and local checks, respectively. It ranked ninth at Ponnampet with yield of 3852 kg/ha

. **Based on the yield gain over best check, 50% flowering duration and plant height suited for RSL conditions, three entries IET 25033 (CR 3543-4-3-2-1-1), IET 25044 (OR 2439-4) and IET 25038 (OR 2434-4) were promoted to AVT-1 RSL. Based on days to 50% flowering, IET 25048 (VNR-217) is shifted to IVT-IM and nine entries IET 25015 (OR (T)-30), IET 25013 (CIARI Dhan 6), IET 25040 (CR 3549-8-1-1-1-1-1), IET 25031 (CIARI Dhan-2), IET 25014 (CR 2790-17-6), IET 25038 (OR 2434-4), IET 25046 (CR 3525-20-1-1-1-1-1), IET 25037 (CR 3808-57) and 24998 (CN 2065-15) are shifted to IVT-L. IET 24491 (Ciherang sub 1) is already notified, hence dropped from further testing.**

ADVANCED VARIETY TRIAL 1 – SEMI DEEP WATER (AVT 1-SDW)

Locations: 11 **Entries: 11**

Checks: Sabita (National), Purnendu (Zonal) and Local **Tables: 2.12**

The trial was constituted with 11 entries of which three and five entries were in third and second year of testing, respectively including three checks *viz*., Sabita (National), Purnendu (Zonal) and local. The trial was sent to 11 locations and data was received from most of the locations except Gerua and Karimgunj. Eight locations *viz*., Bhubaneswar, CRRI, Pusa, Chinsurah, Ghaghraghat, North Lakhimpur, Maruteru and Sirsi maintained the adequate water levels of 40-70 cm, whereas at Masodha required water level was not maintained due to drought. Hence, the data from Masodha was not considered for evaluating the entries. The data on all the listed adaptability parameters was received from Pusa and Maruteru, seedling survival (%), phenotypic acceptability and grain shattering from Cuttack; seedling survival, phenotypic acceptability and submergence tolerance from Chinsurah; seedling survival (%), phenotypic acceptability, submergence tolerance, elongation ability and grain shattering from Ghaghraghat.

Details of water regime at different centres in AVT 1-SDW, Kharif 2015

Location	Week	June	July	August	September	October	November
Bhubaneswar	1st	-	-	-	38-41	20-25	15-20
	2nd	-	--	5-10	41-50	15-20	-
	3rd	-	-	5-10	50	15-20	-
	4th	-	-	20-37	20-30	15-20	-
CRRI –Cuttack	1st	-	-	5-10	30-35	5-10	-
	2nd	-	-	5	20-25	-	-
	3rd	-	20-35	20-25	20-35	-	-
	4th	-	10-30	40	10-30	-	-
Pusa	1st	5	15	27	45	31	-
	2nd	7	18	32	55	35	-
	3rd	12	15	38	70	30	-
	4th	12	22	37	50	16	-
Chinsurah	1st	15	15	50	60	30	15
	2nd	15	20	50	70	30	15
	3rd	15	25	60	70	30	10
	4th	15	30	60	50	30	-
Masodha	1st	-	-	-	18	-	8
	2nd	-	-	-	13	-	-

Location	Week	June	July	August	September	October	November
	3rd	-	-	30	7	18	-
	4th	-	-	24	4	13	-
Ghaghraghat	1st	-	-	03	39	50	-
	2nd	-	-	06	47	25	-
	3rd	-	-	16	60	07	-
	4th	-	-	20	72	-	-
North Lakhimpur	Tillering stage—10-85 cm. Panicle initiation stage—30-50 cm; Flowering stage—20-30 cm, Maturity stage—0-10 cm.						
Maruteru	1st	-	-	-	50	62	70
	2nd	-	-	-	42	47	40
	3rd	-	-	-	63	50	40
	4th	-	-	60	48	40	40
Sirsi	Tillering stage—25 to 40 cm; Flowering to Grain filling stage—15-20 cm.						

CV of the experiments ranged from 3.93 % at Masodha to 16.44 % at Pusa. Experimental mean yield ranged from 2485 kg/ha at Ghagraghat to 4673 kg/ha at Sirsi. Overall mean yield of entries varied from 2862 kg/ha (Zonal check) to 3983 kg/ha (IET 23895). Mean days to 50% flowering ranged from 126 days (National check) to 142 days (IET 23017). Mean panicles/m^2 ranged from 218 (Zonal check) to 247 (IET 23895). On overall yield basis, five entries IETs 23895, 23906, 23053, 23052 and 23934 were found significantly superior to best check. The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.13, 2.14, 2.15 and 2.16. The top entries are discussed below.

IET 23895 (CR 2593-1-1-1-1) derived from the cross Sarala/Varshadhan//CR 2232-85 with short bold grains, 115 cm plant height and 138 days to 50% flowering recorded a mean yield of 3983 kg/ha with yield superiority of 31.2, 39.18 and 16.09 over national, zonal and local checks, respectively. It ranked first with 17 and 21 % higher yield than best check in Eastern and Southern zones, respectively. It scored second rank in Andhra Pradesh and Karnataka, third rank in Bihar and fourth rank in West Bengal. It yielded 3278 kg/ha, 4185 kg/ha, 4117 kg/ha and 5056 kg/ha at Pusa, Chinsurah, Maruteru and Sirsi, respectively. It recorded good seedling survival and submergence tolerance at Pusa and Chinsurah, good phenotypic acceptability at Cuttack, Pusa, Maruteru and Chinsurah, good kneeing ability at Pusa and moderate at Maruteru, low grain shattering at Cuttack, Pusa and moderate at Maruteru and good elongation ability at Pusa. The quality characteristics reported to be 69.7 % HRR, 4.0 ASV, 23.46 % AC and 32 mm GC (Table 2.17).

Adaptability parameters of entries in AVT 1- SDW, Kharif 2015

Entry No.	IET No.	SS	PACP	Kneeing Ability	GS	ST	EA
401	23017	69.4	4	5	2	5	4
402	Purnendu (ZC)	55.9	5	3	4	6	3
403	23906	73.1	4	1	4	5	4
404	23934	53.9	4	5	4	6	4
405	Local Check	60.9	3	5	3	5	4
406	Sabita (NC)	65.9	5	3	4	6	4
407	23053	72.4	4	1	3	5	4
408	23933	67.9	2	3	4	6	4
409	23066	71	4	5	3	5	3
410	23052	71	4	5	2	5	4
411	23895	64.3	3	5	3	5	5

IET 23906 (CR 2789-9-2) derived from a cross between Gayatri/Mahsuri//CR997-9-4 with short bold grains, 124 cm plant height and 131 days to 50% flowering yielded 3915 kg/ha with yield advantage of 28.94, 36.78 and 14.09 % over national, zonal and local checks, respectively. It ranked third with yield advantage of 12% in Eastern and fourth with 11 % in Southern than the best check. It ranked second in Bihar, third in West Bengal, fourth in Andhra Pradesh and fifth in Karnataka having more than 5 % yield superiority over all the three checks. It yielded 3556 kg/ha, 5011 kg/ha, 3685 kg/ha and 4770 kg/ha at Pusa, Chinsurah, Maruteru and Sirsi, respectively. It recorded good seedling survival at Pusa, Ghagraghat and Chinsurah with desirable phenotypic acceptability score at Cuttack, Pusa and Chinsurah. It showed good kneeing and elongation abilities at Pusa and Maruteru, good submergence tolerance at Chinsurah and low grain shattering at Cuttack and Pusa. The quality characteristics reported to be 61.4 % HRR, 4.0 ASV, 25. 49 % AC and moderate GC (45 mm) indicating desirable cooking quality.

Overall performance of promising entries in AVT 1-SDW, Kharif 2015

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield adv. over NC/ ZC/ LC	Superior to check/yield (kg/ha)/rank	% Increase over the best check			
				3 checks	State		Zone	
					Rank/ Yield	% BC	Rank/ Yield	% BC
1	23895 (CR 2593-1-1-1-1) Sarala/ Varshadhan// CR 2232-85	3983 138 MB	31.20 39.18 ***16.09***	PSA (3) 3278 CHN (4) 4185 MTU (2) 4117 SRS (2) 5056	BI-3 WB-4 AP-2 KA-2	7.00 6.00 24.00 14.00	Z-III (1) Z-VII (1)	17.00 21.00
2	23906 (CR 2789-9-2) Gayatri/ Mahsuri//CR997-9-4	3915 131 MB	28.94 36.78 ***14.09***	PSA (2) 3556 CHN (3) 5011 MTU (4) 3685 SRS (5) 4770	BI-2 WB-3 AP-4 KA-5	16.00 27.00 11.00 7.00	Z-III (3) Z-VII (4)	12.00 11.00
3	23053 (CR 2687-2-3-1-1-1) CRLC 899/Warda 2	3819 135 LB	25.79 33.44 ***11.31***				Z-III (2)	13.00
4	23052 (CR3607-12-1-2-1-1) Gayatri/Sudhir// Varshadhan	3784 136 SB	24.65 32.23 ***10.30***	CHN (1) 5537 NLP (1) 4846 MTU (3) 3780 SRS (6) 4738	WB-1 AS-1 AP-3 KA-6	40.00 20.00 14.00 7.00	Z-IV (1) Z-VII (3)	20.00 12.00
5	23934 (CR 3838-1-2-1-4-2) Savitri/Sudhir// Varshadhan	3709 137 SB	22.18 29.61 ***8.11***	CHN (2) 5068 NLP (2) 4700 SRS (1) 5167	WB-2 AS-2 KA-1	29.00 16.00 16.00	Z-IV (2)	16.00
	Sabita (NC)	3036						
	Purnendu (ZC)	2862						
	Local Check	***3431***						

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BC- Best Check

IET 23053 (CR 2687-2-3-1-1-1) derived from the cross CRLC 899/Warda 2 with long bold grains, 137 cm plant height and 135 days to 50% flowering, recorded a mean yield of 3819 kg/ha and yield superiority of 25.79, 33.44 and 11.31 % over NC, ZC and LC, respectively. It ranked second in Eastern zone with 13 % yield superiority over the best check. However, it had not shown any yield superiority of more than 5% over the best check in any state. It recorded good seedling survival at Pusa and Chinsurah, desirable phenotypic acceptability score at Cuttack, Pusa and Chinsurah, submergence tolerance at Chinsurah,

elongation ability at Pusa and Maruteru and low grain shattering at Cuttack, Pusa and Maruteru. The quality characteristics reported to be 67.5 % HRR, 4.0 ASV, 24. 84 % AC and moderate GC (47 mm) indicating desirable cooking quality.

On the basis of overall performance with more than 5% yield advantage over the best check and desirable adaptability parameters, three entries IET 23895 (CR 2593-1-1-1-1), IET 23906 (CR 2789-9-2) and IET 23934 (CR 3838-1-2-1-4-2) are promoted to AVT 2-SDW. Two entries IET 23053 and 23053 completed three years of testing and three year performance of these entries is discussed below.

Three years performance of promising entries:

IET 23053 (CR 2687-2-3-1-1-1) derived from the cross CRLC 899/Warda 2 with long bold grains has recorded required superiority of 5% over the best check in all the three years of testing (2013, 2014 and 2015) but not consistently in any state. In 2015, it recorded more than 5% yield superiority over the best check on overall basis and in Eastern zone but not in any of the test locations/states. In 2014, it ranked first in Southern region with 26% yield gain in Karnataka and Andhra Pradesh showed 63.8 and 11% yield superiority over the best check. In 2013, though it ranked fifth on overall basis, it recorded required superiority of more than 5% only in the state of Odisha. Hence this entry is discontinued due to inconsistency in performance over the states.

Three years performance of entries in AVT 1-SDW, Kharif 2015

IET No/ Designation / Cross combination		**GY/ FD/ GT**	**Yield adv (%) over NC/RC/ LC**	**% increase over BC**			
				State		**Zone/Region**	
				Rank/ yield	**% BC**	**Rank/ Yield**	**% BC**
23053 (CR 2687-2-3-1-1-1) CRLC 899 /Warda 2	2015 (overall basis)	3819 135 LB	25.79 33.44 ***11.31***			Z-III (2)	13.00
	2014 (regional basis)	5395 138 LB	44.25 29.93 **25.81**	AP-1 KA-1	63.80 11.00	RV-1	26.00
	2013 (overall basis)	3205 139 LB	6.31 20.97 ***8.80***	OD-1	19.69		
23052 (CR 3607-12-1-2-1-1) Gayatri/Sudhir// Varshadhan	2015 (overall basis)	3784 136 SB	24.65 32.23 ***10.30***	WB-1 AS-1 AP-3 KA-6	40.00 20.00 14.00 7.00	Z-IV (1) Z-VII (3)	20.00 12.00
	2014 (regional basis)	4541 143 SB	21.42 9.37 **5.90**	AP-2	21.73	RV-4	6.00
	2013 (overall basis)	3417 129 SB	13.36 28.99 16.02	AP-3	10.06	R V-3	10.06

IET 23052 (CR 3607-12-1-2-1-1) derived from the cross between Gayatri/Sudhir//Varshadhan with short bold grains showed consistent yield superiority of more than 5% in all the three years (2015, 2014 and 2013) in the state of Andhra Pradesh. It ranked third in 2015 and 2013 and second in 2014 in AP. In the state of Andhra Pradesh, it

ranked third in 2013 with 10.06%, second in 2014 with 21.73 and third in 2015 with 14% yield superiority over the best check. Considering the yield performance over the years in different states IET 23052 found to be promising for the state of Andhra Pradesh.

Adaptability parameters of entries in AVT 1- SDW Kharif 2015.

Entry No.	IET No.	Seedling survival (%)					Phenotypic Acceptability						Kneeing Ability	
		CTK	PSA	GGT	MTU	CHN	CTK	PSA	GGT	MSD	MTU	CHN	PSA	MTU
401	23017	31.5	93	80	43.7	98	3	3	9		3	1	1	5
402	Purnendu (ZC)	31.3	65	80	15.3	88	5	5	7	5	7	3	3	1
403	23906	44.9	85	80	57.7	98	3	3	7		5	1	1	1
404	23934	26	65	60	20.7	98	5	7	7	3	3	1	5	1
405	Local Check	30.4	70	95	11.3	98	1	7	3	3	3	1	5	5
406	Sabita (NC)	35.2	80	70	56.3	88	6	3	7	3	5	3	3	3
407	23053	38.3	84	75	66.7	98	1	3	9		5	1	1	1
408	23933	31.1	85	70	63.3	90	1	3	5	3	1	1	3	3
409	23066	32.8	95	75	64	88	2	1	7		7	3	1	5
410	23052	33.4	85	70	68.7	98	3	3	9		5	1	1	5
411	23895	41	80	75	30.7	95	1	1	9		3	1	3	5

(Contd.) Adaptability parameters of entries in AVT 1- SDW Kharif 2015.

Entry No.	IET No.	Grain Shattering					Submergence Tolerance				Elongation Ability		
		CTK	PSA	GGT	MSD	MTU	PSA	GGT	MTU	CHN	PSA	GGT	MTU
401	23017	1	1	-		3	3	5	9	1	1	7	3
402	Purnendu (ZC)	1	5	-	5	3	7	5	9	3	5	3	1
403	23906	1	3	5		5	5	5	7	1	3	5	3
404	23934	1	7	-	7	1	7	7	7	1	5	5	3
405	Local Check	1	7	1	7	1	7	3	9	1	5	1	5
406	Sabita (NC)	3	3	-	5	3	5	7	7	3	3	5	3
407	23053	3	3	-		3	5	5	7	1	3	5	3
408	23933	1	3	5	7	3	5	7	7	3	3	7	3
409	23066	4	1	-		3	3	5	7	3	1	5	3
410	23052	1	1	1		3	5	7	7	1	3	7	3
411	23895	1	3	-		5	3	5	9	1	3	7	5

INITIAL VARIETY TRIAL-SEMI DEEP WATER (IVT-SDW)

Locations: 11 **Entries: 14**

Checks: Sabita (National), Purnendu (Zonal) and Local **Table: 2.18**

The trial was constituted with 14 entries including three checks *viz*., Sabita (National), Purnendu (Zonal) and local. The trial was sent to 11 locations and data was received from all the locations except Chinsurah and Karimgunj. Required water level was not maintained at Masodha due to drought. At rest of the locations *viz*., Bhubaneswar, Cuttack, Pusa, Ghaghraghat, Gerua, North Lakhimpur, Maruteru and Sirsi, the required water level of about 40-70 cm was maintained. The data on all the listed adaptability parameters was received from Pusa and Maruteru, seedling survival (%), phenotypic acceptability score and grain shattering from Cuttack and seedling survival (%), phenotypic acceptability, submergence tolerance, elongation ability and grain shattering from Ghaghraghat.

Details of water regime at different centres in IVT-SDW, Kharif 2015

Location	Week	June	July	August	September	October	November
Bhubaneswar	1st	-	-	-	38-41	20-25	15-20
	2nd	-	-	5-10	41-50	15-20	-
	3rd	-	-	5-10	50	15-20	-
	4th	-	-	20-37	20-30	15-20	-
CRRI –Cuttack	1st	-	-	5-10	35-45	5-10	-
	2nd	-	-	5	20-25	5	-
	3rd	-	20-35	20-25	20-35	-	-
	4th	-	10-30	25-40	10-30	-	-
Pusa	1st	8	19	30	60	42	-
	2nd	14	18	32	55	31	-
	3rd	14	17	31	72	28	-
	4th	12	22	37	54	15	-
Masodha	1st	-	-	-	18	-	8
	2nd	-	-	-	13	-	-
	3rd	-	-	30	7	18	-
	4th	-	-	24	4	13	-
Ghaghraghat	1st	-	-	03	39	50	-
	2nd	-	-	06	47	25	-
	3rd	-	-	16	60	07	-
	4th	-	-	20	72	-	-
North Lakhimpur	Tillering stage—10-80 cm. Panicle initiation stage—30-50 cm; Flowering stage—20-30 cm, Maturity stage—0-10 cm.						
Maruteru	1st	-	-	-	50	62	70
	2nd	-	-	-	42	47	40
	3rd	-	-	-	63	50	40
	4th	-	-	60	48	40	40
Sirsi	Tillering stage—25 to 40 cm; Flowering to Grain filling stage—15-20 cm.						
Gerua	30-50cm						

CV ranged from 4.37 % at Maruteru to 22.56 % at Pusa. Experimental mean yield ranged from 2199 kg/ha at Pusa to 5149 kg/ha at Sirsi. Overall mean yield of entries varied from 3033 kg/ha (IET 24490) to 4391 kg/ha (IET 24519). Mean days to 50% flowering ranged from 124 days (National Check) to 143 days (IET 24496). Mean plant height varied from 93 cm (IET 24512) to 152 cm (Zonal Check) and mean panicles/m^2 ranged from 208 (NC) to 251 (24519). Data from Masodha was not considered as required water level was not maintained. The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.19, 2.20, 2.21 and 2.22. CV % in the range of 5-40% was considered to include data from locations in the analysis and hence data from Maruteru was not considered as CV% at this location was below the minimum value. Five entries *viz*., IETs 24519, 24495, 24486, 24496 and 24505 have recorded significant superiority of more than 5% over the best check on overall basis of which first three entries are discussed here under.

IET 24519 (CR 2439-B-18-1-1-1-1) derived from the cross between Utkalprabha / WITA 12 recorded 4391 kg/ha with 141 days to 50% flowering, 111 cm plant height and short bold grains on overall basis. It showed yield superiority of 36.76, 39.59 and 29.47 % over the national, zonal and local checks, respectively. On zonal basis also, it ranked first in both Eastern and North Eastern zones with 45 and 10 % yield superiority over the best check. In the state of Odisha, it ranked first with 46% yield superiority over the best check with yield of 4938 and 5548 kg/ha at Bhubaneshwar and Cuttack, respectively. It had good seedling survival at Ghagraghat and Maruteru, desirable phenotypic acceptability at Cuttack and Pusa, low grain shattering at all the centres, moderate submergence tolerance at Ghagraghat and Maruteru, good elongation ability at Pusa and Maruteru and good kneeing ability at Pusa.

Adaptability parameters of entries in IVT- SDW Kharif 2015

Entry No	IET No	Seedling survival	Phenotypic acceptability	Grain shattering	Submergence Tolerance	Elongation ability	Kneeing ability
501	24490	71	4	2	5	2	9
502	Sabita (NC)	76	5	4	6	3	9
503	24519	76	5	2	6	4	9
504	24489	65	6	6	6	3	9
505	24495	66	6	5	6	4	9
506	24513	68	4	2	4	5	5
507	Purnendu (ZC)	75	4	4	4	2	5
508	24496	73	5	4	4	4	1
509	24512	75	3	4	4	6	9
510	24522	79	5	2	5	4	9
511	24505	70	5	4	6	4	5
512	Local Check	73	4	3	5	4	5
513	24518	71	6	2	6	4	3
514	24486	81	3	5	4	4	3

IET 24495 (MTU 1172) derived from the cross between MTU 7029/MTU1064 with overall mean yield of 4141 kg/ha, 133 days to 50% flowering, 110 cm plant height and medium slender grains. It had shown 28.96, 31.62 and 22.08 % yield superiority over the national, zonal and local checks, respectively on overall basis. It ranked third and first in the states of Odisha and Bihar with 34 and 10 % yield superiority over the best check, respectively. It yielded 5309, 4279 and 3214 kg/ha at Bhubaneshwar, Cuttack and Pusa, respectively. It ranked second in the Eastern zone with 30% yield superiority over the best check. It recorded moderate seedling survival at Ghagraghat, desirable phenotypic acceptability at Cuttack, moderate submergence tolerance at Ghagraghat, good elongation ability at Maruteru and moderate kneeing ability at Pusa.

Overall performance of entries in IVT-SDW, Kharif 2015.

Rank	IET No./ Designation / Cross combination	GY/ FD/ GT	Yield adv. (%) over NC/ ZC / LC	Superior to best check/Yield (kg/ha)/rank 3 checks	Increase over the best check			
					State		Zone	
					Rank	% BC	Rank	% BC
1	IET 24519 (CR 2439-B-18-1-1-1-1) Utkalprabha/WITA 12	4391 141 SB	36.76 39.59 ***29.47***	BBN 4938 (4) CTK 5548 (1)	OD-1	46	Z III-1 Z IV -1	45 10
2	IET 24495 (MTU 1172) MTU 7019/MTU1064	4141 133 MS	28.96 31.62 ***22.08***	BBN 5309 (3) CTK 4279 (2) PSA 3214 (1)	OD-3 BI-1	34 10	ZIII-2	30
3	IET 24486 (MTU 1184) PLA 1100/BM 71	4114 135 MS	28.12 30.77 ***21.29***	BBN 6173 (1) CTK 4019 (3) SRS 5807 (1)	OD-2 KA-1	42 12	ZIII-3 Z VII-1	27 12
4	IET 24496 (OR 2418-2) Mahanadi/OR 1898-2	3859 143 SB	20.19 22.67 ***13.78***	BBN 4568 (6) CTK 3614 (4)	OD-5	14%	ZIII-4	15
5	IET 24505 (OR 2437-11) Indravati/MTU 1065	3821 141 SB	19.00 21.46 ***12.65***	BBN 5556 (2) SRS 5737 (2)	OD-4 KA-2	18 10	ZIII-5 Z IV-2 Z VII-2	7 7 10
	Sabita (NC)	3211						
	Purnendu (ZC)	3146						
	Local check (LC)	***3392***						

IET 24486 (MTU 1184) derived from the cross between PLA 1100/BM 71 with an overall mean yield of 4114 kg/ha, 135 days to 50% flowering, 122 cm plant height and

medium slender grains recorded 28.12, 30.77 and 21.29 % yield superiority over the best check. It ranked second in the state of Odisha with 42 % higher yield than best check and yielded 6173 kg/ha and 4019 kg/ha at Bhubaneshwar and Cuttack, respectively. It ranked first in Karnataka state with 12 % higher yield than best check and yield of 5807 kg/ha at Sirsi centre. It had good seedling survival at Pusa and Maruteru, desirable phenotypic acceptability at all the centres, low grain shattering at Cuttack and Pusa, good submergence tolerance at Maruteru, good elongation kneeing abilities at Pusa and Maruteru.

On overall mean yield performance and desirable adaptability parameters, a total of five entries were promoted to AVT 1- SDW:

IET 24519 (CR 2439-B-18-1-1-1-1), IET 24495 (MTU 1172), IET 24486 (MTU 1184), IET 24496 (OR 2418-2) and IET 24505 (OR 2437-11)

Adaptability parameters of entries in IVT- SDW Kharif 2015.

Entry No.	IET No.	Seedling survival				Phenotypic Acceptability				Grain Shattering			
		CTK	GGT	PSA	MTU	CTK	PSA	GGT	MTU	CTK	PSA	GGT	MTU
501	24490	32.5	90	80	82.5	6	3	3	5	1	1	3	1
502	Sabita (NC)	71.8	80	65	88.7	3	5	5	5	1	5	3	5
503	24519	53.8	90	70	92	1	3	9	5	1	3	-	3
504	24489	43	70	70	76	5	7	5	5	3	7	5	9
505	24495	50.7	75	70	68.5	3	7	5	7	3	7	5	5
506	24513	29.9	80	65	97.8	5	3	3	3	1	3	1	3
507	Purnendu (ZC)	40	80	84	94.7	4	3	7	3	3	3	5	3
508	24496	29.3	80	85	99.2	5	3	9	3	3	1	-	7
509	24512	37.7	90	75	95.8	1	3	5	3	1	3	5	7
510	24522	78.5	75	64	96.7	3	7	7	3	1	5	-	1
511	24505	31	90	70	88.3	4	7	5	5	3	5	3	3
512	Local Check	50.9	95	65	80.3	1	7	3	5	1	5	1	3
513	24518	49.5	80	80	73.5	4	3	9	7	1	3	-	3
514	24486	69.5	75	85	95.5	1	3	3	3	3	3	5	7

(Contd.) Adaptability parameters of entries in IVT- SDW Kharif 2015.

Entry No.	IET No.	Submergence Tolerance			Elongation Ability			Kneeing Ability	
		PSA	GGT	MTU	PSA	GGT	MTU	PSA	MTU
501	24490	5	5	5	1	5	1	1	9
502	Sabita (NC)	7	5	5	5	3	1	3	9
503	24519	7	5	5	3	5	3	1	9
504	24489	7	7	5	5	3	1	5	9
505	24495	7	5	7	5	5	3	5	9
506	24513	5	5	3	3	7	5	3	5
507	Purnendu (ZC)	5	5	3	3	3	1	1	5
508	24496	5	5	3	3	7	3	1	Non lodging
509	24512	5	5	3	3	5	9	3	9
510	24522	7	5	3	5	5	1	5	9
511	24505	7	5	5	5	5	1	5	5
512	Local Check	7	3	5	5	1	5	5	Non lodging
513	24518	5	5	7	3	5	3	3	3
514	24486	5	5	3	3	5	3	3	Non lodging

NATIONAL SEMI DEEP WATER SCREENING NURSERY (NSDWSN)

Locations: 11 **Entries: 47**

Checks: Sabita (National), Purnendu (Zonal) and Local **Table: 2.23**

The trial was constituted with 47 entries including three checks *viz*., Sabita (NC), Purnendu (ZC) and a local check. The trial was sent to 11 locations of which data was not received from three locations *viz*., Gerua, Karimgunj and North Lakimpur. Seven centres namely Bhubaneswar, CRRI, Chinsurah, Ghaghraghat, Gerua, North Lakimpur and Maruteru have maintained the required water table. At Masoda, required water stress was not maintained due to severe drought, hence data from this location was not included in the evaluation of entries. Four centres provided data on adaptability parametrs, *viz*., Cuttack, Ghagraghat, Maruteru and Chinsurah on seedling survival and phenotypic acceptability, Cuttack, Ghagraghat and Maruteru on grain shattering, Ghagraghat, Maruteru and Chinsurah on submergence tolerance, Ghagraghat and Maruteru on elongation ability and Chinsurah on kneeing ability.

Details of Water regime at different centres in NSDWSN, Kharif 2015

Location	Week	June	July	August	September	October	November
Bhubaneswar	1st	-	-	-	38-41	20-25	15-20
	2nd	-	--	5-10	41-50	15-20	-
	3rd	-	-	5-10	50	15-20	-
	4th	-	-	20-37	20-30	15-20	-
CRRI –Cuttack	1st	-	-	5-10	30-45	5-10	-
	2nd	-	-	5	20-25	5	-
	3rd	-	20-35	20-25	20-35	-	-
	4th	-	10-30	25-40	10-30	-	-
Pusa	1st	10	31	52	71	40	-
	2nd	14	35	75	80	30	-
	3rd	19	31	70	96	25	-
	4th	22	37	62	60	15	-
Chinsurah	1st	15	15	50	60	30	15
	2nd	15	20	50	70	30	15
	3rd	15	25	60	70	30	10
	4th	15	30	60	50	30	-
Masodha	1st	-	-	-	15	-	5
	2nd	-	-	-	10	-	-
	3rd	-	-	27	4	15	-
	4th	-	-	21	1	10	-
Ghaghraghat	1st	-	-	03	39	50	-
	2nd	-	-	06	47	25	-
	3rd	-	-	16	60	07	-
	4th		-	20	72	-	-
Maruteru	1st	-	-	-	33	51	35
	2nd	-	-	-	42	46	26
	3rd	-	-	-	40	46	18
	4th	-	-	40	35	43	18
Sirsi	Tillering stage—25 to 40 cm; Flowering to Grain filling stage—15-20 cm.						

Adaptability parameters of entries in NSDWSN Kharif 2015.

Entry No	IET No	Seedling survival	Phenotypic acceptability	Grain shattering	Submergence Tolerance	Elongation ability	Kneeing ability
601	25175	75	7	3	6	5	5
602	25176	76	4	3	6	4	9
603	25177	73	6	2	6	2	5
604	25178	69	4	4	5	3	3
605	25179	69	6	5	6	3	3
606	25180	73	5	2	5	4	3
607	25181	75	4	3	5	4	9
608	25182	66	5	4	7	2	5
609	25183	73	6	3	5	3	1
610	25184	73	4	2	6	3	7
611	25185	83	6	6	4	3	1
612	25186	68	4	4	6	6	1
613	25187	62	5	3	5	4	3
614	25188	67	7	5	6	4	5
615	25189	65	5	4	5	6	9
616	25190	83	3	1	4	6	7
617	Local Check	82	2	3	4	4	3
618	25191	69	3	4	4	6	9
619	25192	78	3	4	6	3	7
620	25193	74	3	4	5	5	9
621	25194	76	4	3	6	4	9
622	25195	74	4	4	5	2	7
623	Purnendu (ZC)	65	5	4	6	3	3
624	25196	71	5	1	6	3	3
625	25197	63	6	4	6	6	1
626	25198	71	6	3	6	3	1
627	25199	63	5	4	6	4	7
628	25200	82	6	3	6	4	5
629	25201	80	5	6	4	3	3
630	25202	85	3	4			
631	25203	72	4	5	5	4	3
632	25204	73	3	4	6	5	1
633	25205	70	3	3	6	6	Non lodging
634	25206	79	4	4	4	5	Non lodging
635	25207	76	5	2	5	4	9
636	25208	77	5	3	4	6	1
637	25209	75	6	3	5	5	3
638	25210	64	4	2	5	1	
639	25211	71	4	4	5	4	5
640	25212	72	4	4	4	3	1
641	25213	71	6	4	5	3	1
642	25214	75	5	2	7	2	9
643	25215	70	5	5	5	3	3

Entry No	IET No	Seedling survival	Phenotypic acceptability	Grain shattering	Submergence Tolerance	Elongation ability	Kneeing ability
644	25216	72	5	2	5	6	9
645	25217	73	6	4	5	5	9
646	Sabita (NC)	73	5	2	6	4	5
647	25218	70	5	4	6	6	5

CV ranged from 5.38 % at Sirsi to 28.79 % at Pusa. Overall mean yield varied from 1393 kg/ha (IET 25199) to 4247 kg/ha (IET 25212) and experimental mean yield ranged from 1840 kg/ha at Maruteru to 4723 kg/ha at Sirsi. Days to 50 % flowering ranged from 103 (IET 25205) to 143 (IETs 25186 and 25198). Plant height varied from 95 cm (IET 25189) to 151 cm (IET 25214) and panicles/m^2 ranged from 144 (IET 25210) to 256 (IET 25218). On overall mean yield basis, eight entries (IETs 25212, 25175, 25211, 25185, 25207, 25186, 25209 and 25201) out yielded the best check. The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.24, 2.25, 2.26 and 2.27. In addition, two entries (IETs 25179 and 25196) in the Eastern zone and five entries in the southern zone (IETs 25178, 25181, 25200, 25203, 25191, 25190, 25208 and 25206) recorded yield advantage of more than 5% over the best check. Top three entries are discussed her under.

Overall performance of the entries in NSDWSN, Kharif 2015

IET No./ Designation / Cross combination	GY/ FD/ GT	Yield adv. (%) over NC/ ZC / LC	Superior to best check/Yield (kg/ha)/rank 3 checks	Increase over the best check			
				State		Zone	
				Rank	% BC	Rank	% BC
IET 25212 (OR 2413-9) Indravati/CN 1231-11-1	4247 134 MB	41.71 81.96 ***18.8***	PSA 3958 (5) CHN 6140 (2) SRS 7320 (2)	BI-5 WB-2 KA-2	19.00 47.00 38.72	Z III-7 Z VII-1	6.00 51.00
IET 25175 (OR 2414-1) Ramachandi/IR 68926-61-2-R	4215 139 MB	40.64 80.59 ***17.90***	BBN 4444 (6) CHN 5044 (8) SRS 7738 (1)	OD-7 WB-8 KA-1	6.00 21.00 46.64	Z III-4 Z VIII-3	9.00 36.00
IET 25211 (CR 2748-15-5-4) Sarala/CR 2683-46	4160 133 SB	38.81 78.23 ***16.36***	BBN 4815 (4) CTK 4531 (7) CHN 6360 (1)	OD-4 WB-1	18.00 53.00	Z III-1	28.00
IET 25185 (CR 3063-2-1-9-2) Pooja/Manika	4059 137 MS	35.44 73.91 ***13.54***	CTK 5860 (1) CHN 4649	OD-2	26.00 12.00	Z III-2	17.00 6.00
IET 25207 (CR 2529-B-2-3-1-1-1) IR 42/Ac. 516602	4050 130 SB	35.14 73.52 ***13.29***	CHN 4386 SRS 6891 (3)	WB-- KA-3	5.25 30.58	Z VII-2	39.00
Sabita (NC)	2997						
Purnendu (ZC)	2334						
Local Check	***3575***						

On over all basis:

IET 25212 (OR 2413-9) developed from Indravati/CN 1231-11-1 with a mean yield of 4247 kg/ha, 134 days to 50% flowering, 125 cm plant height and medium bold grains recorded yield gain of 41.71, 81.96 and 18.8 % over the NC, ZC and LC, respectively. It yielded 3958 kg/ha at Pusa and ranked fifth in Bihar with 19% yield advantage over the best check. It yielded 6140 kg/ha at Chinsurah and ranked second in West Bengal with 47% yield advantage over the best check. It ranked seventh in eastern zone with 6% yield superiority

over the best check. It recorded 7320 kg/ha at Sirsi and ranked first in southern zone with 51% yield advantage over the best check.

IET 25175 (OR 2414-1) derived from the cross between Ramachandi/IR 68926-61-2-R with a mean yield of 4215 kg/ha, 139 days to 50% flowering, 111 cm plant height and medium bold grains showed 40.64, 80.59 and 17.9 % yield advantage over the NC, ZC and LC, respectively. It recorded 4444 kg/ha at Bhubaneshwar and ranked seventh in Odisha with 6% yield advantage over the best check. It yielded 5044 kg/ha at Chinsurah and ranked eighth in West Bengal with 21 % yield advantage over the best check. It ranked fourth in eastern zone with 9% yield superiority over the best check. It yielded 7738 kg/ha at Sirsi and ranked first in Karnataka with 46.64 % yield advantage over the best check. It ranked third in southern zone with 36 % yield gain over the best check. As it recorded poor submergence tolerance and moderate kneeing ability and also due to its semi dwarf plant height not desirable for semi deep water conditions, it is shifted to IVT-RSL.

Trait description of the entries with more than 5% yield advantage over the best check in NSDWSN, Kharif 2015

S. No	IET No	Mean yield	FD	PH	% Yld adv over BC	Adaptability parameters						
						SS	PACP	GS	ST	EA	KA	Remarks
Overall basis												
1	25212	4247	134	125	18.8	72	4	4	4	3	1	Promoted
2	25175	4215	139	111	17.9	75	7	3	6	5	5	Shifted to IVT-RSL
3	25211	4160	133	118	16.36	71	4	4	5	4	5	Promoted
4	25185	4059	137	131	13.54	83	6	6	4	3	1	Promoted
5	25207	4050	130	137	13.29	76	5	2	5	4	9	Drop due to Poor Kneeing Ability.
6	25186	3884	143	114	9.0	68	4	4	6	6	1	Promoted
7	25209	3836	137	142	7.0	75	6	3	5	5	3	Promoted
8	25201	3809	131	115	7.0	80	5	6	4	3	3	Promoted
Eastern zone												
9	25179	3846	141	125	7.0	69	6	5	6	3	3	Promoted
10	25196	3797	133	129	6.0	71	5	1	6	3	3	Promoted
Southern zone												
11	25200	4421	130	155	26.0	82	6	4	6	4	5	Promoted
12	25203	4310	132	139	23.0	72	4	5	5	4	3	Promoted
13	25191	4277	123	117	22.0	69	3	4	4	6	9	Shifted to IVT-RSL
14	25190	4270	117	133	21.0	83	3	1	4	6	7	Shifted to IVT-RSL
15	25206	4148	115	124	18.0	70	4	4	4	5	1	Promoted
16	25208	4129	137	113	17	77	5	3	4	6	1	Promoted
17	25178	4014	126	140	14	69	4	4	5	3	3	Promoted
18	25181	3879	124	117	10	75	4	3	5	4	9	Shifted to IVT-RSL

FD-days to 50% flowering, PH-plant height, SS-seedling survival, PACP-phenotypic acceptability, GS-grain shattering, ST-submergence tolerance, EA-elongation ability, KA-kneeing ability

IET 25211 (CR 2748-15-5-4) a cross between Sarala/CR 2683-46 with a mean yield of 4160 kg/ha, 133 days to 50% flowering, 118 cm plant height and medium slender grains recorded 38.81, 78.23 and 16.36 % yield advantage over the NC, ZC and LC, respectively. It recorded 4815 kg/ha at Bhubaneshwar and 4531 kg/ha at Cuttack and ranked fourth in Odisha with 18% yield advantage over the best check. It yielded 6360 kg/ha at Chinsurah and ranked

first in West Bengal with 53% yield advantage over the best check. It ranked first in eastern zone with 28% yield superiority over the best check.

Based on days to 50% flowering, plant height and adaptability parameters, of the sixteen entries with overall or zonal mean yield advantage of more than 5% over the best check, four entries were shifted to IVT-RSL: IET 25175 (OR 2414-1), IET 25191 (CR 2747-14-4-3), IET 25181 (MTU 1199) and IET 25190 (CR 3900-135-8-5-4).

The following entries are promoted to IVT-SDW:

<u>On overall basis</u>: Six entries *viz*.,

IET 25212 (OR 2413-9), IET 25185 (CR 3063-2-1-9-2), IET 25186 (OR 2415-2), IET 25209 (CR 3816-1-2-1-2-2) and IET 25201 (MTU 1198), IET 25211 (CR2748-15-5-4),

<u>On zonal basis- Eastern zone</u>: Two entries

IET 25179 (CR 2315-1-1-3-1-2) and IET 25196 (CR 3036-3-1-21-1)

<u>Southern zone</u>: Five entries

IET 25200 (CR 3060-2-1-12-2), IET 25203 (CR 3062-1-1-6-4) and IET 25206 (CN 2024-1), IET 25178 (OR 2436-10) and IET 25208 (OR 2431-1)

Adaptability parameters of entries in NSDWSN Kharif 2015.

Entry No.	IET No.	Seedling survival				Phenotypic Acceptability					Grain Shattering			
		CTK	GGT	MTU	CHN	CTK	GGT	MSD	MTU	CHN	CTK	GGT	MSD	MTU
601	25175	92	80	43.1	85	5	9		7	5	1	-		5
602	25176	84	90	54.6		1	3	3	7		1	1	5	3
603	25177	89	90	21.2	90	9	1		9	3	3	1		3
604	25178	43	85	64.5	85	1	7	3	5	3	1	-	7	5
605	25179	65	75	42.6	93	3	9		7	5	3	-		7
606	25180	80	85	36.1	90	1	5		9	5	1	1		5
607	25181	63	90	58.2	90	7	3		3	3	3	3		3
608	25182	88	85	26.2		5	3	3	7		3	1	7	3
609	25183	73	70	54.1	95	4	9		7	5	1	-		5
610	25184	93	90	23.2	85	1	3		7	3	1	1		3
611	25185	94	85	61.2	93	4	9		7	3	7	-		5
612	25186	76	70	40.2	85	1	9	1	7	3	3	-	5	3
613	25187	55	80	18.2	95	7	7		5	1	3	-		3
614	25188	82	70	26.2	88	5	9		9	5	3	-		7
615	25189	48	85	35.2	90	5	7	1	5	5	1	3	7	3
616	25190	81	90	65.8	95	4	5		3	1	1	-		1
617	Local Check	83	90	58.2	95	1	3	1	3	1	1	3	5	3
618	25191	32	85	62.3	95	4	5	3	3	1	3	5	5	3
619	25192	89	90	49.2	85	5	3	3	3	3	3	1	7	5
620	25193	64	80	65.2	85	3	7	1	3	3	1	-	5	5
621	25194	94	95	28.2	85	3	3	1	9	3	1	1	5	3
622	25195	88	75	36.6	95	5	7	1	5	1	3	-	5	3
623	Purnendu (ZC)	55	70	38.0	95	5	7	1	7	5	1	-	7	3
624	25196	70	85	43.2	85	5	5		7	3	1	-		1
625	25197	35	80	46.8	90	5	9		9	1	2	-		5
626	25198	80	70	45.2	90	1	9		9	3	3	-		3
627	25199	47	85	36.6	85	9	3	5	5	3	5	-	5	3

Entry No.	IET No.	Seedling survival				Phenotypic Acceptability					Grain Shattering			
		CTK	GGT	MTU	CHN	CTK	GGT	MSD	MTU	CHN	CTK	GGT	MSD	MTU
628	25200	93	85	66.6	85	4	7		9	3	3	-		3
629	25201	78	80	67.2	95	3	7		9	1	3	-		9
630	25202	85	-			3	-	3			3	-	5	
631	25203	81	80	36.5	90	1	9	5	5	1	5	-	7	3
632	25204	75	85	45.6	85	1	3	1	5	3	3	3	7	3
633	25205	67	90	36.3	85	5	1	1	5	3	1	3	5	3
634	25206	81	85	59.3	90	1	7	3	5	3	3	3	7	3
635	25207	78	70	62.3	95	1	9		7	1	1	-		3
636	25208	64	85	67.2	90	5	9	3	9	1	1	-	5	3
637	25209	81	80	42.3	95	7	7		9	1	3	-		3
638	25210	38	90			5	3				3	1		
639	25211	73	85	32.2	95	3	9	3	5	1	3	-	7	3
640	25212	46	80	67.5	95	5	5		5	1	3	-		5
641	25213	78	80	32.3	95	5	9		7	3	1	-		7
642	25214	80	90	43.2	85	1	3		9	5	1	-		3
643	25215	81	85	24.5	90	3	7	3	9	1	6	-	-	3
644	25216	93	80	24.6	90	5	7	3	9	1	3	1	-	3
645	25217	96	80	25.4	90	3	9		5	5	5	-		3
646	Sabita (NC)	80	90	38.2	85	3	5	3	9	3	1	-	-	3
647	25218	80	70	41.2	90	5	9		5	1	3	-		5

(Contd..) Adaptability parameters of entries in NSDWSN Kharif 2015.

Entry No.	IET No.	Submergence Tolerance			Elongation Ability		Kneeing Ability
		GGT	MTU	CHN	GGT	MTU	MTU
601	25175	5	9	3	7	3	5
602	25176	5	7		5	3	9
603	25177	5	9	3	3	1	5
604	25178	5	7	3	5	1	3
605	25179	5	9	3	5	1	3
606	25180	5	9	1	5	3	3
607	25181	5	7	3	5	3	9
608	25182	5	9		3	1	5
609	25183	7	7	1	5	1	1
610	25184	5	9	5	1	5	7
611	25185	5	7	1	5	1	1
612	25186	7	9	3	7	5	1
613	25187	5	9	1	7	1	3
614	25188	7	9	3	7	1	5
615	25189	5	9	1	5	7	9
616	25190	5	7	1	7	5	7
617	Local Check	5	7	1	3	5	3
618	25191	5	7	1	7	5	9
619	25192	5	9	5	3	3	7
620	25193	5	7	3	7	3	9
621	25194	3	9	5	3	5	9
622	25195	5	9	1	3	1	7
623	Purnendu (ZC)	7	9	1	3	3	3
624	25196	5	9	5	5	1	3
625	25197	5	9	3	7	5	1
626	25198	7	9	3	5	1	1
627	25199	5	9	5	1	7	7
628	25200	5	7	5	7	1	5
629	25201	5	7	1	5	1	3
630	25202	-			-		
631	25203	5	9	1	7	1	3
632	25204	5	9	5	5	4	1
633	25205	5	9	5	5	7	Non lodging
634	25206	5	7	1	5	5	Non lodging
635	25207	7	7	1	5	3	9
636	25208	5	7	1	5	7	1

Entry No.	IET No.	Submergence Tolerance			Elongation Ability		Kneeing Ability
		GGT	MTU	CHN	GGT	MTU	MTU
637	25209	5	9	1	5	5	3
638	25210	5			1		
639	25211	5	9	1	3	5	5
640	25212	5	7	1	1	5	1
641	25213	5	9	1	5	1	1
642	25214	5	9	7	1	3	9
643	25215	5	9	1	5	1	3
644	25216	5	9	1	7	5	9
645	25217	5	9	1	5	5	9
646	Sabita (NC)	5	9	3	3	5	5
647	25218	7	9	1	7	5	5

INITIAL VARIETY TRIAL-DEEP WATER (IVT-DW)

Locations: 5 **Entries: 17**

Checks: Jalmagna (National), Dinesh (Zonal) and Local **Table: 2.28**

IVT-DW trial comprised of seventeen entries including three checks, Jalmagna as national check, Dinesh as zonal check and one local check. Of the fourteen test entries, eleven entries were in first year and remaining three entries were in third year of testing. The trial was sent to five locations viz., Cuttack, Pusa, Chinsurah, Ghagraghat and Gerua. Data was received from all the centres and required water level of 70-120 was maintained at all these locations. However, only Pusa and Ghagraghat provided data on adaptability parameters.

Details of Water regime at different centres in IVT-DW, Kharif 2015

Location	Week	June	July	August	September	October	November	December
CRRI, Cuttack	1st	-	-	25	52	55	30	5
	2nd	-	-	30	55	50	25	10
	3rd	-	-	35	68	45	20	-
	4th	-	12	40	80	35	15	-
Pusa	1st	10	31	52	71	40	-	-
	2nd	14	35	75	80	30	-	-
	3rd	19	31	70	96	25	-	-
	4th	22	37	62	60	15	-	-
Chinsurah	1st	-	25	50	50	25	-	
	2nd	15	60	42	35	15	-	
	3rd	18	55	45	40	-	-	
	4th	22	50	50	30	-	-	
Ghaghraghat	1st	-	-	05	45	80	-	-
	2nd	-	-	09	75	63	-	-
	3rd	-	-	26	80	30	-	-
	4th	-	-	31	95	10	-	-
Gerua	50-75cm							

The CV of the experiments varied from a minimum of 5.41 at Chinsurah to a maximum of 36.09 % at Gerua. Experimental mean yield ranged from 900 kg/ha at Pusa to 4377 kg/ha at Chinsurah. Overall mean yield of the entries varied from 2740 kg/ha (IET 25225) to 4048 kg/ha (IET 23601). Days to 50% flowering ranged from 118 (IET 25220, Local check) to 134 (IETs 23596 and 25219). Plant height varied from a minimum of 107 cm

(IET 25219) to 148 cm (National check) and panicles per square meter varied from 204 (IET 25224) to 249 (25221). The data pertaining to yield, days to 50% flowering, plant height and no. of panicles/m^2 are presented in tables 2.29, 2.30, 2.31 and 2.32. Data from Pusa was not included in the overall mean yield analysis as the experimental mean yield at this location was very low. On overall basis, a total of eight entries *viz.*, IETs 23601, 25223, 25221, 23596, 25226, 25219, 23594 and 24525 had shown yield advantage of more than 5% over the best check. Top three entries are discussed here under:

Adaptability parameters of entries in IVT-DW Kharif 2015

Entry No	IET No	SS	PACP	GS	ST	EA	KA
701	23596	90	6	2	4	4	6
702	25219	83	3	3	5	6	6
703	25220	83	3	3	4	3	6
704	25221	78	7	7	6	6	7
705	24527	79	6	7	6	5	7
706	25222	78	7	7	6	5	7
707	Local Check	82	5	4	5	3	4
708	25223	78	3	3	5	5	7
709	25224	76	4	5	5	5	8
710	25225	79	7	7	6	6	8
711	24525	94	4	3	3	3	7
712	25226	62	7	5	7	7	5
713	25227	80	8	7	6	7	8
714	Dinesh (ZC)	81	5	3	5	4	6
715	23601	78	6	5	5	5	8
716	Jalmagna (NC)	88	5	3	3	4	6
717	23594	83	6	3	4	5	7

SS: Seedlings Survival; PACP: Phenotypic Acceptability; GS: Grain shattering; ST: Submergence Tolerance; EA: Elongation Ability; KA: Kneeing Ability.

IET 23601 (CR 3835-1-7-2-1-1) is in the third year of testing. It is derived from the cross of CRLC 899/Warda 2 with a mean yield of 4048 kg/ha, 129 days to 50% flowering, 144 cm plant height and long bold grains recorded 36.39, 30. 29 and 30.58 % yield advantage over the NC, ZC and LC, respectively. It ranked first in the state of Assam with 99.42% yield superiority over the best check. It recorded 4196 kg/ha at Gerua. It ranked fourth in eastern zone with 10% and first in north eastern zone with 99.42 % yield advantage over the best check. It had good seedling survival at Ghagraghat, moderate phenotypic acceptability and grain shattering at Pusa, moderate submergence tolerance and elongation ability at Pusa and Ghagraghat. The quality parameters are reported to be 61.1 % HRR, 5.0 ASV, 21.86 AC and GC (26 mm) (Table 2.33).

IET 25223 (OR 2420-3) derived from the cross between Mahanadi/T-90 with a mean yield of 3997 kg/ha, 132 days to 50% flowering, 108 cm plant height and short bold grains recorded 34.67, 28.64 and 28.93 % yield superiority over the national, zonal and local checks, respectively. It yielded 4204 kg/ha at Cuttack, 3613 kg/ha at Ghagraghat and 2798 kg/ha at Gerua. It ranked third in the states of Odisha and Uttar Pradesh with 11 and 38.96 % yield advantage over the best check, respectively. It ranked sixth in the state of Assam with 32.98 % yield superiority over the best check. It ranked first in the eastern zone with 22 % yield superiority over the best check with yield of 4397 kg/ha. It recorded good seedling survival,

low grain shattering and moderate kneeing ability at Pusa, desirable phenotypic acceptability, elongation ability and submergence tolerance at Pusa and Ghagraghat,

IET 25221 (CR 2315-1-1-3-1-3) derived from the cross between CR 2006-10/Hanseswari with a mean yield of 3886 kg/ha, 131 days to 50% flowering, 110 cm plant height and long slender grains showed 30.93, 25.07 and 25.35 % yield advantage over the national, zonal and local checks, respectively. It yielded 3376 kg/ha at Gerua centre and ranked third with 60.45 % yield advantage over the best check. It ranked second in eastern zone with 15% yield superiority over the best check. It showed very good seedling survival and moderate submergence tolerance at Ghagraghat and moderate kneeing and elongation abilities at Pusa.

Overall performance of promising entries in IVT -DW, Kharif 2015

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield advan-tage over NC/ ZC/LC	Superior to check/yield (kg/ha)/rank	Increase over the best check			
				3 checks	State		Zone	
					Rank/ Yield	% BC	Rank/ yield	% BC
1	IET 23601 (CR 3835-1-7-2-1-1) CRLC 899/Warda 2	4048 129 LB	36.39 ***30.29*** 30.58	GER 4196 (1)	AS-1	99.42	Z III- 4 Z IV-1	10.0 99.42
2	IET 25223 (OR 2420-3) Mahabadi/ T-90	3997 132 SB	34.67 ***28.64*** 28.93	CTK 4204 (3) GGT 3613 (3) GER 2798 (6)	OD-3 UP-3 AS-6	11.0 38.96 32.98	Z III- 1 Z IV-6	22 32.98
3	IET 25221 (CR 2315-1-1-3-1-3) CR 2006-10/Hanseswari	3886 131 LS	30.93 ***25.07*** 25.35	GER 3376 (3)	AS-3	60.45	Z III-2 Z IV-3	15.0 60.45
4	IET 23596 (CR 3836-1-7-4-1-1) CRLC 899/Ac.38700	3828 134 SB	28.98 ***23.21*** 23.48	CTK 4497 (1) GER 3530 (2)	OD-1 AS-2	19.0 67.77	Z III- 3 Z IV-2	11.0 67.77
5	IET 25226 (NDR 9925) IR 77769-54-NDR B-283-13/ NDR 9830144	3614 124 LB	21.77 ***16.32*** 16.58	-	-	-	-	-
	Jalmagna	2968						
	Dinesh	***3107***						
	Local Check	3100						

Based on over all mean yield superiority of more than 5% over the best check, desirable traits for deep water conditions viz., days to 50% flowering, plant height and adaptability parameters , only two entries, IET 25226 (NDR 9925) and IET 24525 (NDGR-1529) were promoted to AVT 1-DW.

Due to plant height less than 120 cm, three entries IET 25223 (OR 2420-3), IET 25221 (CR 2315-1-1-3-1-3) and IET 25219 (OR 2423-1) were shifted to IVT-RSL.

The performance of the three entries which were in 3rd year of testing is discussed as here under

Three year performance of entries in IVT 1-DW, Kharif 2015

IET No/Designation / Cross combination		GY/ FD/ GT	Yield adv (%) over NC/RC/LC	Superior to check/yield (kg/ha)/ Rank	% increase over BC			
					State		Zone/Region	
					Rank/yield	% BC	Rank/ yield	% BC
IET 23601 (CR 3835-1-7-2-1-1) CRLC 899/ Warda 2	2015	4048 129 LB	36.39 ***30.29*** 30.58	GER 4196 (1)	AS-1	99.42	Z III-4 Z IV-1	10.0 99.42
	2014	4287 157 LB	53.16 82.49 ***46.16***	CHN 7833 (1) GER 3928 (4)	WB-1 AS-4	95.82 21.27	RIII-2	46.00
	2013	4352 124 MS	52.5 47.37 ***20.34***	-	-	-	R III-3	20.34
IET 23596 (CR 3836-1-7-4-1-1) CRLC 899/ Ac.38700	2015	3828 134 SB	28.98 ***23.21*** 23.48	CTK 4497 (1) GER 3530 (2)	OD-1 AS-2	19.0 67.77	Z III-3 Z IV-2	11.0 67.77
	2014	3344 160 SB	19.47 42.3 ***14.01***	CHN 6417 (4)	WB-4	60.42	RIII-4	14.00
	2013	4784 130 MS	67.64 62.0 ***32.3***	CRR 4784 (1)	OD-1	9.15	R III-1	32.3
IET 23594 (CR 2687-3-3-1-1-3) CRLC 899/AC. 38606	2015	3295 132 LB	11.01 ***6.05*** 6.29	GER 3088 (4)	AS-4	46.76	Z IV-4	46.76
	2014	4380 156 LB	56.48 86.38 ***49.34***	CRR 4343 (2) CHN 7750 (2) GER 3929 (3)	OD-2 WB-2 AS-2	24.33 93.75 21.30	RIII-1	49.00
	2013	4043 125 MS	41.48 36.91 ***11.8***	-	-	-	R III-5	11.8

Three years performance of the promising entries

IET 23601 (CR 3835-1-7-2-1-1) derived from the cross between CRLC 899/Warda 2 with long bold grains recorded yield advantage of more than 5% over the best check in all the three years of testing. For two consecutive years 2015 and 2014, it ranked first and fourth with 99.42 and 95.82 % yield superiority over the best check, respectively in the state of Assam. It ranked first in West Bengal only during 2014 with 21.27 % yield advantage over the best check. It is found to be promising for the state of Assam.

IET 23596 (CR 3836-1-7-4-1-1) derived from the cross between CRLC 899/Ac.38700 with short bold grains showed yield superiority of more than 5% over the best check in all the three years of testing. In the state of Odisha, it ranked first with 5% yield advantage over the best check in two alternate years 2015 and 2013, it also ranked fourth in West Bengal only during 2014. It is found to be promising for the state of Odisha.

IET 23594 (CR 2687-3-3-1-1-3) derived from the cross between CRLC 899/Ac. 38606 with long bold grains recorded yield advantage of more than 5% over the best check in all the three years of testing. In the state of Assam, it ranked fourth and second with 46.76 and 21.30 % yield advantage over the best check during 2015 and 2014, respectively. It ranked second in West Bengal with required yield superiority over the best check only during 2014. Hence it is found to be promising for the state of Assam.

Adaptability parameters of entries in IVT-DW Kharif 2015

Entry No.	IET No.	Seedling survival		Phenotypic acceptability		Grain Shattering		Submergence Tolerance		Elongation Ability		Kneeing Ability	
		PSA	GGT	PSA	GGT	PSA	GGT	PSA	GGT	PSA	GGT	PSA	GGT
701	23596	90	90	3	9	3	1	3	5	3	5	3	9
702	25219	85	80	3	3	3	-	5	5	5	7	5	7
703	25220	70	95	3	3	3	-	5	3	3	3	5	7
704	25221	65	90	7	7	7	-	7	5	5	7	5	9
705	24527	68	90	7	5	7	-	7	5	5	5	5	9
706	25222	65	90	7	7	7	-	7	5	5	5	5	9
707	Local Check	68	95	7	3	7	1	7	3	5	1	5	3
708	25223	80	75	3	3	3	-	5	5	5	5	5	9
709	25224	72	80	5	3	5	-	5	5	7	3	7	9
710	25225	68	90	7	7	7	-	7	5	7	5	7	9
711	24525	92	95	3	5	3	-	3	3	3	3	5	9
712	25226	62	-	7	-	5	-	7	-	7	-	5	-
713	25227	69	90	7	9	7	-	7	5	7	7	7	9
714	Dinesh (ZC)	72	90	3	7	3	-	5	5	5	3	3	9
715	23601	75	80	5	7	5	-	5	5	5	5	7	9
716	Jalmagna (NC)	80	95	3	7	3	-	3	3	3	5	3	9
717	23594	70	95	3	9	3	-	5	3	5	5	5	9

Table 2.2: Composition of entries in Advanced Variety Trial 1- Rainfed Shallow Lowland (AVT 1-RSL), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
2nd year of testing				
201	24443	BRR 2031	Rajashree Sel.	SB
202	**Dhanrasi (NC)**			
203	24480	CR 2681-2-3-1-1-1	Gayatri/Warda2	SB
204	24451	MGD-1403	IR-43581/IR26940-20-3-3-3/KDML-105	LB
205	24474	OR 2330-1-1	OR 1530-1 / NDR 8003	SB
3rd year of testing				
206	23565	OR 2380-2	Mahanadi/ RAYADA-B3	LB
2nd year of testing				
207	23930	MTU 1169	PLA 1100/CR 1009	SB
208	**Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern)-- ZC**			
209	24471	CR 2683-45-1-2-2-1	CRLC 899/Ac.38700	LB
3rd year of testing				
210	23561	CR 3607-11-2-1-1-3	Savitri/Sudhir// Varshadhan	SB
211	**Local Check**			
2nd year of testing				
212	24367	OR 2344-1	Jagannath / IR 21567-1-18-3	SB
213	24450	BRR 2028	Radha Sel.	MS

Table No. 2.2 : Grain Yield (Kg/ha) of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	III													
		OD		OD		OD (2)		BI		JH		W.B		U.P.	
		BBN		CTK		Mean		PTN		RCI@		CHN		MSD@	
201	24443	2969	8	4818	7	3894		3844		1911	8	4686	7	1855	7
202	Dhanrasi (NC)	2538		6341	3	4440	3	3267		2844	2	4349		1964	6
203	24480	2347		6453	2	4400	4	6467	5	2133	4	3086			
204	24451	4550	1 *	4105		4327	6	5178	9	3022	1	5247	3 …10%	2291	3
205	24474	2969	9	6762	1	4865	1 10%	6733	3 …3%	2000	6	6734	1 * …41%	2332	2
206	23565	3496	4	5508	5	4502	2 1%	7156	1 …10%	267		6117	2 * …28%		
207	23930	3640	2	4299		3969	9	6467	6	1933	7	5135	4 …8%	2209	5
208	Zonal Check	3400	5	3875		3638		6511	4	1689		4770	6		
209	24471	3113	7	5648	4	4381	5	3178				4153			
210	23561	2155		4521	9	3338		3800				4686	8		
211	Local ©	2874		5388	6	4131	7	5711	7	2022	5	4461	9	2264	4
212	24367	3544	3	4634	8	4089	8	6933	2 …6%	2244	3	4938	5 …4%	2782	1 *
213	24450	3257	6	3978		3617		5644	8	1822	9	3367			
	Exp Mean	**3142**		**5102**		**4122**		**5453**		**1990**		**4748**		**2243**	
	C.D. 5%	494		965		523		1105		934		741		179	
	C.V.%	9.32		11.22		10.94		12.02		27.57		9.26		4.48	
	Sowing Date	30-Jun		17-Jun				19-Jun		15-Jun		23-Jun		06-Jul	
	Planting Date	30-Jul		01-Aug				15-Jul		06-Aug		06-Aug		15-Aug	
	Local ©	Ashutosh		Sumit				Rajendra Mahsuri		MTU 7029		Sujala		Jallahri	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2. 2 (contd.): Grain Yield (Kg/ha) of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	Zone III Mean (4)		IV						Zone IV Mean (1)		VII			
				AS		AS		AS (1)				KA		KA	
				TTB		GER@		Mean				MGD@		SRS	
201	24443	4079		5162	8	2768	5	5162	8 *	5162	8	843	4 *	4147	9
202	Dhanrasi (NC)	4124	9	4167		2730	6	4167	*	4167		380	9	4247	7
203	24480	4588	8	5664	6	2579	8	5664	6 *	5664	6	802	6 *	4711	5
204	24451	4770	5 3%	5818	4	2384	9	5818	4 *	5818	4	1957	1 *	5150	2
205	24474	5800	1 * 25%	5139	9	3073	2	5139	9 *	5139	9	1047	3 *	4668	6
206	23565	5569	2 * 20%	4275		1684		4275	*	4275		519	8	6648	1 *
207	23930	4885	4 5%	5856	3	1986		5856	3 *	5856	3	833	5 *	4210	8
208	Zonal Check	4639	6	5934	2	2848	4	5934	2 *	5934	2	693	7	4894	3
209	24471	4023		5463	7	2947	3	5463	7 *	5463	7			4841	4
210	23561	3791		4043		2722	7	4043	*	4043				3489	
211	Local ©	4608	7	4614		1166		4614	*	4614				2922	
212	24367	5013	3 8%	5733	5	3298	1	5733	5 *	5733	5	1261	2 *	3081	
213	24450	4061		5957	1	1852		5957	1 *	5957	1	156		3311	
	Exp Mean	**4612**		**5217**		**2464**		**5217**		**5217**		**849**		**4332**	
	C.D. 5%	401		422		1050				380		23		533	
	C.V.%	10.74		4.80		25.28				4.34		1.57		7.30	
	Sowing Date			25-Jun		23-Jun						11-Jun		27-Jun	
	Planting Date			06-Aug		28-Jul								29-Jul	
	Local ©			Ranjit		Chandrama						ASHA		ASHA	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.2 (contd.): Grain Yield (Kg/ha) of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	VII				Zone VII (2)		Overall Mean(7)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA		KA (2)								
		PNP		Mean								
201	24443	2778	7	3462	7	3462	7	4058		116	107	279
202	Dhanrasi (NC)	1661		2954		2954		3796		128	114	272
203	24480	3513	3	4112	4 2%	4112	4 2%	4606	5	129	100	276
204	24451	3799	1 *	4475	1 * 11%	4475	1 * 11%	4835	3 4%	117	110	265
205	24474	3082	6	3875	6	3875	6	5155	1 * 11%	130	99	285
206	23565	1864		4256	3 6%	4256	3 6%	5009	2 * 8%	130	106	287
207	23930	1577		2893		2893		4455	6	127	87	247
208	Zonal Check	3154	5	4024	5	4024	5	4648	4	128	97	289
209	24471	3734	2 *	4287	2 7%	4287	2 7%	4304	8	133	132	262
210	23561	2670	8	3080	9	3080	9	3623		135	120	266
211	Local ©	3297	4	3110	8	3110	8	4181	9	124	106	273
212	24367	2097		2589		2589		4423	7	123	97	271
213	24450	2139	9	2725		2725		3950		114	83	281
	Exp Mean	**2720**		**3526**		**3526**		**4388**		**126**	**104**	**273**
	C.D. 5%	390		418		413		271		1	4	16
	C.V.%	8.52		10.24		10.09		10.15		0.92	0.00	11.74
	Sowing Date	20-Jul										
	Planting Date	27-Aug										
	Local ©	Tunga										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.3: Days to 50% Flowering of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	III							Zone III (6)	IV			Zone IV (2)	VII				Zone VII (2)	Overall (10)
		OD	OD	OD (2)	BI	JH	W.B	U.P.		AS	AS	AS (2)		KA	KA	KA	KA (2)		
		BBN	CTK	Mean	PTN	RCI	CHN	MSD	Mean	TTB	GER	Mean	Mean	@MGD	SRS	PNP	Mean	Mean	Mean
201	24443	101	121	111	103	127	112	118	114	122	145	134	134	132	109	106	108	108	116
202	Dhanrasi (NC)	120	128	124	118	135	127	127	126	134	153	144	144	147	120	114	117	117	128
203	24480	122	132	127	122	137	129		128	140	153	147	147	130	118	112	115	115	129
204	24451	103	119	111	108	126	115	113	114	121	147	134	134	120	108	110	109	109	117
205	24474	122	131	127	123	138	133	120	128	142	153	148	148	131	123	114	119	119	130
206	23565	117	126	122	118	138	128		125	129	160	144	144	142	132	120	126	126	130
207	23930	117	131	124	113	137	129	126	126	140	153	146	146	127	115	110	112	112	127
208	Zonal Check	119	132	126	113	131	129		125	134	149	142	142	136	132	115	124	124	128
209	24471	134	131	132	138	137	137		135	140	147	144	144	157	125	110	118	118	133
210	23561	133	132	133	145	138	135		137	138	151	145	145	156	132	108	120	120	135
211	Local ©	121	121	121	114	138	113	115	120	139	137	138	138		129	116	123	123	124
212	24367	114	129	122	112	136	118	121	122	124	145	135	135	125	115	116	116	116	123
213	24450	103	105	104	109	126	112		111	113	139	126	126	127	112	107	110	110	114
	Exp Mean	**117**	**126**	**122**	**118**	**134**	**124**	**120**	**124**	**132**	**149**	**140**	**140**	**136**	**121**	**112**	**117**	**117**	**126**
	C.D. 5%	1	2	1	1	1	0	2	0	1	5	2	2	0	1	1	1	1	1
	C.V.%	0.66	0.87	0.76	0.57	0.46	0.00	0.88	0.61	0.60	1.96	1.36	1.47	0.00	0.31	0.73	0.53	0.53	0.92

Table No. 2.4: Plant Height (cm) of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	III							Zone III (6)	IV			Zone IV (2)	VII				Zone VII (2)	Overall (10)
		OD	OD	OD (2)	BI	JH	W.B	U.P.		AS	AS	AS (2)		KA	KA	KA	KA (2)		
		BBN	CTK	Mean	PTN	RCI	CHN	MSD	Mean	TTB	GER	Mean	Mean	@MGD	SRS	PNP	Mean	Mean	Mean
201	24443	109	118	114	151	85	117	85	111	120	102	111	111	58	105	77	91	91	107
202	Dhanrasi (NC)	131	137	134	132	92	138	95	121	114	109	111	111	68	112	85	98	98	114
203	24480	102	117	110	132	68	105		105	115	97	106	106	70	87	73	80	80	100
204	24451	120	122	121	134	84	115	112	115	118	102	110	110	86	107	84	96	96	110
205	24474	109	124	117	131	75	111	76	104	110	96	103	103	62	92	68	80	80	99
206	23565	114	124	119	125	63	128		111	117	100	108	108	64	105	81	93	93	106
207	23930	101	110	106	100	64	95	75	91	108	82	95	95	57	78	57	67	67	87
208	Zonal Check	100	118	109	105	64	100		97	110	100	105	105	65	100	75	87	87	97
209	24471	147	134	141	189	78	160		142	120	129	125	125		132	97	114	114	132
210	23561	131	132	132	170	82	147		132	113	115	114	114		110	83	96	96	120
211	Local ©	111	134	123	132	54	122	116	112	110	87	98	98		104	90	97	97	106
212	24367	109	123	116	121	71	112	78	102	105	93	99	99	53	80	83	81	81	97
213	24450	86	93	90	100	58	95		86	113	72	93	93	44	70	64	67	67	83
	Exp Mean	**113**	**122**	**118**	**132**	**72**	**119**	**91**	**110**	**113**	**99**	**106**	**106**	**63**	**98**	**78**	**88**	**88**	**104**
	C.D. 5%			0					3								0	0	4
	C.V.%			0.00					0.00								0.00	0.00	0.00

Table No. 2.5: Panicles/ M² of entries in AVT 1-RSL Kharif 2015

Entry No.	IET No.	III							Zone III (6)	IV			Zone IV (2)	VII				Zone VII (2)	Overall (10)
		OD	OD	OD (2)	BI	JH	W.B	U.P.		AS	AS	AS (2)		KA	KA	KA	KA (2)		
		BBN	CTK	Mean	PTN	RCI	CHN	MSD	Mean	TTB	GER	Mean	Mean	@MGD	SRS	PNP	Mean	Mean	Mean
201	24443	207	264	235	362	206	330	153	254	363	233	298	298	270	249	421	335	335	279
202	Dhanrasi (NC)	217	251	234	338	254	297	147	251	345	245	295	295	290	278	348	313	313	272
203	24480	170	264	217	362	238	264		259	353	230	292	292	208	251	348	300	300	276
204	24451	221	241	231	373	222	198	152	235	334	203	268	268	222	280	428	354	354	265
205	24474	223	257	240	420	239	330	155	271	280	241	261	261	228	324	385	355	355	285
206	23565	208	274	241	373	189	330		275	320	243	281	281	192	269	378	323	323	287
207	23930	221	307	264	338	154	231	147	233	214	225	220	220	428	274	356	315	315	247
208	Zonal Check	233	274	254	350	306	198		272	348	238	293	293	218	251	399	325	325	289
209	24471	190	253	221	362	208	264		255	317	207	262	262		289	269	279	279	262
210	23561	149	274	212	408	148	297		255	308	209	258	258		278	327	302	302	266
211	Local ©	224	253	238	292	286	264	146	244	315	235	275	275		269	450	359	359	273
212	24367	199	274	237	350	287	264	165	257	314	227	271	271	282	293	341	317	317	271
213	24450	212	251	232	292	272	231		251	371	242	307	307	170	256	407	331	331	281
	Exp Mean	**206**	**264**	**235**	**355**	**231**	**269**	**152**	**254**	**322**	**229**	**275**	**275**	**251**	**274**	**374**	**324**	**324**	**273**
	C.D. 5%	20	15	12	100	94	0	6	23	11	27	11	15	44	57	61	39	39	16
	C.V.%	5.87	3.28	4.47	16.70	24.15	0.00	2.07	13.72	2.05	6.91	3.45	4.72	10.29	12.28	9.66	10.29	10.29	11.74

Table 2.6: Grain quality characteristics of entries in AVT 1-RSL, Kharif 2015

		IIRR											NRRI		
ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC	ASV	AC	GC
201	24443	79.7	69.9	65.3	5.48	2.43	2.25	SB	VOC	7.0	24.52	38	6.0	22.65	47
202	Dhan Rasi (NC)	79.8	70.1	66.7	5.33	2.42	2.20	SB	VOC	4.0	23.93	22	5.0	21.45	34
203	24480	81.4	73.2	70.3	4.92	2.36	2.08	SB	VOC	4.0	22.70	22	5.0	21.37	66
204	24451	79.9	70.8	67.2	6.99	2.34	2.98	LB	VOC	4.0	24.40	45	5.0	24.45	51
205	24474	80.4	72.6	70.4	5.13	2.23	2.30	SB	VOC	4.0	24.93	22	5.3	21.30	31
206	23565	75.8	68.4	64.8	6.06	2.24	2.70	LB	A	5.0	25.66	44	5.0	21.52	31
207	23930	80.3	71.2	69.6	5.43	2.25	2.41	SB	A	7.0	25.49	23	7.0	22.42	65
208	Savitri (ZC)	79.6	68.2	66.5	4.66	2.49	1.87	SB	VOC	5.0	23.20	51	5.0	24.37	34
209	24471	79.8	71.7	70.2	6.29	2.29	2.74	LB	A	4.0	23.08	22	5.0	22.20	42
210	23561	79.7	69.4	65.7	5.17	2.19	2.36	SB	A	4.0	23.87	22	5.0	22.35	55
212	24367	79.7	69.4	64.9	4.99	2.33	2.14	SB	VOC	4.0	26.75	34	4.0	23.55	35
213	24450	78.6	67.7	54.6	4.88	1.67	2.92	MS	VOC	4.0	23.67	22	5.0	21.82	32

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 2.7: Composition of entries in Initial Variety Trial - Rainfed Shallow Lowland (IVT- RSL), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
1st year of testing				
301	24997	OR 2488-4	OR1509-4/Vandana	MB
302	24488	OR 2439-6	OR 142-99/ Tarun bhog	MS
303	24998	CN 2065-15	CN 1234-12-1/OR 1898-18	MS
304	24999	CR 3941-7	Samba Mahsuri/Wita 12	MS
305	25000	CR 2756-20-9-4	Savitri/ Mahsuri	MB
306	25001	CR 3695-2-1-1-1	Gayatri/Wardal	MB
307	25002	CR3941-10	Samba Mahsuri/Wita 12	MS
308	25003	CR 2543-19-8-5	WITA 12 / Swarna	MB
309	25004	CN-1967-23-3-7	Swarna/Sashi	LS
310	25005	CR 3697-4-2-4-2-1	CR662-2-2-1-1-1/Sarala//CR780-1937-1-3/ DRR1702	LS
311	25006	RP 5709-343-19-5-4	RP Bio 226/ MTU 1064	MS
312	25007	CR 3504-14-1-1-2-1	IR 36/Birupa	MS
313	25008	CIARI Dhan-7	SBIR 67471-M-8-1-1-1-1/ SABITA	MS
314	25009	RCPR-29-HHZ9-DT 12-DT1-Sub-1	HUANG-HUA-ZHAN*2/IR 50	MS
315	25010	CIARI Dhan-8	C 14-8-11-113 (Selection from C14-8)	SB
316	25011	TTB 619-7-3	Salibahana/Basamanik	SS
317	25012	CR 3816-2-1-1-1-3	Gayatri/Ac38700	SB
318	25013	CIARI Dhan-6	IR 730112-137-2-22/ PSBRC 10	LS
319	25014	CR 2790-17-6	Pooja/Pusa 44// CR 997	MS

Entry No.	IET No.	Designation	Cross combination	Grain type
320	25015	OR(T)-30	Lalat Mutant	MS
321	25016	CR 2792-18-8-7	Swarna/CR 997	MB
322	25017	MTU 1196 (MTU 2244-119-83-65)	MTU1064/Swarna sub1//*2 MTU1064	MS
323	25018	CR 2688-1-7-1-3-2	Chakaakhi/AC .38599	MB
324	25019	CIARI Dhan-9	C 14-8-11-91 (Selection from C 14-8)	SB
325	25020	OR 2545-7	Birupa/IR76561-AC-8-8	MS
326	**Local Check**			
327	25021	TTB-680-2-35-2	IR 74355-CN3/CN 6-78	MS
328	25022	CR 3863-41-5-1	Pusa 44 / PTB 33	MB
329	25023	CHR 29	Sabita/Samba Mahsuri	LS
330	25024	CR 3816-1-2-1-1-1	Gayatri/AC 38700	SB
331	25025	CR 2683-7-1-2-3-2	CRLC 899/Ac.38700	MS
332	25026	CR 3505-1-1-1-1-2-1	IR 36/Vijetha	MS
333	25027	NDR 9956	IR77200-227-NDR-B-11-17/NDR 9730018	LB
334	25028	IR 70153-15-TTB 3-1-6-3	Chang Ropeak/IR 63429-23-1-3-3-//IR55008-10-3-3-3-3	SS
335	25029	CIARI Dhan-1	Quing Livan o.1	MS
336	25030	CIARI Dhan-3	Taichung Sen Yu	MS
337	25031	CIARI Dhan-2	Milyang 55	MB
338	25032	CR 3813-4-10-1-1-1	CR780-1937-1-3/DRR1702	LS
339	25033	CR 3543-4-3-2-1-1	Prasad/Divya	LS
340	25034	CR 2682-1-1-5-1-4	CRLC899/AC.38606	MS
341	25035	OR 2440-8	Salivahana//Mahanadi/CR 2023-3	SB
342	25036	CR2315-1-1-3-1-1	CR2006-10/Hanseswari	LS
343	24521	CR 3008-B-13-1-1-1	Gayatri/Gahgasuili	SB
344	**Dhanrasi (NC)**			
345	25037	CR 3808-57	Selection from MS Line	MS
346	25038	OR 2434-4	Indravati/CR780-1937	SB
347	25039	AD 13113	ADT 40/ Swarna	LB
348	25040	CR 3549-8-1-1-1-1-1	ADT 43/Annapurna	MS
349	25041	NDR 9948	IR77200-227-NDR-B-11-16/ NDR 9830099	LB
350	**Pooja (Eastern), Bahadur (North Eastern), Savitri (Southern)-- ZC**			
351	25042	MTU 1197 (MTU 2191-27-1-1-1)	MTU1064/Swarnasub1	MS
352	25043	CR 3697-4-2-4-1-5	CR662-2-2-1-1-1/Sarala//CR780-1937-1-3/ DRR1702	LS
353	25044	OR 2439-4	OR 142-99/Tarunbhog	MS
354	25045	CR 2682-1-1-5-1-3	CRLC899/AC.38606	MS
355	24491	Ciherang Sub-1	Ciherang 2/IR 64 Sub-1	LB
356	25046	CR 3525-20-1-1-1-1-1	Vijetha /Divya	MS
357	25047	AD 13125	CR 1009/ KR 1	SB
358	25048	VNR-217	VNRF-83/VNRB-412	MS

Table No. 2.8: Grain Yield (Kg/ha) of entries in IVT-RSL Kharif 2015

Entry No.	IET No.	III																Zone III (4)	
		OD		OD		OD (2)		JH		W.B		W.B		W.B (2)		U.P.			
		BBN		PTN		Mean		@RCI		CHN		CKD		Mean		@MSD		Mean	
301	24997	5926	2	3550		4738	5	1800		4735		4550		4642				4690	
302	24488	5556	5	4150	5	4853	3	500		4735		5500	6	5117	6%			4985	5
303	24998	3704		3400		3552		2400		5051		4490		4770		1719		4161	
304	24999	3889		3100		3494		1850		3472		4940		4206		2174		3850	
305	25000	4815		3650		4232		200		5808		5580	3	5694	6 * 18%			4963	6
306	25001	3704		3150		3427				3914		3050		3482				3454	
307	25002	4630		2400		3515		1950		4104		4400		4252		2450	4	3883	
308	25003	4630		3150		3890		2550	9	4419		3450		3935		2989	2 *	3912	
309	25004	4444		3650		4047		2650	5	4924		5780	1	5352	7 11%	1719		4700	8
310	25005	2593		3150		2871		950		4230		4830		4530				3701	
311	25006	4259		2400		3330		1300		3662		3910		3786				3558	
312	25007	4444		2650		3547		1750		3472		670		2071		2078		2809	
313	25008	4630		2400		3515		2100		3977		4270		4124		2221	8	3819	
314	25009	4074		2650		3362		1350		3472		4520		3996		3112	1 *	3679	
315	25010	2593		2400		2496				3346		3620		3483				2990	
316	25011	5370	6	3650		4510	7	1850		5051		4700		4875	1%	2217	9	4693	9
317	25012	3704		2750		3227				3472		5310	8	4391				3809	
318	25013	3704		4400	3	4052		1900		3157		3500		3328		2443	5	3690	
319	25014	5185	7	3600		4393	8	2100		5934	7	5530	4	5732	4 * 19%			5062	3
320	25015	5185	8	3400		4293		3550	1 *	5997	5	5400	7	5699	5 * 18%	2261	7	4996	4
321	25016	4259		3150		3705		600		5177		4880		5028	5%			4367	
322	25017	4630		2650		3640		600		5366		4810		5088	6%			4364	
323	25018	4444		4200	4	4322	9			4293		4610		4451				4387	
324	25019	2130		2400		2265		2300		3662		3650		3656				2960	
325	25020	4259		3650		3955		1250		6124	3			6124	1 * 27%			4678	
326	Local Check	4630		2400		3515		1450		4735		4885		4810		2367	6	4162	
327	25021	5741	3	3900	8	4820	4	2900	2	6187	1	5300	9	5743	3 * 19%	1902		5282	1 2%
328	25022	4074		3650		3862		2300		5997	6	5605	2	5801	2 * 21%			4832	7
329	25023	4815		3300		4057		2050		4735		4100		4417				4237	
330	25024	4259		3350		3805				5177		3760		4468				4137	
331	25025	4630		2650		3640				4924		3770		4347				3993	
332	25026	4259		3000		3630		2800	3	3662		3100		3381		2936	3 *	3505	
333	25027			2800		2800		1550				3610		3610		1862		3205	
334	25028	5185	9	2900		4043		1950		4293		4340		4316				4180	
335	25029	4630		2650		3640		1350		3662		4380		4021		2041		3830	
336	25030	4259		2650		3455		1600		4040		2710		3375		1908		3415	
337	25031	4074		3000		3537		2600	7	3788		4800		4294		1549		3915	
338	25032	3148		2400		2774		1550		3914		4050		3982		1370		3378	
339	25033	4444		2800		3622		1800		3662		4740		4201		1729		3912	
340	25034	3889		3600		3744				4104		4470		4287				4016	
341	25035	3889		3900	9	3894		1100		6187	2	3805		4996	4%			4445	
342	25036	4074		3400		3737		550		4735				4735				4070	
343	24521	5000		2500		3750				5808		4530		5169	9 7%			4460	
344	Dhanrasi (NC)	4259		2400		3330		2350		6124	4	3300		4712		1230		4021	
345	25037	5185		3900		4543	6	2650	6	3220		5505	5	4362		1503		4452	
346	25038	3704		4650	2	4177		2450		5682		3610		4646				4411	
347	25039	4259		3400		3830		1800		4861		4360		4611				4220	
348	25040	4630		3050		3840		2050		4609		3450		4029		1629		3935	
349	25041			4050	7	4050		2200		3409		5160		4285				4206	
350	Zonal Check	5741	4	5400	1	5570	1	1900		5871	8	3700		4786				5178	2
351	25042	6111	1	3750		4931	2	2600	8	5366		485		2926				3928	
352	25043	3889		2950		3419		1200		5745		4710		5227	8 9%			4323	
353	25044	4815		2400		3607		1100		5051		3340		4195				3901	
354	25045	4259		4150	6	4205				3409		2925		3167				3686	
355	24491	4630		3400		4015		2050		4609		3150		3879		1961		3947	
356	25046	4259		3200		3730		2500		4924		4690		4807				4268	
357	25047	3704		2400		3052				5366		4330		4848	1%	1961		3950	
358	25048	4444		3150		3797		2800	4	5871	9	3402		4637		2174		4217	
	Exp Mean	**4387**		**3221**		**3793**		**1848**		**4654**		**4179**		**4419**		**2058**		**4105**	
	C.D. 5%	784		1004		738		969		1293		1115		843		405		528	
	C.V.%	8.92		15.57		13.89		26.06		13.87		13.31		13.62		9.56		13.07	
	Sowing Date	30-Jun		03-Jul				16-Jun		24-Jun		04-Jul				06-Jul			
	Planting Date	03-Aug		13-Aug				08-Aug		08-Jul		14-Aug				06-Aug			
	Local ©	Ashutosh		R. Mahsuri - 1				MTU 7029		Sujala		MTU 7029				Jallahri			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.8 Contd. : Grain Yield (kg/ha) of entries in IVT-RSL Kharif 2015

Entry No.	IET No.	IV						Zone IV (2)		VII			
		AS		AS		AS (2)				KA		KA	
		TTB		GER		Mean		Mean		@GD		SRS	
301	24997	4835		4235		4535		4535		25		4553	
302	24488	3810		4335		4072		4072		117		3668	
303	24998	5549	5	4105		4827		4827		96		4812	
304	24999	5440	7	2636		4038		4038		509	3	2910	
305	25000	5220		3456		4338		4338		89		3268	
306	25001	4084		3450		3767		3767		190		4385	
307	25002	4872		3795		4333		4333		621	1	3847	
308	25003	4780		4866		4823		4823		339	6	4445	
309	25004	5238		4258		4748		4748		308	7	4394	
310	25005	3828		1404		2616		2616				3281	
311	25006	4103		3304		3703		3703		376	5	4336	
312	25007	5586	3	4476		5031	9	5031	9	578	2	3895	
313	25008	5870	1	4145		5007		5007		248	8	1084	
314	25009	3956		1846		2901		2901		230	9	2382	
315	25010	3388		74		1731		1731				3791	
316	25011	5092		5103	7	5097	7	5097	7			5511	5
317	25012	4945		4141		4543		4543				3989	
318	25013	5256		4562		4909		4909				5081	
319	25014	4359		4816		4588		4588				4112	
320	25015	4505		4214		4360		4360				5764	2
321	25016	3480		4145		3813		3813				2857	
322	25017	3919		2443		3181		3181				3339	
323	25018	4267		4135		4201		4201				3876	
324	25019	4432		9		2221		2221				3428	
325	25020	5385	8	4981	8	5183	6	5183	6			3458	
326	Local Check	5311		1729		3520		3520				3264	
327	25021	3810		5322	3	4566		4566				3899	
328	25022	5055		4175		4615		4615				4868	
329	25023	4615		3177		3896		3896				3358	
330	25024	5165		5655	2	5410	1 1%	5410	1 1%			3445	
331	25025	4414		4744		4579		4579				2931	
332	25026	4469		4502		4485		4485				3959	
333	25027	4945				4945		4945		157			
334	25028	4927		3871		4399		4399				4567	
335	25029	4762		2076		3419		3419				2060	
336	25030	4725		3137		3931		3931		177		2357	
337	25031	5055		3943		4499		4499		200		5315	8
338	25032	4377		3547		3962		3962				4795	
339	25033	4744		3811		4277		4277				5022	
340	25034	4615		2500		3558		3558				4529	
341	25035	4853		4035		4444		4444				3490	
342	25036	4780		3805		4293		4293				4074	
343	24521	4212		3881		4047		4047				3850	
344	Dhanrasi (NC)	4853		5842	1	5348	2	5348	2			4954	
345	25037	5330	9	5249	4	5289	3	5289	3	412	4	5673	3
346	25038	4835		5224	6	5030		5030				3795	
347	25039	4799		4368		4583		4583				5397	7
348	25040	4963		4330		4647		4647				5036	
349	25041	4579				4579		4579					
350	Zonal Check	5623	2	4531		5077	8	5077	8			4093	
351	25042	5568	4	4930	9	5249	4	5249	4			5295	9
352	25043	4835		3675		4255		4255				2738	
353	25044	4835		4853		4844		4844				5671	4
354	25045	4304		3051		3678		3678				4517	
355	24491	5531	6	4029		4780		4780				3288	
356	25046	4963		4377		4670		4670				5485	6
357	25047	4853		3686		4270		4270				4404	
358	25048	5256		5227	5	5242	5	5242	5			6042	1
	Exp Mean	**4761**		**3861**		**4327**		**4319**		**275**		**4083**	
	C.D. 5%	1181		1060		776		784		14		1649	
	C.V.%	12.38		13.70		12.83		12.96		2.44		20.15	
	Sowing Date	24-Jun		23-Jun						18-Jun		19-Jun	
	Planting Date	01-Aug		06-Aug								16-Jul	
	Local ©	Ranjit		Chandrama								ASHA	

* Superior to Best Check % Superior over Best Check @ not included in means

Contd... Table No. 2.8: Grain Yield (kg/ha) of entries in IVT-RSL Kharif 2015

Entry No.	IET No.	VII				Zone VII (2)		Overall (8)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA		KA (2)								
		PNP		Mean		Mean		Mean				
301	24997	2526		3539		3539		4364		125	103	260
302	24488	3163		3415		3415		4365		125	107	260
303	24998	3259		4036	5%	4036	5%	4296		113	98	290
304	24999	2644		2777		2777		3629		110	98	260
305	25000	919		2093		2093		4089		122	90	298
306	25001	3081		3733		3733		3602		129	132	254
307	25002	2689		3268		3268		3842		115	104	273
308	25003	1556		3000		3000		3912		118	108	273
309	25004	3178		3786		3786		4483	8	119	81	297
310	25005	681		1981		1981		3000		130	106	303
311	25006	3030		3683		3683		3625		112	78	326
312	25007	3156		3525		3525		3544		113	103	255
313	25008	3867	8	2475		2475		3780		107	100	287
314	25009	1281		1832		1832		3023		102	83	282
315	25010	185		1988		1988		2425		138	132	276
316	25011	1926		3718		3718		4550	6	119	106	283
317	25012	2444		3217		3217		3844		129	141	261
318	25013	3852	9	4466	3 16%	4466	3 16%	4189		106	96	276
319	25014	4489	3	4300	7 12%	4300	7 12%	4753	3	124	97	311
320	25015	3978	7	4871	2 * 27%	4871	2 * 27%	4806	2	108	93	270
321	25016	2274		2566		2566		3778		121	102	277
322	25017	1230		2284		2284		3548		128	91	287
323	25018	3289		3582		3582		4139		126	105	296
324	25019	919		2173		2173		2579		139	142	256
325	25020	2156		2807		2807		4287		130	104	280
326	Local Check	3311		3288		3288		3783		121	100	285
327	25021	1452		2675		2675		4451	9	123	116	307
328	25022	1911		3390		3390		4417		121	104	304
329	25023	4311	5	3835		3835		4051		114	129	289
330	25024	3556		3500		3500		4296		130	124	240
331	25025	2919		2925		2925		3873		124	128	240
332	25026	3193		3576		3576		3768		118	117	271
333	25027							3785		115	94	248
334	25028	681		2624		2624		3846		123	117	294
335	25029	4304	6	3182		3182		3565		103	101	273
336	25030	4400	4	3379		3379		3535		105	113	261
337	25031	3393		4354	5 13%	4354	5 13%	4171		108	90	257
338	25032	830		2812		2812		3383		124	113	278
339	25033	3600		4311	6 12%	4311	6 12%	4103		113	112	299
340	25034	1622		3076		3076		3666		131	132	288
341	25035	2578		3034		3034		4092		126	126	283
342	25036	3059		3567		3567		3990		133	110	296
343	24521	2926		3388		3388		4088		127	119	279
344	Dhanrasi (NC)	2044		3499		3499		4222		121	107	271
345	25037	2437		4055	6%	4055	6%	4562	5	117	97	266
346	25038	4674	2 *	4235	9 10%	4235	9 10%	4522	7	128	105	276
347	25039	2348		3873	1%	3873	1%	4224		125	101	256
348	25040	3852		4444	4 16%	4444	4 16%	4240		115	107	275
349	25041							4299		119	96	297
350	Zonal Check	3585		3839		3839		4818	1	126	99	319
351	25042	3111		4203	9%	4203	9%	4327		122	95	248
352	25043	481		1610		1610		3628		130	110	281
353	25044	2904		4287	8 12%	4287	8 12%	4234		123	103	262
354	25045	1415		2966		2966		3504		125	134	265
355	24491	4844	1 *	4066	6%	4066	6%	4185		110	96	271
356	25046	2889		4187	9%	4187	9%	4348		113	97	282
357	25047	1985		3195		3195		3841		132	100	277
358	25048	3830		4936	1 * 29%	4936	1 * 29%	4653	4	116	108	264
	Exp Mean	**2682**		**3383**		**3383**		**3980**		**120**	**106**	**277**
	C.D. 5%	981		942		942		422		1	12	23
	C.V.%	18.25		19.88		19.88		15.24		1.00	0.00	13.74
	Sowing Date	20-Jul										
	Planting Date	28-Aug										
	Local ©	Tunga										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.9: Days to 50% Flowering of entries in IVT-RSL Kharif 2015

Entry No.	IET No.	III								Zone III (6)	IV			Zone IV (2)	VII				Zone VII (3)	Overall (11)
		OD	OD	OD (2)	JH	W.B	W.B	W.B (2)	U.P.		AS	AS	AS (2)		KA	KA	KA	KA (3)		
		BBN	PTN	Mean	RCI	CHN	CKD	Mean	MSD	Mean	TTB	GER	Mean	Mean	MGD	SRS	PNP	Mean	Mean	Mean
301	24997	121	118	119	138	127	100	113		121	131	145	138	138	138	119	114	123	123	125
302	24488	128	125	126	139	129	84	106		121	133	143	138	138	119	125	123	122	122	125
303	24998	106	111	109	122	114	99	106	120	112	120	119	119	119	119	107	111	112	112	113
304	24999	103	111	107	124	112	74	93	109	105	117	125	121	121	123	108	111	114	114	110
305	25000	120	118	119	140	129	86	108		119	123	139	131	131	140	118	109	122	122	122
306	25001	134	136	135		139	102	121		128	138	145	141	141	125	132	113	123	123	129
307	25002	106	114	110	123	112	99	105	115	111	121	132	126	126	123	111	112	115	115	115
308	25003	109	114	111	133	116	94	105	115	113	120	127	124	124	135	118	119	124	124	118
309	25004	109	114	112	137	118	91	104	123	115	118	130	124	124	140	118	110	123	123	119
310	25005	133	135	134	143	126	83	105		124	135	152	143	143	142	130	122	131	131	130
311	25006	104	111	107	121	112	84	98		106	118	132	125	125	122	108	109	113	113	112
312	25007	107	112	109	123	112	118	115	107	113	107	127	117	117	123	106	100	110	110	113
313	25008	99	101	100	116	118	96	107	103	105	116	116	116	116	112	96	103	103	103	107
314	25009	89	94	91	115	106	103	105	101	101	98	108	103	103	108	97	109	105	105	102
315	25010	152	134	143		125	99	112		127	140	166	153	153		158	127	142	142	138
316	25011	113	118	116	133	120	94	107	121	116	125	136	130	130		117	114	116	116	119
317	25012	136	135	135		133	99	116		126	135	145	140	140		134	115	124	124	129
318	25013	94	102	98	121	108	68	88	107	100	115	120	117	117	125	100	110	112	112	106
319	25014	122	125	124	141	131	90	110		122	132	145	138	138		122	112	117	117	124
320	25015	97	104	100	117	112	79	96	112	103	109	125	117	117	140	97	103	113	113	108
321	25016	113	118	115	136	126	95	111		118	136	140	138	138		107	118	112	112	121
322	25017	133	135	134	139	130	78	104		123	140	156	148	148	128	126	115	123	123	128
323	25018	134	130	132		139	82	111		121	137	143	140	140		124	119	121	121	126
324	25019	151	135	143	138	140	102	121		133	140	164	152	152		156	122	139	139	139
325	25020	122	124	123	141	128		128		129	133	140	136	136	140	123	118	127	127	130
326	Local Check	119	126	122	136	116	94	105	109	116	132	116	124	124	140	135	113	129	129	121
327	25021	114	125	120	136	124	97	110	123	120	132	140	136	136		123	116	119	119	123
328	25022	112	131	121	138	123	94	108		119	133	136	134	134		109	114	111	111	121
329	25023	108	114	111	125	116	83	100		109	120	132	126	126		119	112	115	115	114
330	25024	136	136	136	141	135	100	118		129	135	145	140	140		130	114	122	122	130
331	25025	131	107	119	139	134	82	108		118	133	145	139	139		130	115	122	122	124
332	25026	108	135	121	128	116	107	111	99	115	121	130	125	125	140	109	110	120	120	118
333	25027		115	115	125		87	87	113	110	125		125	125	126			126	126	115
334	25028	113	121	117	136	125	96	110		118	135	140	137	137		125	116	120	120	123
335	25029	92	99	96	120	103	66	85	104	97	100	116	108	108	123	105	103	110	110	103
336	25030	92	100	96	118	103	105	104	105	104	100	110	105	105	123	105	98	109	109	105
337	25031	97	100	99	121	105	100	103	110	105	105	113	109	109	125	108	107	113	113	108
338	25032	121	121	121	136	126	100	113	119	120	133	140	136	136		125	119	122	122	124
339	25033	105	109	107	124	113	85	99	113	108	118	132	125	125	129	110	108	115	115	113
340	25034	136	136	136		135	91	113		124	136	156	146	146		143	118	131	131	131
341	25035	133	119	126	136	129	103	116		124	133	145	139	139		124	114	119	119	126
342	25036	133	135	134	138	136		136		135	136	145	140	140		132	112	122	122	133
343	24521	131	131	131		134	95	114		123	134	145	140	140	129	135	114	126	126	127
344	Dhanrasi (NC)	122	126	124	136	120	78	99	120	117	131	140	135	135		121	115	118	118	121
345	25037	111	125	118	125	119	100	109	114	115	126	132	129	129	123	109	110	114	114	117
346	25038	135	125	130	140	134	93	114		125	135	145	140	140		125	120	122	122	128
347	25039	124	135	130	136	128	85	107		122	133	145	139	139		125	112	119	119	125
348	25040	99	111	105	124	113	103	108	113	110	121	132	126	126	128	109	110	116	116	115
349	25041		121	121	124	120	89	105		113	128		128	128	130			130	130	119
350	Zonal Check	115	124	120	141	129	110	119		124	131	140	135	135		126	119	122	122	126
351	25042	114	121	117	126	125	111	118		119	125	143	134	134	133	110	112	118	118	122
352	25043	126	135	131	141	137	99	118		128	136	145	141	141		126	121	123	123	130
353	25044	126	135	131	133	127	78	103		120	130	136	133	133	128	120	120	123	123	123
354	25045	136	130	133		139	68	104		118	137	145	141	141		137	112	124	124	125
355	24491	92	103	97	116	106	107	106	105	105	124	116	120	120	132	108	107	116	116	110
356	25046	106	114	110	121	117	91	104		110	106	130	118	118	133	107	109	116	116	113
357	25047	152	136	144		139	100	120	111	128	138	154	146	146		139	117	128	128	132
358	25048	109	114	111	132	120	106	113	113	115	124	130	127	127		107	107	107	107	116
	Exp Mean	**117**	**120**	**119**	**130**	**123**	**93**	**108**	**111**	**116**	**126**	**136**	**131**	**131**	**129**	**119**	**113**	**119**	**119**	**120**
	C.D. 5%	2	1	1	2	0	1	1	2	1	1	6	3	3	0	1	2	1	1	1
	C.V.%	1.01	0.56	0.83	0.79	0.00	0.64	0.39	0.92	0.75	0.50	2.22	1.65	1.65	0.00	0.31	0.72	0.47	0.47	1.00

Table No. 2.10: Plant Height (cm) of entries in IVT-RSL Kharif 2015

Entry No.	IET No.	III								Zone III	IV			Zone IV	VII				Zone VII	Overall
		OD	OD	OD (2)	JH	W.B	W.B	W.B (2)	U.P.	(6)	AS	AS	AS (2)	(2)	KA	KA	KA	KA (3)	(3)	(11)
		BBN	PTN	Mean	RCI	CHN	CKD	Mean	MSD	Mean	TTB	GER	Mean	Mean	MGD	SRS	PNP	Mean	Mean	Mean
301	24997	124	118	121	78	138	97	118		111	110	115	112	112	61	106	82	83	83	103
302	24488	130	111	121	76	125	122	124		113	115	133	124	124	54	115	87	85	85	107
303	24998	111	116	114	77	112	98	105	92	101	112	115	113	113	67	101	75	81	81	98
304	24999	105	113	109	77	115	109	112	103	104	98	124	111	111	71	95	73	80	80	98
305	25000	82	89	86	62	96	152	124		96	122	93	107	107	57	87	64	69	69	90
306	25001	154	163	159		146	144	145		152	132	148	140	140	69	133	100	101	101	132
307	25002	126	94	110	73	115	155	135	93	109	112	123	117	117	71	103	78	84	84	104
308	25003	127	120	124	78	130	108	119	94	109	118	128	123	123	78	117	87	94	94	108
309	25004	95	76	86	58	95	108	101	70	84	100	91	95	95	51	85	58	65	65	81
310	25005	108	108	108	84	112	118	115		106	118	124	121	121		105	80	92	92	106
311	25006	85	60	73	56	95	123	109		84	90	83	86	86	49	79	59	62	62	78
312	25007	125	110	118	76	124	120	122	97	109	94	136	115	115	64	106	78	82	82	103
313	25008	100	104	102	81	118	114	116	94	102	122	125	124	124	60	105	79	81	81	100
314	25009	80	91	86	62	90	113	101	97	89	80	90	85	85	52	95	62	70	70	83
315	25010	164	113	139		145	108	126		132	142	147	144	144		157	82	119	119	132
316	25011	135	103	119	64	115	123	119	86	104	120	121	121	121		108	82	95	95	106
317	25012	156	143	150		155	112	134		142	148	160	154	154		152	105	128	128	141
318	25013	96	110	103	72	105	111	108	90	97	120	110	115	115	68	100	72	80	80	96
319	25014	103	85	94	68	110	129	119		99	105	104	105	105		94	73	84	84	97
320	25015	94	101	98	79	108	108	108	83	95	108	105	106	106	71	96	74	80	80	93
321	25016	106	104	105	73	115	116	116		103	116	108	112	112		100	76	88	88	102
322	25017	105	98	102	69	100	100	100		94	120	94	107	107	61	94	69	75	75	91
323	25018	103	115	109		115	94	104		107	114	120	117	117		99	82	91	91	105
324	25019	179	162	171	75	172	108	140		139	147	170	159	159		165	102	133	133	142
325	25020	110	107	109	70	124		124		103	115	122	119	119		104	84	94	94	104
326	Local Check	119	93	106	61	125	86	106	105	98	107	105	106	106		104	92	98	98	100
327	25021	130	125	128	94	132	134	133	104	120	118	124	121	121		108	89	98	98	116
328	25022	108	107	108	77	115	112	114		104	107	128	118	118		101	84	92	92	104
329	25023	141	137	139	94	162	108	135		128	150	138	144	144		127	104	115	115	129
330	25024	154	125	140	84	140	107	123		122	140	144	142	142		131	90	111	111	124
331	25025	146	117	132	96	165	92	129		123	140	153	146	146		143	100	121	121	128
332	25026	135	136	136	92	135	105	120	93	116	127	144	135	135		114	85	99	99	117
333	25027		91	91	81		112	112	114	100	105		105	105	59			59	59	94
334	25028	129	125	127	83	126	142	134		121	122	121	122	122		120	82	101	101	117
335	25029	100	111	106	78	115	109	112	86	100	113	115	114	114		105	82	93	93	101
336	25030	95	101	98	76	311	120	216	102	134	100	104	102	102	50	107	81	79	79	113
337	25031	92	95	94	68	104	137	121	85	97	90	101	95	95	55	96	68	73	73	90
338	25032	107	121	114	83	140	110	125	111	112	120	133	127	127		119	85	102	102	113
339	25033	125	104	115	88	144	127	136	84	112	116	135	126	126		114	83	98	98	112
340	25034	144	103	124		154	109	131		127	147	159	153	153		143	99	121	121	132
341	25035	130	131	131	82	140	152	146		127	138	134	136	136		129	102	115	115	126
342	25036	117	125	121	68	120		120		108	125	123	124	124		114	88	101	101	110
343	24521	121	128	125		135	110	123		124	118	130	124	124		118	95	107	107	119
344	Dhanrasi (NC)	113	119	116	75	130	93	111	97	104	117	127	122	122		114	89	101	101	107
345	25037	114	105	110	87	110	102	106	86	101	119	108	114	114	64	98	71	78	78	97
346	25038	101	113	107	82	118	107	112		104	120	120	120	120		100	81	90	90	105
347	25039	97	112	105	71	110	112	111		100	125	108	117	117		95	83	89	89	101
348	25040	119	109	114	92	130	120	125	95	111	121	126	124	124	65	109	87	87	87	107
349	25041		76	76	87	130	93	111		96	118		118	118	71			71	71	96
350	Zonal Check	94	96	95	61	130	82	106		93	120	119	119	119		109	84	96	96	99
351	25042	99	96	98	75	105	127	116		100	105	106	106	106	59	100	77	79	79	95
352	25043	116	109	113	74	132	106	119		107	105	129	117	117		130	87	109	109	110
353	25044	110	145	128	73	120	98	109		109	100	124	112	112	71	109	85	88	88	103
354	25045	150	102	126		165	93	129		128	145	160	152	152		151	105	128	128	134
355	24491	100	103	102	71	107	141	124	85	101	113	104	109	109	63	98	74	78	78	96
356	25046	105	101	103	81	110	122	116		104	107	114	110	110	52	102	80	78	78	97
357	25047	92	93	93		101	163	132	95	109	84	105	94	94		98	73	85	85	100
358	25048	118	101	110	80	125	123	124	95	107	125	121	123	123		107	85	96	96	108
	Exp Mean	**117**	**110**	**113**	**76**	**127**	**115**	**121**	**94**	**108**	**117**	**122**	**119**	**120**	**62**	**111**	**83**	**90**	**90**	**106**
	C.D. 5%			0						0			11	11						12
	C.V.%			0.00						0.00			0.00	0.00						0.00

Table No. 2.11: Panicles/M² of entries in IVT-RSL 2015 Kharif 2015

Entry No.	IET No.	III								Zone III	IV			Zone IV	VII				Zone VII	Overall
		OD	OD	OD (2)	JH	W.B	W.B	W.B (2)	U.P.	(6)	AS	AS	AS (2)	(2)	KA	KA	KA	KA (3)	(3)	(11)
		BBN	PTN	Mean	RCI	CHN	CKD	Mean	MSD	Mean	TTB	GER	Mean	Mean	MGD	SRS	PNP	Mean	Mean	Mean
301	24997	216	385	301	205	297	328	313		286	240	250	245	245	245	238	196	226	226	260
302	24488	220	368	294	257	264	343	304		290	248	212	230	230	85	219	385	229	229	260
303	24998	220	385	302	230	297	321	309	149	267	347	272	309	309	215	307	450	324	324	290
304	24999	195	280	238	178	297	314	306	149	235	292	240	266	266	293	265	356	304	304	260
305	25000	230	263	246	231	297	383	340		281	393	272	332	332	195	272	450	306	306	298
306	25001	191	263	227		198	328	263		245	336	194	265	265	145	234	399	259	259	254
307	25002	220	263	241	207	264	344	304	163	243	376	222	299	299	275	273	392	313	313	273
308	25003	242	280	261	203	264	285	275	176	242	283	272	278	278	333	250	414	332	332	273
309	25004	198	333	265	207	297	385	341	139	260	365	255	310	310	310	326	450	362	362	297
310	25005	213	403	308	229	264	347	306		291	299	223	261	261		322	428	375	375	303
311	25006	189	350	270	227	330	305	318		280	311	289	300	300	425	291	545	420	420	326
312	25007	230	245	237	179	264	185	225	145	208	315	250	282	282	248	342	399	329	329	255
313	25008	222	263	242	203	363	322	343	155	254	425	255	340	340	168	326	457	317	317	287
314	25009	176	263	219	179	264	332	298	177	232	374	265	320	320	228	330	515	358	358	282
315	25010	182	298	240		264	323	294		267	306	216	261	261		303	319	311	311	276
316	25011	227	368	297	203	264	334	299	155	258	358	226	292	292		284	414	349	349	283
317	25012	186	280	233		198	356	277		255	283	248	266	266		273	269	271	271	261
318	25013	210	298	254	179	231	301	266	168	231	276	261	268	268	193	342	581	372	372	276
319	25014	230	263	246	227	330	378	354		285	216	272	244	244		330	559	445	445	311
320	25015	214	263	238	253	297	373	335	148	258	237	226	231	231	188	326	450	321	321	270
321	25016	198	333	265	207	264	329	297		266	251	253	252	252		249	414	331	331	277
322	25017	213	403	308	206	231	330	280		276	318	244	281	281	168	338	421	309	309	287
323	25018	202	420	311		231	328	279		295	293	237	265	265		295	363	329	329	296
324	25019	169	193	181	302	198	312	255		235	279	188	233	233		245	421	333	333	256
325	25020	192	298	245	179	330		330		250	347	203	275	275		288	407	347	347	280
326	Local Check	197	315	256	228	297	351	324	143	255	305	260	283	283		334	421	377	377	285
327	25021	267	350	308	254	264	335	299	141	268	353	238	295	295		338	530	434	434	307
328	25022	239	333	286	207	297	400	349		295	313	224	268	268		307	421	364	364	304
329	25023	255	350	302	184	264	329	296		276	318	236	277	277		284	385	334	334	289
330	25024	161	245	203	130	264	315	290		223	296	190	243	243		211	348	280	280	240
331	25025	148	280	214	153	231	322	276		227	293	202	247	247		253	283	268	268	240
332	25026	207	298	252	204	264	320	292	160	242	287	265	276	276		288	421	354	354	271
333	25027		245	245	183		330	330	154	228	369		369	369	208			208	208	248
334	25028	278	298	288	205	231	342	287		271	304	242	273	273		311	436	373	373	294
335	25029	212	210	211	203	264	321	292	149	226	354	263	308	308		299	457	378	378	273
336	25030	218	175	197	180	264	305	285	157	217	348	220	284	284	168	326	515	336	336	261
337	25031	214	228	221	183	264	353	309	150	232	343	229	286	286	223	299	348	290	290	257
338	25032	247	333	290	201	231	349	290	136	249	330	235	282	282		261	457	359	359	278
339	25033	224	315	269	230	264	395	329	158	264	308	256	282	282		361	479	420	420	299
340	25034	139	315	227		297	359	328		278	290	192	241	241		268	443	355	355	288
341	25035	216	315	265	203	264	293	278		258	303	206	254	254		292	457	374	374	283
342	25036	215	333	274	206	297		297		263	318	248	283	283		284	465	374	374	296
343	24521	180	298	239		264	334	299		269	298	220	259	259		292	348	320	320	279
344	Dhanrasi (NC)	215	385	300	181	264	315	290	137	249	321	240	280	280		253	399	326	326	271
345	25037	194	333	263	202	198	418	308	133	246	333	219	276	276	178	238	479	298	298	266
346	25038	189	298	243	225	231	320	276		252	300	233	266	266		261	428	344	344	276
347	25039	211	228	219	207	231	356	294		246	315	220	268	268		207	327	267	267	256
348	25040	221	385	303	225	264	317	291	152	261	324	271	297	297	203	276	385	288	288	275
349	25041		333	333	231	264	436	350		316	286		286	286	235			235	235	297
350	Zonal Check	256	350	303	255	297	304	301		292	331	242	286	286		265	574	419	419	319
351	25042	223	280	251	204	231	184	208		224	314	214	264	264	163	273	392	276	276	248
352	25043	203	315	259	179	231	330	281		252	300	223	262	262		307	443	375	375	281
353	25044	215	245	230	175	264	304	284		241	339	219	279	279	230	273	356	286	286	262
354	25045	149	315	232		264	297	281		256	300	196	248	248		353	247	300	300	265
355	24491	206	280	243	226	264	318	291	159	242	339	262	301	301	233	257	436	308	308	271
356	25046	218	315	266	228	264	314	289		268	358	248	303	303	150	295	436	294	294	282
357	25047	212	350	281		231	370	301	159	264	300	217	258	258		265	392	328	328	277
358	25048	227	280	254	158	264	299	282	166	232	339	214	276	276		292	399	345	345	264
	Exp Mean	**209**	**305**	**258**	**207**	**265**	**331**	**297**	**153**	**255**	**315**	**235**	**277**	**276**	**219**	**287**	**417**	**327**	**327**	**277**
	C.D. 5%	22	82	42	82	0	36	18	8	21	24	44	25	25	46	89	151	67	66	23
	C.V.%	5.17	13.39	11.65	19.66	0.00	5.40	4.22	2.44	10.28	3.87	9.33	6.44	6.44	10.26	15.40	18.03	18.07	17.76	13.74

Table 2.12: Composition of entries in Advance Variety Trial - Semi-Deep Water (AVT 1-SDW), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
3rd year of testing				
401	23017	CR 3605-4-2-1-1-1	Gayatri / Jalmagna	SB
402	**Purnendu (ZC)**			
2nd year of testing				
403	23906	CR 2789-9-2	Gayatri/Mahsuri // CR 997-9-4	SB
404	23934	CR 3838-1-2-1-4-2	Savitri/Sudhir// Varshadhan	SB
405	**Local Check**			
406	**Sabita (NC)**			
3rd year of testing				
407	23053	CR 2687-2-3-1-1-1	CRLC 899 / Warda 2	LB
2nd year of testing				
408	23933	MTU 1140	MTU 5249/PLA 8572	SB
409	23066	CR 2683-45-2-2-3	LC 899/AC. 38700	LB
3rd year of testing				
410	23052	CR 3607-12-1-2-1-1	Gayatri / Sudhir // Varshadhan	SB
2nd year of testing				
411	23895	CR 2593-1-1-1-1	Sarala/Varshadhan// CR 2232-85	SB

Table No. 2.13: Grain Yield (kg/ha) of entries in AVT 1-SDW Kharif 2015

Entry No.	IET No.	III																		Zone III (5) Mean	
		OD		OD		OD (2)		BI		W.B		U.P.		U.P.		U.P. (1)					
		BBN		CTK		Mean		PSA		CHN		@MSD		GGT		Mean					
401	23017	4233	4	2429	7	3331	6	3222	4 ...5%	3979	6 ...1%						*	3466	4* 3%
402	Purnendu (ZC)	2844		1602		2223		2389		2459		2128	5	2692	2	2692	2*	2397	*
403	23906	3307	8	4246	1*	3776	4	3556	2 ...16%	5011	3* ...27%			2688	3	2688	3*	3761	3* 12%
404	23934	3505	7	2597	6	3051	8	2611	9	5068	2* ...29%	2782	2				*	3445	5* 3%
405	Local ©	5622	1	2927	5	4274	1	1333		3941	7	2496	4	2950	1	2950	1*	3355	7*
406	Sabita (NC)	2513		1862	9	2188		3056	7	3097	9	2721	3	2392	5	2392	5*	2584	*
407	23053	4101	5	3880	2*	3990	3	3111	5 ...2%	4073	5 ...3%						*	3791	2* 13%
408	23933	5225	2	1308		3266	7	3111	6 ...2%	3773	8	2987	1*	2463	4	2463	4*	3176	8*
409	23066	3108	9	2306	8	2707	9	3611	1 ...18%	3041							*	3016	9*
410	23052	4034	6	2949	4	3492	5	2667	8	5537	1* ...40%			1725	6	1725	6*	3382	6* 1%
411	23895	5026	3	3241	3	4134	2	3278	3 ...7%	4185	4 ...6%						*	3933	1* 17%
	Exp Mean	**3956**		**2668**		**3312**		**2904**		**4015**		**2623**		**2485**		**2485**		**3278**	
	C.D. 5%	326		617				690		452		159		585					
	C.V.%	5.70		16.01				16.44		7.79		3.93		15.62					
	Sowing Date	03-Jun		11-Jun				18-Jun		23-Jun		06-Jul		09-Jul					
	Planting Date	08-Aug		21-Jul				18-Aug		11-Aug		06-Aug							
	Local ©	Upahar		Varshadhan				Sudha		Rajdeep (IET 17713)		Jalpriya		Jalpriya					

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.13 Contd. : Grain Yield (kg/ha) of entries in AVT 1-SDW Kharif 2015

Entry No.	IET No.	IV		VII				Zone VII (2) Mean		Overall (8) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		AS		A.P.		KA								
		NLP		MTU		SRS								
401	23017	3787	7	2137		4992	3	3564	9 *	3540	8 * 3%	142	116	225
402	Purnendu (ZC)	4040	5	2673	8	4197		3435	*	2862	*	126	140	218
403	23906	4055	4	3685	4 ...11%	4770	5	4227	4 * 11%	3915	2 * 14%	131	124	238
404	23934	4700	2 ...16%	2317		5167	1 *	3742	8 *	3709	5 * 8%	137	130	242
405	Local ©	3624	9	2607	9	4445	8	3526	*	3431	9 *	128	126	230
406	Sabita (NC)	3782	8	3324	7	4262		3793	7 *	3036	*	125	131	231
407	23053	3869	6	3357	6 ...1%	4342	9	3849	6 * 1%	3819	3 * 11%	135	137	241
408	23933	3601		4283	1 * ...29%	4574	7	4429	2 * 17%	3542	6 * 3%	130	109	219
409	23066	4320	3 ...7%	3542	5 ...7%	4865	4	4204	5 * 11%	3542	7 * 3%	138	138	241
410	23052	4846	1 * ...20%	3780	3 ...14%	4738	6	4259	3 * 12%	3784	4 * 10%	136	133	220
411	23895	2979		4117	2 * ...24%	5056	2 *	4586	1 * 21%	3983	1 * 16%	138	115	247
	Exp Mean	**3964**		**3256**		**4673**		**3965**		**3551**		**133**	**127**	**232**
	C.D. 5%	739		458		604							0	
	C.V.%	12.91		9.74		8.95							0.00	
	Sowing Date	12-Jun		30-Jun		27-Jun								
	Planting Date	21-Jul		03-Aug		30-Jul								
	Local ©	Panchanan		MTU 1064		Asha (IET 9926)								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.14 : Days to 50% flowering of entries in AVT 1-SDW Kharif 2015

Entry No.	IET No.	III								Zone III (5) Mean	IV	VII		Zone VII (2) Mean	Overall (8) Mean
		OD	OD	OD (2)	BI	W.B	U.P.	U.P.	U.P. (1)		AS	A.P.	KA		
		BBN	CTK	Mean	PSA	CHN	@MSD	GGT	Mean		NLP	MTU	SRS		
401	23017	141	150	145	150	138				145	150	132	133	133	142
402	Purnendu (ZC)	115	132	124	123	129	125	114	114	123	152	119	123	121	126
403	23906	122	139	130	142	134		113	113	130	157	124	120	122	131
404	23934	128	140	134	143	136	128			137	153	127	135	131	137
405	Local ©	126	149	138	125	121	119	104	104	125	142	131	129	130	128
406	Sabita (NC)	112	133	122	133	127	123	113	113	123	154	118	109	113	125
407	23053	132	150	141	146	140				142	122	131	125	128	135
408	23933	122	140	131	131	129	120	111	111	127	155	127	127	127	130
409	23066	132	149	140	144	140				141	142	131	125	128	138
410	23052	131	145	138	143	138		125	125	137	138	130	136	133	136
411	23895	131	146	139	144	138				140	143	132	132	132	138
	Exp Mean	**127**	**143**	**135**	**139**	**134**	**123**	**113**	**113**	**133**	**146**	**127**	**127**	**127**	**133**
	C.D. 5%	1	1		2	0	1	2			3	3	0		
	C.V.%	0.65	0.26		0.98	0.00	0.50	0.95			1.59	1.43	0.18		

Table No. 2.15 : Plant Height (cm) of entries in AVT 1-SDW Kharif 2015

Entry No.	IET No.	III								Zone III(5) Mean	IV	VII		Zone VII Mean	Overall (8) Mean
		OD	OD	OD (2)	BI	W.B	U.P.	U.P.	U.P. (1)		AS	A.P.	KA		
		BBN	CTK	Mean	PSA	CHN	@MSD	GGT	Mean		NLP	MTU	SRS		
401	23017	109	131	120	107	112		90	90	110	142	132	103	118	116
402	Purnendu (ZC)	149	164	156	127	158	116	123	123	144	154	120	129	125	140
403	23906	136	148	142	111	135		106	106	127	127	124	109	117	124
404	23934	142	147	145	122	140	122	104	104	131	143	127	118	122	130
405	Local ©	110	159	135	89	112	118	154	154	125	147	131	105	118	126
406	Sabita (NC)	142	151	146	103	162	123	114	114	134	138	118	121	120	131
407	23053	159	149	154	126	150		111	111	139	148	131	123	127	137
408	23933	120	116	118	92	96	100	88	88	102	148	127	89	108	109
409	23066	168	159	164	127	155		107	107	143	125	131	129	130	138
410	23052	169	148	158	118	128		98	98	132	159	130	118	124	133
411	23895	130	135	133	97	112		89	89	113	123	132	103	118	115
	Exp Mean	**139**	**146**	**143**	**111**	**133**	**116**	**107**	**107**	**127**	**141**	**128**	**113**	**121**	**127**

Table No. 2.16: Panicles/ M² of entries in AVT 1-SDW Kharif 2015

Entry No.	IET No.	III								Zone III (5) Mean	IV	VII		Zone VII (2) Mean	Overall (8) Mean
		OD BBN	OD CTK	OD (2) Mean	BI PSA	W.B CHN	U.P. @MSD	U.P. GGT	U.P. (1) Mean		AS NLP	A.P. MTU	KA SRS		
401	23017	229	170	200	195	198				198	285	235	260	247	225
402	Purnendu (ZC)	218	149	183	244	264	148	136	136	202	255	221	253	237	218
403	23906	226	192	209	217	264		159	159	212	293	280	273	277	238
404	23934	233	159	196	216	297	157			226	276	250	264	257	242
405	Local ©	227	166	196	164	330	156	172	172	212	287	222	276	249	230
406	Sabita (NC)	192	169	181	172	330	165	130	130	199	269	334	253	294	231
407	23053	219	176	197	183	297				219	237	325	249	287	241
408	23933	242	140	191	172	231	169	136	136	184	233	349	247	298	219
409	23066	180	137	158	171	297				196	288	352	260	306	241
410	23052	192	153	172	155	264		137	137	180	278	323	260	292	220
411	23895	238	180	209	173	231				205	277	351	280	316	247
	Exp Mean	**218**	**163**	**190**	**187**	**273**	**159**	**145**	**145**	**202**	**271**	**295**	**261**	**278**	**232**
	C.D. 5%	15	33		43	0	4	12			37	28	37		
	C.V.%	4.83	13.91		15.77	0.00	1.46	5.69			9.48	6.58	9.92		

Table 2.17: Grain quality characteristics of entries in AVT 1-SDW, Kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
401	23017	78.4	69.5	66	5.03	2.31	2.17	SB	VOC	4	25.22	61
402	Purnendu	78.8	68.9	62.4	5.27	2.29	2.3	SB	VOC	4	23.58	45
403	23906	79.6	69.8	61.4	5.14	2.34	2.19	SB	VOC	4	25.49	45
404	23934	79.7	69.4	56.9	5.18	2.31	2.24	SB	VOC	4	25.52	22
406	Sabitha	78.7	67.3	64	6.58	2.16	3.04	LS	VOC	4	23.7	23
407	23053	80.1	70.6	67.5	6.31	2.31	2.73	LB	VOC	4	24.84	47
408	23933	79.8	71.2	69.5	5.23	2.29	2.28	SB	A	4	23.05	30
409	23066	80.2	71.5	69.3	6.37	2.28	2.79	LB	VOC	4	22.02	22
410	23052	81.7	71.9	69.3	5.5	2.21	2.48	SB	VOC	4	22.61	22
411	23895	81.5	72.3	69.7	5.41	2.28	2.37	SB	VOC	4	23.46	32

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 2.18: Composition of entries in Initial Variety Trial – Semi Deep Water (IVT- SDW), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
1st year of testing				
501	24490	OR 2436-11	Indravati/ Nsamsagui-19	LB
502	**Sabita (NC)**			
503	24519	CR 2439-B-18-1-1-1-1	Utkalprabha/ WITA 12	SB
504	24489	KDML 105	Introduced from Thailand through INGER	LB
505	24495	MTU 1172 (MTU II 335-19-1-1-1)	MTU 7029/ MTU 1064	MS
506	24513	CR 2458-72-6	Savitri/ Swarna	SB
507	**Purnendu (ZC)**			
508	24496	OR 2418-2	Mahanadi/ OR 1898-2	SB
509	24512	CN 1951-5-3	Swarna/Pankaj	SB
510	24522	CR 3842-3-1-1-2-1	CR 662-2211/TCA 282	SB
511	24505	OR 2437-11	Indravati/ MTU 1065	SB
512	**Local Check**			
513	24518	CR 3612-1-4-2-1	CR-662-22-11-1-1/Sarala // CR-2080-169-1	LS
514	24486	MTU 1184 (MTU 20601-1-1-1-1)	PLA 1100/BM 71	MS

Table No. 2.19: Grain Yield (kg/ha) of entries in IVT-SDW Kharif 2015

Entry No.	IET No.	III														Zone III (4) Mean	
		OD		OD		OD (2)		BI		U.P.		U.P.		U.P. (1)			
		BBN		CTK		Mean		PSA		@MSD		GGT		Mean			
501	24490	3580		2925	9	3253	9	2357	5	2327		2783	5	2783	5	2912	8
502	Sabita (NC)	2099		2908		2504		2357	6	2748		2567	7	2567	7	2483	
503	24519	4938	4 *	5548	1 *	5243	1 * 46%	2786	3							4424	1 * 45%
504	24489	3086		3314	5	3200		2429	4	3369	9	2333	8	2333	8	2790	
505	24495	5309	3 *	4279	2 *	4794	3 * 34%	3214	1 ...10%	4477	2 *	3050	4	3050	4	3963	2 * 30%
506	24513	3704	9	2467		3085		2143	8	4610	1 *	3217	3	3217	3	2882	9
507	Purnendu (ZC)	2593		1623		2108		2929	2	3546	8	2233		2233		2344	
508	24496	4568	6	3614	4	4091	5 * 14%	2357	7	4078	5					3513	4 * 15%
509	24512L	4938	5 *	2224		3581	8	1571		3723	6	2293	9	2293	9	2757	
510	24522	3210		2822		3016		1429								2487	
511	24505	5556	2 *	2932	8	4244	4 * 18%	1857		3679	7	2700	6	2700	6	3261	5 7%
512	Local ©	4198	8	2975	7	3586	7	1286		4122	4	3713	1	3713	1	3043	7
513	24518	4444	7	3228	6	3836	6 7%	2071	9							3248	6 7%
514	24486	6173	1 *	4019	3 *	5096	2 * 42%	2000		4433	3	3267	2	3267	2	3865	3 * 27%
	Exp Mean	**4171**		**3206**		**3688**		**2199**		**3738**		**2816**		**2816**		**3120**	
	C.D. 5%	589		754		475		833		325		543		326		341	
	C.V.%	8.42		14.01		11.14		22.56		5.10		11.25		6.78		13.50	
	Sowing Date	03-Jul		11-Jun				15-Jun		06-Jul		08-Jul					
	Planting Date	08-Aug		21-Jul				18-Aug		06-Aug							
	Local ©	Upahar		Varshadhan				Sudha		Jalpriya		Jalpriya					

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.19 Contd. : Grain Yield (kg/ha) of entries in IVT-SDW Kharif 2015

Entry No.	IET No.	IV								Zone IV (2) Mean		VII				Zone VII (1) Mean		Overall (7) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		AS		AS		AS (2)						A.P.		KA								
		GER		NLP		Mean						@MTU		SRS								
501	24490	2448		1703		2075				2075		2429		5431	4	5431	4 4%	3033		136	107.5279	226
502	Sabita (NC)	3468	2	3977		3723	7			3723	7	1503		5100		5100		3211		132	126.714	220
503	24519	3314	6	4900	1	4107	1*	10%		4107	1 10%	3526	8	4860		4860		4391	1* 29%	132	129.535	229
504	24489	3147	8	4520	5	3833	5	3%		3833	5 3%	2450		4227		4227		3294	9	131	124.8187	230
505	24495	3148	7	4593	3	3871	3	4%		3871	3 4%	3825	4	5391	5	5391	5 4%	4141	2* 22%	131	**122.1489**	239
506	24513	3394	5	4280	9	3837	4	3%		3837	4 3%	2550		5184	9	5184	9	3484	6 3%	129	12.00463	229
507	Purnendu (ZC)	3049	9	4387	8	3718	8			3718	8	3647	6	5208	8	5208	8	3146		128		225
508	24496	2833		4440	7	3637				3637		4338	1*	5342	6	5342	6 3%	3859	4* 14%	133		232
509	24512L	3481	1	3913		3697	9			3697	9	3027	9	4613		4613		3291		132		225
510	24522	2169		4580	4	3374				3374		3675	5	5280	7	5280	7 1%	3248		131		232
511	24505	3445	3	4520	6	3982	2	7%		3982	2 7%	3625	7	5737	2	5737	2 10%	3821	5* 13%	136		229
512	Local ©	2665		4640	2	3653				3653		2942		4265		4265		3392	7	136		230
513	24518	1547				1547				1547		3974	3*	5641	3	5641	3 8%	3387	8	135		232
514	24486	3427	4	4103		3765	6	1%		3765	6 1%	4117	2*	5807	1	5807	1 12%	4114	3* 21%	**132**		**229**
	Exp Mean	**2967**		**4197**		**3559**				**3559**		**3259**		**5149**		**5149**		**3553**		4		
	C.D. 5%	618		897		328				476		239		820		671		286		5.45		
	C.V.%	12.41		12.68		7.96				11.56		4.37		9.49		7.78		13.23				
	Sowing Date	23-Jun		12-Jun								30-Jun		27-Jun								
	Planting Date	15-Aug		28-Jul								03-Aug		29-Jul								
	Local ©	Jalashree		Panindra								PLA 1100		ASHA (IET9926)								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.20: Days to 50% Flowering of entries in IVT-SDW Kharif 2015

Entry No.	IET No.	III							Zone III (4) Mean	IV			Zone IV (2) Mean	VII		Zone VII (2) Mean	Overall Mean (8)
		OD	OD	OD (2)	BI	U.P.	U.P.	U.P. (1)		AS	AS	AS (2)		A.P.	KA		
		BBN	CTK	Mean	PSA	@MSD	GGT	Mean		GER	NLP	Mean		MTU	SRS		
501	24490	127	144	135	147	120	117	117	133	154	151	152	152	128	126	127	136
502	Sabita (NC)	120	139	130	138	122	117	117	128	147	151	149	149	123	119	121	132
503	24519	122	139	130	141	121	118	118	130	147	148	147	147	122	120	121	132
504	24489	123	134	129	148	122	121	121	132	139	145	142	142	122	118	120	131
505	24495	119	138	128	143	120	117	117	129	147	144	145	145	119	122	121	131
506	24513	122	136	129	142	119	113	113	128	141	142	142	142	119	119	119	129
507	Purnendu (ZC)	115	136	125	138	121	115	115	126	141	142	142	142	115	121	118	128
508	24496	126	139	132	145	121	114	114	131	147	144	146	146	125	122	123	133
509	24512L	125	140	132	146	124	113	113	131	145	144	145	145	122	122	122	132
510	24522	119	143	131	146	122	107	107	129	153	144	148	148	115	123	119	131
511	24505	129	143	136	149	120	117	117	134	153	146	150	150	130	125	127	136
512	Local ©	132	147	139	138	119	114	114	133	150	146	148	148	133	127	130	136
513	24518	130	147	139	139	120	113	113	132	150	149	149	149	125	129	127	135
	Exp Mean	**123**	**140**	**132**	**143**	**121**	**115**	**115**	**130**	**147**	**146**	**146**	**146**	**123**	**122**	**123**	**132**
	C.D. 5%	12	12	8	15	4	11	10	6	18	9	9	9	12	11	7	4
	C.V.%	5.78	4.91	5.18	6.06	1.90	5.61	5.43	5.44	7.14	3.87	5.37	5.55	5.72	5.20	5.28	5.45

Table No. 2.21: Plant Height (cm) of entries in IVT-SDW 2015 Kharif 2015

Entry No.	IET No.	III							Zone III Mean (4)	IV			Zone IV Mean (2)	VII		Zone VII Mean (2)	Overall Mean (8)
		OD	OD	OD (2)	BI	U.P.	U.P.	U.P. (1)		AS	AS	AS (2)		A.P.	KA		
		BBN	CTK	Mean	PSA	@MSD	GGT	Mean		GER	NLP	Mean		MTU	SRS		
501	24490	115	135	125	78	96	106	106	108	115	146	131	131	160	103	131	120
502	Sabita (NC)	129	149	139	102	114	125	125	126	138	171	155	155	160	122	141	137
503	24519	116	125	121	74		107	107	106	104	122	113	113	134	108	121	111
504	24489	135	140	138	103	115	131	131	127	130	144	137	137	162	110	136	132
505	24495	108	118	113	78	102	114	114	104	105	127	116	116	139	92	115	110
506	24513	123	115	119	81	95	94	94	103	101	127	114	114	128	97	112	108
507	Purnendu (ZC)	169	188	179	120	133	141	141	154	147	152	150	150	172	130	151	152
508	24496	110	106	108	73	94	89	89	95	100	129	115	115	142	94	118	105
509	24512L	97	108	103	65	85	101	101	93	89	108	98	98	98	78	88	93
510	24522	158	161	159	107		107	107	133	127	135	131	131	169	117	143	135
511	24505	145	146	145	80	96	105	105	119	117	142	130	130	150	116	133	125
512	Local ©	145	169	157	105	125	168	168	147	114	182	148	148	110	104	107	137
513	24518	135	143	139	100		120	120	124	117		117	117	143	118	131	125
514	24486	136	133	134	100	105	115	115	121	116	128	122	122	144	104	124	122
	Exp Mean	**130**	**138**	**134**	**90**	**105**	**116**	**116**	**119**	**116**	**140**	**127**	**127**	**144**	**106**	**125**	**122**

Table No. 2.22: Panicles/ M² of entries in IVT-SDW Kharif 2015

Entry No.	IET No.	III							Zone III Mean (4)	IV			Zone IV Mean (2)	VII		Zone VII Mean (2)	Overall Mean (8)
		OD	OD	OD (2)	BI	U.P.	U.P.	U.P. (1)		AS	AS	AS (2)		A.P.	KA		
		BBN	CTK	Mean	PSA	@MSD	GGT	Mean		GER	NLP	Mean		MTU	SRS		
501	24490	206	194	200	179	152	182	182	190	259	243	251	251	321	227	274	226
502	Sabita (NC)	185	203	194	186	151	156	156	183	229	237	233	233	296	267	282	220
503	24519	202	187	194	190	153	163	163	185	265	251	258	258	321	255	288	229
504	24489	235	193	214	187	155	159	159	193	236	204	220	220	360	271	315	230
505	24495	226	205	215	178	156	176	176	196	274	248	261	261	334	273	303	239
506	24513	198	154	176	203	157	175	175	182	226	231	228	228	347	302	324	229
507	Purnendu (ZC)	207	162	184	184	159	163	163	179	226	278	252	252	281	302	291	225
508	24496	228	160	194	188	154	156	156	183	251	257	254	254	353	260	307	232
509	24512L	236	158	197	183	149	155	155	183	244	263	254	254	327	233	280	225
510	24522	235	171	203	181	148	182	182	192	266	247	256	256	314	264	289	232
511	24505	219	192	206	177	144	171	171	190	253	221	237	237	327	276	301	229
512	Local ©	196	224	210	165	150	154	154	185	230	253	241	241	337	282	309	230
513	24518	200	212	206	189	150	159	159	190	247	251	249	249	350	249	299	232
	Exp Mean	**213**	**186**	**199**	**184**	**152**	**165**	**165**	**187**	**247**	**245**	**246**	**246**	**328**	**266**	**297**	**229**
	C.D. 5%	31	48		25	12	30			43	74			43	76		
	C.V.%	8.75	15.46		8.11	4.54	10.72			10.31	17.99			7.81	16.89		

Table 2.23: Composition of entries in National Semi Deep Water Screening Nursery (NSDWSN), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
1st year of testing				
601	25175	OR 2414-1	Ramachandi/IR68926-61-2-R	MB
602	25176	CR 3900-193-9-5-3	Savitri/R.Mahsuri-1//IR71700-247-1-1-2	MS
603	25177	RP Bio 5478-176-1M	Madhukar/Swarna	SB
604	25178	OR 2436-10	Indravati/Namasagui-19	MB
605	25179	CR 2315-1-1-3-1-2	CR2006-10/Hanseswari	LS
606	25180	OR 2418-1	Mahanadi/OR1898-2	SB
607	25181	MTU 1199 (MTU 2127-39-2-2-1)	MTU 1010/MTU 1064	SB
608	25182	CN-1967-1-1-12	Swarna/Sashi	LB
609	25183	CR 3063-2-1-12-2	Pooja/Manika	MS
610	25184	RP Bio-5478-166M	Madhukar/Swarna	SB
611	25185	CR 3063-2-1-9-2	Pooja/Manika	MS
612	25186	OR2415-2	Mahanadi/CR2023-3	SS
613	25187	CR3898-113-4-2-1	Jagabandhu/IR 71700-247-1-1-2	MB
614	25188	CR 2749-16-6-5	IET 21489/ CR 997-9-4	LB
615	25189	CN-1967-1-2-1	Swarna/Sashi	MS
616	25190	CR3900-135-8-5-4	Savitri/R.Mahsuri-1//IR71700-247-1-1-2	LB
617	**Local Check**			
618	25191	CR 2747-14-4-3	NPG 210/CR 2550-77	MS
619	25192	NDGR-1525	PS46/CR700-1937-3-GHT 1	MB
620	25193	CR 3052-1-1-5-1	CN 1231-11-7/Ramchandi	MB
621	25194	NDGR-1526	PS46/CR700-1937-3-GHT 2	MB
622	25195	CR 3061-1-1-4-2	Varshadhan/Manika	MS
623	**Purnendu (Zonal Check)**			
624	25196	CR 3036-3-1-21-1	Rajendra Mahsuri/Mahalaxmi	MB
625	25197	OR 2434-5	Indravati/CR780-1937	SB
626	25198	CR 2582-1-1-1-1-2	Varshadhan/IR 82809-237	MS
627	25199	RP Bio 5478-185-1M	Madhukar/Swarna	SB
628	25200	CR 3060-2-1-12-2	Durga/Varshadhan	MS
629	25201	MTU 1198 (MTU 2126-2-1-3)	MTU4870/MTU1064	MS
630	25202	NDR 9921	IR 77770-98-NDR-B-36-13/NDR 9830099	LB
631	25203	CR 3062-1-1-6-4	Varshadhan/Utkalprabha	MS
632	25204	CN 1987-5-4	Nayanmoni/ MTU 7029	MB
633	25205	CR 3903-161-2-1-7	Santepheap/IR 82810-407//IR 71700-247-1-1-2	MB
634	25206	CN 2024-1	Sudhir/Swarna	LS
635	25207	CR 2529-B-2-3-1-1-1	IR 42/ EC 516602	SB
636	25208	OR 2431-1	Jagannath/Mahanadi	SB
637	25209	CR 3816-1-2-1-2-2	Gayatri/AC 38700	SB
638	25210	NDR 9917	IR66873-20-M-1-1-1-B-1-1/NDR 8002	LB
639	25211	CR 2748-15-5-4	Sarala/CR 2683-46	SB
640	25212	OR2413-9	Indravati/CN1231-11-1	MB
641	25213	CR 2672-13-1-1-2	Gayatri/Ac. 38687	SB
642	25214	RP Bio 5478-196M	Madhukar/Swarna	SB
643	25215	CR 2682-1-1-5-1-3	CRLC899/AC.38606	MS
644	25216	MTU 1200 (MTU 2244-47-15-6-77)	MTU1064/Swarnasub1//*2 MTU1064	MS
645	25217	CR 3909-192-5-3-1	CN 1233-33-9/IR85260-148//IR72176-307-4-2-2-3	MS
646	**Sabita (National Check)**			
647	25218	CR 3045-2-1-4-2	Ramba/Rajendra Mahsuri-1	MB

Table No. 2.24 : Grain Yield (kg/ha) of entries in NSDWSN Kharif 2015

Entry No.	IET No.	III																		ZONE III (5)	
		OD		OD		OD (2)		BI		W.B		U.P.		U.P.		U.P. (1)					
		BBN		CTK		Mean		PSA		CHN		@MSD		GGT		Mean				Mean	
601	25175	4444	6*	3938		4191	7 6%	2292		5044	8* ...21%									3929	4 9%
602	25176	2346		2339		2342		3333				2320		3375	6	3375	6 2%			2848	
603	25177	1605		676		1141		2396		5482	5* ...32%			4075	2*	4075	2* 23%			2847	
604	25178	4074		3546		3810		3333		4298	...3%	2450		2100		2100				3470	
605	25179	3951		3390		3670		4271	1 ...28%	3772										3846	6 7%
606	25180	3951		3353		3652		3438	...3%	3947				3000		3000				3538	
607	25181	4198	*	1722		2960		2604		5175	6* ...24%			3175	9	3175	9			3375	
608	25182	2222		2615		2419		3542	9 ...6%			2500	9	3405	5	3405	5 3%			2946	
609	25183	3580		2433		3007		3229		4035										3319	
610	25184	2716		3885		3300		2813		1096				2700		2700				2642	
611	25185	4074		5860	1*	4967	2* 26%	2292		4649	...12%									4219	2* 17%
612	25186	4444	7*	3015		3730		3542	...6%	5526	4* ...33%	2820	1							4132	3* 15%
613	25187	4321	9*	3274		3797		2396		5044	9* ...21%			1000		1000				3207	
614	25188	3210		2575		2892		1979		3289										2763	
615	25189	4444	8*	2682		3563		3125		3684		2800	2	1800		1800				3147	
616	25190	3333		3756		3544		3438	...3%	5175	7* ...24%			1645		1645				3469	
617	Local Check	3086		4808	4	3947		3333		4167		2550	7	2600		2600				3599	
618	25191	3580		2622		3101		3958	4 ...19%	4474	...7%	2300		2000		2000				3327	
619	25192	2346		1999		2172		3750	7 ...13%	1667		2650	6	3600	3	3600	3 9%			2672	
620	25193	3704		4440	8	4072	8 3%	3854	6 ...16%	4386	...5%	2700	5	1025		1025				3482	
621	25194	2099		3628		2863		2917		1754		2750	4	3590	4	3590	4 9%			2798	
622	25195	4074		4650	6	4362	6 11%	1458		3509		2300								3423	
623	Purnendu (ZC)	1728		1615		1672		2396		3202		2400		2150		2150				2218	
624	25196	3457		4186		3821		4063	2 ...22%	4781	...15%			2500		2500				3797	8 6%
625	25197	4198	*	1382		2790		1875		4386	...5%			1050		1050				2578	
626	25198	2593		4394	9	3494		2292		2851										3032	
627	25199	1420		431		925		1354		1096		1900		2650		2650				1390	
628	25200	2469		4804	5	3637		2083		2807				2100		2100				2853	
629	25201	5926	1*	3556		4741	3* 20%	3438	...3%	3728				1600		1600				3649	1%
630	25202			5533	3	5533	1* 40%	1042				2150								3288	
631	25203	4691	5*	3400		4046	9 2%	3438	...3%	4386	...5%	2050		1400		1400				3463	
632	25204	5185	3*	3878		4531	5 15%	3333		1754		2800	3	2990		2990				3428	
633	25205	3086		1767		2427		3750	8 ...13%	1535		2550	8	4100	1*	4100	1* 24%			2848	
634	25206	3580		2974		3277		2917		4079		2250		2100		2100				3130	
635	25207	2222		5617	2	3919		2292		4386	...5%									3629	1%
636	25208	3333		3361		3347		2604		3421		2150		1100		1100				2764	
637	25209	3086		3529		3308		3125		5921	3* ...42%									3915	5 9%
638	25210			2735		2735		1875						3200	8	3200	8			2603	
639	25211	4815	4*	4531	7	4673	4 18%	2708		6360	1* ...53%	2100								4603	1* 28%
640	25212	3457		3840		3649		3958	5 ...19%	6140	2* ...47%			1700		1700				3819	7 6%
641	25213	4321	*	1044		2683		2604		2105										2519	
642	25214	1605		3813		2709		1458		175				2600		2600				1930	
643	25215	3580		3833		3707		2292		4298	...3%	2150		1200		1200				3041	
644	25216	5679	2*	2307		3993	1%	4063	3 ...22%	4386	...5%	2250		1950		1950				3677	9 2%
645	25217	2222		1908		2065		2917		3947										2749	
646	Sabita (NC)	2716		3336		3026		2604		2939		2360		3300	7	3300	7			2979	
647	25218	2963		1886		2425		1250		2763										2216	
	Exp Mean	**3425**		**3210**		**3315**		**2830**		**3759**		**2402**		**2399**		**2399**				**3173**	
	C.D. 5%	991		1019		733		1640		852		307		640		640				500	
	C.V.%	14.36		15.77		15.73		28.79		11.24		6.16		13.07		13.07				17.94	
	Sowing Date	03-Jul		11-Jun				18-Jun		02-Jul		09-Jul		21-Jul							
	Planting Date	08-Aug		21-Jul				13-Aug		14-Aug		16-Aug									
	Local ©	Upahar		Varshadhan				Sudha		Rajdeep		NDR 2008		Jalpriya							

Table No. 2.24 Contd. : Grain Yield (kg/ha) of entries in NSDWSN Kharif 2015

Entry No.	IET No.	VII				ZONE VII Mean (2)		Overall Mean (7)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		A.P.		KA								
		MTU		SRS								
601	25175	1833		7738	1 *	4786	3 * 36%	4215	2 * 18%	139	111	208
602	25176	1784		3374		2579		2759		113	113	206
603	25177	892		1861		1377		2427		108	140	205
604	25178	3225	6	4802		4014	* 14%	3626	1%	126	127	230
605	25179	1794		4599		3197		3629	2%	138	127	226
606	25180	1657		4780		3219		3446		127	118	202
607	25181	2647		5112		3879	* 10%	3519		125	111	217
608	25182	941		3549		2245		2712		117	146	208
609	25183	1755		4963		3359		3333		138	140	223
610	25184	892		3342		2117		2492		114	139	205
611	25185	2716		4766		3741	6%	4059	4 * 14%	137	131	237
612	25186	1863		4915		3389		3884	6 9%	143	114	227
613	25187	990		4865		2928		3127		128	116	191
614	25188	1422		5015		3218		2915		138	137	205
615	25189	1951		3483		2717		3024		113	95	205
616	25190	4010	1 * ...24%	4531		4270	7 * 21%	3698	3%	117	121	246
617	Local Check	3235	5	3794		3515		3575		124	133	250
618	25191	3265	4 ...1%	5290		4277	6 * 22%	3598	1%	126	112	230
619	25192	1618		4032		2825		2716		112	145	206
620	25193	2451		4356		3404		3459		127	116	220
621	25194	1098		3341		2219		2632		107	134	201
622	25195	1775		4591		3183		3343		138	147	225
623	Purnendu (ZC)	990		4260		2625		2334		121	140	204
624	25196	1892		4594		3243		3639	2%	133	135	226
625	25197	1863		4597		3230		2764		131	115	200
626	25198	1480		5663	9	3572	2%	3212		143	140	205
627	25199	804		1996		1400		1393		105	127	196
628	25200	3912	2 * ...21%	4930		4421	4 * 26%	3301		131	144	217
629	25201	2882	8	5532		4207	8 * 20%	3809	8 7%	131	115	211
630	25202							3288		140	144	158
631	25203	1755		6864	4 *	4310	5 * 23%	3705	9 4%	132	127	219
632	25204	1029		3283		2156		3065		106	116	226
633	25205	1029		4011		2520		2754		103	106	207
634	25206	2490		5807	7 *	4148	9 * 18%	3421		110	122	229
635	25207	2892	7	6891	3 *	4892	2 * 39%	4050	5 * 13%	130	137	223
636	25208	2765	9	5493		4129	* 17%	3154		133	112	216
637	25209	1078		6277	5 *	3677	5%	3836	7 7%	137	142	221
638	25210							2603		124	124	144
639	25211	1147		5398		3272		4160	3 * 16%	133	118	243
640	25212	3314	3 ...2%	7320	2 *	5317	1 * 51%	4247	1 * 19%	134	125	220
641	25213	1333		4279		2806		2615		132	147	218
642	25214	1814		1730		1772		1885		111	151	203
643	25215	902		4997		2949		3015		132	145	201
644	25216	873		4349		2611		3372		127	118	226
645	25217	657		6173	6 *	3415		2971		128	133	248
646	Sabita (NC)	804		5277		3040		2997		121	141	206
647	25218	1275		5695	8	3485		2639		135	130	256
	Exp Mean	**1840**		**4723**		**3281**		**3196**		**125**	**128**	**216**
	C.D. 5%	327		512		344		365		1	15	19
	C.V.%	8.81		5.38		7.46		15.34		1.33	0.00	12.07
	Sowing Date	30-Jun		22-Jun								
	Planting Date	05-Aug		23-Jul								
	Local ©	MTU 1064		ASHA								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.25: Days to 50% flowering of entries in NSDWSN Kharif 2015

Entry No.	IET No.	III								Zone III (5)	VII		Zone VII (2)	Overall (7)
		OD	OD	OD (2)	BI	W.B	U.P.	U.P.	U.P. (1)		A.P.	KA		
		BBN	CTK	Mean	PSA	CHN	@MSD	GGT	Mean	Mean	MTU	SRS	Mean	Mean
601	25175	135	142	138	153	132				140	137	134	135	139
602	25176	116	115	116	125		117	99	99	114	115	111	113	113
603	25177	107	105	106	120	128		92	92	110	100	107	104	108
604	25178	129	130	129	134	127	121	111	111	126	125	127	126	126
605	25179	134	143	138	155	132				141	135	129	132	138
606	25180	130	137	134	133	123		105	105	126	134	128	131	127
607	25181	129	131	130	135	127		105	105	125	124	124	124	125
608	25182	113	122	117	131		105	105	105	117	115	118	116	117
609	25183	133	137	135	157	128				139	136	134	135	138
610	25184	108	142	125	123	108		92	92	114	107	117	112	114
611	25185	130	139	134	159	128				139	134	130	132	137
612	25186	138	143	141	163	132	109			144	138	141	140	143
613	25187	131	133	132	147	130		110	110	130	126	120	123	128
614	25188	132	140	136	152	133				139	135	137	136	138
615	25189	110	113	111	131	121	117	104	104	116	102	113	107	113
616	25190	116	120	118	131	119		99	99	117	113	121	117	117
617	Local Check	130	147	139	125	121	90	92	92	123	124	131	127	124
618	25191	130	138	134	134	125	121	112	112	128	121	125	123	126
619	25192	111	113	112	123	112	118	99	99	111	107	119	113	112
620	25193	131	130	130	144	125	118	113	113	128	125	123	124	127
621	25194	107	104	106	126	108	113	95	95	108	103	106	104	107
622	25195	133	140	137	148	133	104			138	140	135	137	138
623	Purnendu (ZC)	121	122	121	131	121	122	110	110	121	118	123	120	121
624	25196	132	136	134	151	137		111	111	133	131	132	131	133
625	25197	136	143	139	150	105		110	110	129	140	135	137	131
626	25198	143	141	142	154	135				143	141	144	142	143
627	25199	97	102	100	123	105	104	93	93	104	111	105	108	105
628	25200	131	138	135	144	135		110	110	132	126	134	130	131
629	25201	136	141	138	137	129	127	110	110	131	139	129	134	131
630	25202		140	140	139		125			140				140
631	25203	131	141	136	149	129	120	110	110	132	136	128	132	132
632	25204	109	106	107	120	108	110	90	90	106	102	111	106	106
633	25205	99	102	101	116	102	104	81	81	100	113	106	109	103
634	25206	112	106	109	121	107	110	94	94	108	114	116	115	110
635	25207	127	131	129	149	128				133	121	127	124	130
636	25208	138	143	141	161	135	119	84	84	132	136	137	137	133
637	25209	134	141	137	150	135				140	136	129	133	137
638	25210		138	138	138			96	96	124				124
639	25211	132	138	135	151	129	120			137	122	129	126	133
640	25212	141	142	141	147	129		112	112	134	139	131	135	134
641	25213	133	102	118	159	132				132	138	131	134	132
642	25214	107	139	123	121	107		96	96	114	103	105	104	111
643	25215	129	131	130	154	129	131	116	116	131	130	136	133	132
644	25216	130	130	130	163	121	118	101	101	129	116	126	121	127
645	25217	122	122	122	150	128	122			131	116	128	122	128
646	Sabita (NC)	111	131	121	161	120	118	106	106	126	113	110	111	121
647	25218	131	110	120	154	135				132	137	141	139	135
	Exp Mean	**125**	**129**	**127**	**141**	**124**	**115**	**102**	**102**	**126**	**124**	**125**	**124**	**125**
	C.D. 5%	3	1	1	3	0	3	3	4	1	4	5	3	1
	C.V.%	1.05	0.39	0.78	1.18	0.00	1.15	1.57	1.94	1.01	1.58	2.17	1.90	1.33

Table No. 2.26: Plant Height (cm) of entries in NSDWSN Kharif 2015

Entry No.	IET No.	III								Zone III (5)	VII		Zone VII (2)	Overall (7)
		OD	OD	OD (2)	BI	W.B	U.P.	U.P.	U.P. (1)		A.P.	KA		
		BBN	CTK	Mean	PSA	CHN	@MSD	GGT	Mean	Mean	MTU	SRS	Mean	Mean
601	25175	115	120	117	92	100	93	91	91	103	154	103	128	111
602	25176	110	111	111	100		90	108	108	107	158	92	125	113
603	25177	165	159	162	122	116	89	118	118	136	182	122	152	140
604	25178	145	141	143	102	125	92	99	99	122	163	117	140	127
605	25179	150	145	147	103	128	94	102	102	125	158	105	132	127
606	25180	135	127	131	104	133	89	85	85	117	140	101	121	118
607	25181	114	119	116	86	130	105	94	94	109	139	94	117	111
608	25182	152	170	161	122		112	122	122	142	199	111	155	146
609	25183	149	179	164	112	142	106	109	109	138	176	111	144	140
610	25184	150	178	164	123	122	104	144	144	143	136	120	128	139
611	25185	145	147	146	98	130	99	118	118	128	170	111	140	131
612	25186	125	131	128	95	110	98	98	98	112	131	108	119	114
613	25187	116	147	132	101	105	96	88	88	111	155	103	129	116
614	25188	148	157	153	122	160	103	82	82	134	151	136	143	137
615	25189	96	125	111	76	90	91	83	83	94	123	70	96	95
616	25190	134	139	137	100	112	94	95	95	116	154	112	133	121
617	Local Check	144	166	155	129	115	84	138	138	138	138	102	120	133
618	25191	145	114	130	79	132	75	80	80	110	151	82	117	112
619	25192	152	181	166	130	115	115	130	130	142	174	133	153	145
620	25193	131	128	129	95	115	94	93	93	112	158	94	126	116
621	25194	140	148	144	122	117	120	122	122	130	167	122	144	134
622	25195	172	169	171	100	165	88	118	118	145	171	133	152	147
623	Purnendu (ZC)	150	134	142	127	155	132	129	129	139	142	144	143	140
624	25196	156	159	157	104	116	106	108	108	129	178	123	150	135
625	25197	136	125	130	90	110	109	93	93	111	141	108	124	115
626	25198	171	159	165	120	117	98	101	101	134	191	120	156	140
627	25199	150	132	141	114	112	122	145	145	131	107	129	118	127
628	25200	165	177	171	124	130	112	100	100	139	183	127	155	144
629	25201	128	133	130	101	110	93	90	90	112	133	106	120	115
630	25202		179	179	108		87			144				144
631	25203	144	131	137	106	130	95	97	97	122	162	116	139	127
632	25204	125	127	126	102	120	88	97	97	114	133	105	119	116
633	25205	120	115	118	85	106	89	109	109	107	112	95	104	106
634	25206	145	140	142	103	122	104	98	98	122	137	111	124	122
635	25207	142	168	155	109	135	97	102	102	131	180	123	151	137
636	25208	120	118	119	90	122	99	111	111	112	123	103	113	112
637	25209	173	157	165	119	140	103	106	106	139	160	138	149	142
638	25210		106	106	112		94	153	153	124				124
639	25211	133	142	138	84	125	101	105	105	118	142	96	119	118
640	25212	135	147	141	108	125	103	84	84	120	161	113	137	125
641	25213	170	191	180	119	130	94	104	104	143	170	148	159	147
642	25214	145	168	156	147	140	96	154	154	151	147	157	152	151
643	25215	182	142	162	141	110	107	115	115	138	186	139	163	145
644	25216	129	147	138	102	120	92	91	91	118	145	93	119	118
645	25217	150	167	158	121	132	113	109	109	136	136	118	127	133
646	Sabita (NC)	150	169	160	132	135	115	116	116	141	139	145	142	141
647	25218	142	154	148	117	135	109	91	91	128	146	124	135	130
	Exp Mean	**142**	**147**	**144**	**108**	**124**	**100**	**107**	**107**	**126**	**153**	**115**	**134**	**128**
	C.D. 5%			11					0	7				15

Table No. 2.27 : Panicles/M² of entries in NSDWSN Kharif 2015

Entry No.	IET No.	III								Zone III (5)	VII		Zone VII (2)	Overall (7)
		OD	OD	OD (2)	BI	W.B	U.P.	U.P.	U.P. (1)		A.P.	KA		
		BBN	CTK	Mean	PSA	CHN	@MSD	GGT	Mean	Mean	MTU	SRS	Mean	Mean
601	25175	221	141	181	203	198				191	268	216	242	208
602	25176	204	121	162	213		146	154	154	173	251	296	273	206
603	25177	188	56	122	203	264		178	178	178	225	322	273	205
604	25178	225	133	179	211	264	149	208	208	208	330	241	286	230
605	25179	225	108	166	223	231				197	268	301	284	226
606	25180	247	142	195	179	198		148	148	183	251	251	251	202
607	25181	244	126	185	208	231		131	131	188	320	263	291	217
608	25182	190	114	152	216		158	173	173	173	248	307	277	208
609	25183	219	110	164	233	231				198	274	273	273	223
610	25184	200	139	169	185	198		214	214	187	234	265	250	205
611	25185	217	125	171	204	264				202	314	302	308	237
612	25186	236	143	189	205	264	160			212	281	236	258	227
613	25187	222	104	163	172	198		106	106	160	297	237	267	191
614	25188	191	107	149	200	231				182	271	234	252	205
615	25189	210	104	157	240	231	158	107	107	178	304	243	273	205
616	25190	212	150	181	250	231		160	160	200	357	366	361	246
617	Local Check	219	146	182	213	330	149	141	141	210	317	383	350	250
618	25191	217	85	151	225	264	143	150	150	188	307	360	333	230
619	25192	206	106	156	221	198	155	142	142	174	284	287	285	206
620	25193	207	131	169	225	231	157	133	133	185	310	301	306	220
621	25194	166	133	149	211	198	160	164	164	174	264	270	267	201
622	25195	195	124	159	224	264	149			202	304	240	272	225
623	Purnendu (ZC)	199	88	143	219	231	151	132	132	174	291	266	278	204
624	25196	213	139	176	212	264		164	164	198	327	263	295	226
625	25197	199	80	139	200	198		144	144	164	304	277	290	200
626	25198	182	121	151	233	231				191	222	246	234	205
627	25199	160	108	134	194	231	133	196	196	178	205	279	242	196
628	25200	220	139	179	219	231		140	140	190	320	254	287	217
629	25201	232	122	177	236	231		118	118	188	251	286	269	211
630	25202		137	137	180		147			158				158
631	25203	241	128	184	248	231	146	130	130	196	261	292	276	219
632	25204	226	118	172	204	264	161	212	212	205	264	296	280	226
633	25205	221	84	152	202	264	159	216	216	197	188	276	232	207
634	25206	196	134	165	220	231	139	170	170	190	320	331	326	229
635	25207	184	151	167	200	198				183	267	336	302	223
636	25208	214	125	169	228	198	135	126	126	178	314	312	313	216
637	25209	193	124	158	209	198				181	327	276	301	221
638	25210		92	92	210			130	130	144				144
639	25211	220	140	180	249	231	138			210	327	291	309	243
640	25212	219	117	168	233	231		148	148	190	271	318	295	220
641	25213	209	115	162	222	198				186	267	296	281	218
642	25214	149	144	146	211	264		180	180	189	221	251	236	203
643	25215	181	131	156	193	231	139	116	116	170	294	261	277	201
644	25216	236	120	178	234	231	145	136	136	191	306	318	312	226
645	25217	237	148	192	230	264				219	264	347	305	248
646	Sabita (NC)	205	118	161	234	198	148	122	122	175	281	283	282	206
647	25218	231	119	175	241	264				213	317	363	340	256
	Exp Mean	**209**	**121**	**164**	**215**	**233**	**149**	**153**	**153**	**187**	**282**	**287**	**284**	**216**
	C.D. 5%	18	35	19	86	0	7	21	22	23	38	63	37	19
	C.V.%	4.31	14.22	8.42	19.96	0.00	2.35	6.81	6.95	13.92	6.65	10.82	9.27	12.07

Table 2.28: Composition of entries in Initial Variety Trial - Deep Water (IVT - DW), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
3rd year of testing				
701	23596	CR 3836-1-7-4-1-1	CRLC 899/AC.38700	SB
1st year of testing				
702	25219	OR 2423-1	Mahanadi/IR 61040	SB
703	25220	NDGR-939	NDGR 21/IR 44962-161-2-4-4	SB
704	25221	CR 2315-1-1-3-1-3	CR 2006-10/Hanseswari	LS
705	24527 (Repeat)	CRL 67-27-2-1-4-1	Utkal Prabha/Panikekoa	LB
706	25222	OR 2420-5	Mahanadi/T-90	SS
707	**Local Check**			
708	25223	OR 2420-3	Mahanadi/T-90	SB
709	25224	NDGR-944	NDGR 101/IR 36	MB
710	25225	CR 2285-3-2-2-1-1	Ravana/Mahsuri	MS
711	24525 (Repeat)	NDGR-1529	IR 498307/Gayatri	LB
712	25226	NDR 9925	IR 77769-54-NDR-B-283-13/ NDR 9830144	LB
713	25227	OR 2428-2	OR1530-1/WGL 36	MB
714	**Dinesh (ZC)**			
3rd year of testing				
715	23601	CR 3835-1-7-2-1-1	CRLC 899/Warda2	LB
716	**Jalmagna (NC)**			
717	23594	CR 2687-3-3-1-1-3	CRLC 899/AC.38606	LB

Table No. 2.29: Grain Yield (Kg/ha) of entries in IVT-DW Kharif 2015

Entry No.	IET No.	III								Zone III Mean (3)		IV		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		OD		BI		W.B		U.P.				AS						
		CTK		@PSA		CHN		GGT				GER						
701	23596	4497	1 * ...19%	769		3458				3978	3 * 11%	3530	2 *	3828	4 * 23%	134	118	226
702	25219	4439	2 ...17%	615		3750		3513	4 *	3900	5 * 8%	1915		3404	6 * 10%	134	107	239
703	25220	2506		1385	2	4125		3913	1 *	3515	*	1308		2963	*	118	146	209
704	25221	3824	4 ...1%	615		4458	7			4141	2 * 15%	3376	3 *	3886	3 * 25%	131	110	249
705	24527	3028		462		4042		2648	6	3239	*	3021	5	3185	9 * 2%	119	126	214
706	25222	3684	6	769		4417	8	2625	7	3575	9 *	413		2785	*	135	120	242
707	Local ©	3780	5	692		4417	9	2600	8	3599	8 *	1602		3100	*	118	136	228
708	25223	4204	3 ...11%	846	7	5375	1	3613	3 *	4397	1 * 22%	2798	6	3997	2 * 29%	132	108	244
709	25224	2330		923	6	4042		3775	2 *	3382	*	2579	8	3181	* 2%	125	145	204
710	25225	3243	7	846	8	4083		2250		3192	*	1383		2740	*	129	132	209
711	24525	2560		1385	3	4708	4	3263	5 *	3510	*	2635	7	3292	8 * 6%	122	146	226
712	25226	3104	8	538		4125				3614	7 *			3614	5 * 16%	124	128	221
713	25227	2868		769		4667	5			3767	6 * 5%	743		2759	*	136	111	247
714	Dinesh (ZC)	2858		1615	1	5375	2	2375	9	3536	*	1821		3107	*	126	149	228
715	23601	3074	9	1077	5	4875	3			3975	4 * 10%	4196	1 *	4048	1 * 30%	129	144	227
716	Jalmagna (NC)	3007		846	9	4542	6	2219		3256	*	2104	9	2968	*	126	148	214
717	23594	2839		1154	4	3958				3399	*	3088	4	3295	7 * 6%	132	132	212
	Exp Mean	**3285**		**900**		**4377**		**2981**		**3623**		**2282**		**3272**		**128**	**130**	**225**
	C.D. 5%	697		304		337		426				1173					0	
	C.V.%	14.92		23.77		5.41		9.91				36.09					0.00	
	Sowing Date	25-Jul		19-Jun		15-Jul		03-Jul				03-Jul						
	Planting Date	28-Jul		19-Aug														
	Local ©	CR Dhan 500		Vaidehi		Rajdeep		Jalnidhi										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 2.30: Days to 50% Flowering of entries in IVT-DW Kharif 2015

Entry No.	IET No.	III				Zone III Mean (4)	IV	Overall Mean (5)
		OD	BI	W.B	U.P.		AS	
		CTK	PSA	CHN	GGT		GER	
701	23596	136	151	102		130	148	134
702	25219	138	155	103	121	129	155	134
703	25220	118	152	94	108	118	120	118
704	25221	138	146	101		128	141	131
705	24527	122	136	97	106	115	136	119
706	25222	136	151	106	130	131	155	135
707	Local ©	129	124	105	111	117	120	118
708	25223	137	146	101	121	126	155	132
709	25224	129	158	100	116	126	123	125
710	25225	133	151	98	125	127	138	129
711	24525	117	151	100	107	119	136	122
712	25226	127	144	100		124		124
713	25227	135	154	105		131	153	136
714	Dinesh (ZC)	126	142	105	123	124	134	126
715	23601	129	146	105		127	138	129
716	Jalmagna (NC)	130	141	102	124	124	132	126
717	23594	135	149	105		130	138	132
	Exp Mean	**130**	**147**	**102**	**117**	**125**	**139**	**128**
	C.D. 5%	2	2	1	2		3	
	C.V.%	1.14	0.74	0.66	1.21		1.44	

Table No. 2.31: Plant Height (cm) of entries in IVT-DW Kharif 2015

Entry No.	IET No.	III				Zone III Mean (4)	IV	Overall Mean (5)
		OD	BI	W.B	U.P.		AS	
		CTK	PSA	CHN	GGT		GER	
701	23596	134	88	125	104	113	140	118
702	25219	116	80	117	101	104	121	107
703	25220	111	148	160	155	144	154	146
704	25221	139	79	115	98	108	118	110
705	24527	132	92	131	117	118	156	126
706	25222	127	117	127	101	118	127	120
707	Local ©	140	131	108	161	135	139	136
708	25223	106	100	112	100	105	120	108
709	25224	108	143	161	152	141	163	145
710	25225	136	114	142	111	126	159	132
711	24525	133	144	162	133	143	157	146
712	25226	142	112	131		128		128
713	25227	111	80	130	93	104	141	111
714	Dinesh (ZC)	144	134	173	132	146	160	149
715	23601	145	126	167	112	138	170	144
716	Jalmagna (NC)	148	141	165	116	143	169	148
717	23594	125	105	154	111	124	165	132
	Exp Mean	**129**	**114**	**140**	**119**	**125**	**147**	**130**

Table No. 2.32 : Panicles/ M² of entries in IVT-DW Kharif 2015

Entry No.	IET No.	III					IV	Overall (5)
		OD	BI	W.B	U.P.	Zone III (4)	AS	
		CTK	PSA	CHN	GGT	Mean	GER	Mean
701	23596	243	129	242		205	290	226
702	25219	324	125	242	209	225	294	239
703	25220	215	167	228	195	201	240	209
704	25221	275	132	251		219	337	249
705	24527	228	173	227	182	202	259	214
706	25222	288	173	231	197	222	320	242
707	Local ©	240	186	250	230	226	237	228
708	25223	268	178	285	207	234	284	244
709	25224	192	143	240	195	192	253	204
710	25225	231	150	235	173	197	256	209
711	24525	239	182	257	172	212	281	226
712	25226	235	177	251		221		221
713	25227	267	175	273		239	272	247
714	Dinesh (ZC)	242	171	271	165	212	292	228
715	23601	230	183	272		228	222	227
716	Jalmagna (NC)	231	157	250	170	202	260	214
717	23594	226	154	238		206	230	212
	Exp Mean	**245**	**162**	**250**	**190**	**214**	**270**	**225**
	C.D. 5%	28	12	21	14		37	
	C.V.%	8.06	5.18	6.01	5.08		9.71	

Table 2.33: Grain quality characteristics of entries in IVT-DW Kharif 2015

CODE	ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
1373	701	23596	80.4	71.2	68.4	4.93	2.33	2.11	SB	VOC	4.0	22.88	34
1374	711	24525	80.7	67.3	62.5	6.23	2.34	2.66	LB	VOC	3.0	21.64	55
1375	717	23594	80.2	69.6	67.1	6.26	2.29	2.73	LB	VOC	4.0	23.52	43
1616	714	Dinesh (ZC)	80.8	64.0	51.8	4.95	2.62	1.88	SB	VOC	5.0	24.17	54
1617	715	23601	78.2	66.5	61.1	6.16	2.24	2.75	LB	A	5.0	21.85	26
1618	716	Jalmagna	79.4	68.6	60.7	6.87	2.28	3.01	LS	VOC	5.0	22.93	26

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

ADVANCE VARIETY TRIAL – 2 EARLY (TRANSPLANTED) AVT-2E-TP

Locations : 31 **Entries : 17**

Checks : Sahbhagidhan (National), Govind (North Western), Narendra 97 (Eastern), Tulasi (Southern & Western Zones), local and hybrid (PA 6129) check. **Table : 3.1**

The trial AVT-2E (TP) was constituted with 13 test entries and 4 checks, *viz*., national, zonal, local and hybrid check. The trial was conducted at 31 locations under transplanted and irrigated conditions covering 19 states in 6 zones *viz*., II, III, IV, V, VI & VII. In majority of the locations crop growth was good and no severe incidence of any major pest and diseases recorded. The CV of the experiments ranged from 2.97% at Waraseoni to 31.78 % at Ranchi, The experimental mean yield ranged from 1971 kg/ha (Brahmavar) to 9143 kg/ha (Gangavati), while the mean yield of the entries varied from 4766 kg/ha (zonal check) to 6310 kg/ha (IET 24075).. The mean of 50% flowering duration of the entries ranged from 86 days (national check) to 93 days (IET 23354). The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m, plant height, and quality characteristics are presented in 3,2, 3.3, 3.4, 3.5 and 3.6.

Overall performance of promising entries in AVT-2E-TP, kharif 2015.

Rank	IET No/ Designation / Cross combination	GY / FD / GT	Yield adv (%) over NC/ZC/ LC/ HC	% Increase over best check					
				State			Zone		
				Rank / Yield	%BC	%HC	Rank / Yield	%BC	%HC
1	*24075* *VNR-212*	6371 89 LB	25.6 30.7 24.5 ***6.6***	WB-1 KE-1 KA-6	12.0 19.0 15.0	14.0 59.0 9.0	Z II-2 Z III-1 Z VII -1	21.0 40.0 12.0	5.0 11.0 7.0
2	*24082* *HRI-183*	6145 90 LB	21.1 26.0 20.0 ***2.85***	HA-5 TR-3 GU-1 KA-1	22.0 33.0 15.0 33.0	11.0 62.0 15.0 27.0	Z II-1 Z IV- 3 ZVI-2 Z VII -2	23.0 33.0 10.0 12.0	7.0 62.0 9.0 7.0
	Hybrid check	5975 89	-	-	-	-	-	-	-
4	23356 RP 5125-17-6-3-2-1 (IR 84898-B-B) (IR78877-208-B-1-1 /IR 78878-53-2-2-2)	5944 92 LB	17.2 21.9 16.1 -	HAR-3 OD-4 WB-2 TR-5 MH-1 Gu-4 AP-2 KA- 7	25.0 14.0 9.0 27.0 19.0 6.0 14.0 13.0	14.0 12.0 11.0 55.0 17.0 6.0 - 7.0	Z II- 8 Z III-7 Z IV- 5 Z VI- 1 Z VII-3	9.0 18.0 27.0 15.0 5.0	- - 55.0 14.0 -
5	23957 GNV 11-09(PR 35887-1-21-2-1) ISH 58/Matatag 6	5758 91 MS	13.5 18.0 12.5 -	HAR-2 OD-1 KA- KE- MP-	29.0 50.0 8.0 8.0 8.0	17.0 47.0 - - -	Z III-2 Z IV-2 Z V-8	23.0 42.0 7.0	- 72.0 -
	Shahbhagidhan (NC)	5071 86							
	Zonal check	4876 88							
	Local check	5117 88							
	Hybrid check	***5975*** ***89***							

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; HC- Hybrid Check; LC- Local Check; GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type

The entry IET 24075 (VNR-212) a hybrid with mean yield of 6371 kg/ha, 89 days to 50% flowering duration and long bold grains, ranked first in the trial. On overall mean basis it yielded 25.64, 30.66, 24.51 and 6.63% higher than national, zonal, local and hybrid checks, respectively. This entry recorded significantly higher yield than the best check at Pantnagar (8247 kg/ha, 3rd), Jeypore (10231kg/ha, 2nd), Sabour (4916 kg/ha, 1st), Chinsurah (6576 kg/ha, 2nd), Varanasi (8427 kg/ha, 2nd), Jabalpur (8411 kg/ha, 2nd), Nawagam (6580 kg/ha, 2nd) , Kurumbapet (5833 kg/ha, 3rd) and Moncompu (6256 kg/ha, 1st). It stood first in zones III & VII with yield advantage of 40% and 12% respectively over best check and 11% and 7 % respectively over hybrid check. In zone II it ranked second with 21% of yield advantage over best check and 5% over hybrid check. In quality characters, it has 58.6 % HRR, long bold grains, high ASV (7) and AC (25.60 %) with medium GC (42 mm) indicating desirable cooking quality.

The second ranking entry in the trial was IET 24082 (HRI-183) a hybrid with mean grain yield of 6145 kg/ha, 90 days to 50% flowering with long bold grain type. This entry recorded yield gain of 21.18 %, 26% and 20% over national ,zonal and local checks, respectively. However it failed to show yield advantage over hybrid check on overall mean. IET 24082 was superior to best check at Pantnagar (8304 kg/ha, 2nd), Kaul (7911 kg/ha,5th), Sabour (3906 kg/ha, 2nd), Varanasi (7900 kg/ha, 3rd), Arundhutinagar (4582kg/ha, 3rd), Navasari (6986 kg/ha, 1st), Nawagam (6466 kg/ha, 3rd), Jabalpur (8328 kg/ha, 2nd), Mandya (5667 kg/ha,2nd), Ganganvati (11250 kg/ha, 2nd) and Kurumbapet (6233 kg/ha, 1st). This entry performed well in zone II, ranked first with 23 and 7% yield advantage over best check and hybrid check, respectively. In zone VII it ranked second with 12 and 7% yield advantage over best check and hybrid check, respectively. In zone IV it ranked third with yield advantage of 33% over best check and 62% over hybrid check. While in zone VI ranked second with 10% yield advantage over best check and 9% over hybrid check. In quality characters, it has 65.2 % HRR, long bold grains, high ASV (7) and intermediate AC (20.24 %) and GC (43 mm) indicating desirable cooking quality.

The hybrid check ranked 3rd in the trial with mean yield of 5912 kg/ha and 89 days to 50% flowering.

The entry IET 23356 [RP 5125-17-6-3-2-1(IR 84898-B-B)] developed from the cross IR78877-208-B-1-1/IR 78878-53-2-2-2 ranked 4th in the trial with mean yield of 5944 kg/ha, 92 days to 50% flowering and long bold grains. It recorded 17.2, 21.9 and 16.6 % more yield than national, regional and local checks, respectively on overall mean basis. IET 23356 yielded significantly higher to best check at Kaul (8047 kg/ha, 3rd), Chinsurah (5858 kg/ha, 4th), Pundibari(6493 kg/ha,1st), Sakoli (6810 kg/ha, 1st),Karjat (5862 kg/ha, 1st),Vadagaon (5123 kg/ha, 1st), Navasari (6463 kg/ha, 2nd), Ganagavati (9975 kg/ha,4th) and Kurumbapet (5433 kg/ha,4th). IET 23356 stood first in zone VI, with yield advantage of 15 and 14 %, respectively over best and hybrid check. While in zone IV also it showed yield superiority over best check and hybrid check. In quality characters, it has 60.2% HRR, long bold grains, intermediate ASV (4), AC (21.82%) and GC (56 mm) indicating desirable cooking quality.

Considering yield advantage over best check on overall mean basis the following entries viz., IET 24075, 24082, 23356, 23957, 23979, 23951, 23354, 23996, 23947, 23976, 23949 and 23392 are found to be superior with yield advantage of more than 5% over best check.

Three year performance of entries:

In three years of testing IET 24075 performed well against the best check and hybrid checks with significant yield advantage in various states, however it failed to show yield advantage over best check and hybrid check consecutively for two years in the same state. Only in Punjab, IET 24075 registered yield superiority of 22.12 % over best check and 12.47% over hybrid check, during 2014 and 11.3% over best check and 9.83 % over hybrid check during 2013, Therefore this entry is found to be promising in the state of Punjab only.

IET 24082 registered yield superiority of 22% and 11% over best check and hybrid check, respectively during 2015 and 25.12% over best check and 26.36% over hybrid check, during 2014 in the state of Haryana. It registered required yield superiority over best check and hybrid check during 2013 and 2014 in the states of Tamil Nadu. Hence, this entry is found to be promising for the states of Haryana and Tamil Nadu.

IET 23354 found to be promising in Haryana, Karnataka, Bihar and Madhya Pradesh.

IET 23356 found promising in the states of Odisha, Karnataka and Bihar.

IET 23996 found to be promising in Karnataka, Bihar and Madhya Pradesh.

IET 23951, IET 23976, IET 23957 found to be promising in the states of Bihar and Karnataka.

IET 23979 found to be promising in the states of Karnataka and Pudhucherry.

IET 23949 found promising only in the state of Karnataka.

IET 23947 found to be promising in Madhya Pradesh and Haryana.

IET 23392 found promising only in the state of Bihar.

Three years performance of promising entries in Advance Variety Trial - 2 – Early Transplanted (AVT- 2 E TP), kharif 2015.

Code	IET No/ Designation / Cross Combination	Year	Over all mean yield	Yield adv (%) over NC/ ZC or RC /LC/HC	% Increase over best check					
					State			Zone/ Region		
					Rank/ Yield (kg/ha)	%BC	% HC	Rank	%BC	%HC
1	*24075* *VNR-212* (Hybrid)	2015	6371 89 LB	25.6 30.7 24.5 *6.6*	WB-1 KE-1 KA-6	12.0 19.0 15.0	14.0 59.0 9.0	Z II-2 Z III-1 Z VII -1	21.0 40.0 12.0	5.0 11.0 7.0
		2014	5882 90 LB	25.68 43.81 21.38 4.79	PU-1 HA- 4 BI-2 MP-2 GU- 1 AP-3	22.12 16.75 45.98 32.59 16.07 14.17	12.5 17.9 13.7 6.7 16.8 31.4	R 2-1 R 3-1	19.83 29.52	14.68 12.81
		2013	5967 90	21.5 50.4 23.2 -	PU-1 CH	11.3 25.6	9.83 14.80	R2 R3 R5	26.5 23.8 21.5	6.7
2	*24082* *HRI-183* (Hybrid)	2015	6145 90 LB	21.1 26.0 20.0 *2.85*	HA-5 TR-3 Gu-1 KA-1	22.0 33.0 15.0 33.0	11 62 15 27	Z II-1 Z IV- 3 ZVI-2 Z VII -2	23 33 10 12	7.0 62.0 9.0 7.0
		2014	5888 90 LB	26.03 44.21 21.71 5.08	PU-2 HA-1 BI-4 CG-2 TN-1 KE-	14.04 25.12 37.56 49.25 27.98 11.52	5.03 26.36 7.11 11.30 18.78 28.76	R2-2 R3-3 R5-1	18.78 22.37 24.89	13.68 6.58 6.29
		2013	5725 90	18.24 44.31 16.59 -	TN	6.92	7.93	R2	33.1	6.7
3	23356 [RP 5125-17-6-3-2-1 (IR 84898-B-B)] (IR78877-208-B-1-1/ IR 78878-53-2-2-2)	2015	5944 92 LB	17.2 21.9 16.1 -	HA-3 OD-4 WB-2 TR-5 MH-1 Gu-4 AP-2 KA- 7	25.0 14.0 9.0 27.0 19.0 6.0 14.0 13.0	14.0 12.0 11.0 55.0 17.0 6.0 - 7.0	Z II- 8 Z III-7 Z IV- 5 Z VI- 1 Z VII-3	9.0 18.0 27.0 15.0 5.0	- - 55.0 14.0 -

Code	IET No/ Designation / Cross Combination	Year	Over all mean yield	Yield adv (%) over NC/ ZC or RC /LC/HC	% Increase over best check					
					State			Zone/ Region		
					Rank/ Yield (kg/ha)	%BC	% HC	Rank	%BC	%HC
		2014	5400 91 LB	15.4 32.0 - -	OD-6 BI MP KA	- 13.0 14.0 8.0	50.4 -	R3 R5	10.0 17.0	- -
		2013	5049 89	- 39.3 7.7 -	PU-3 HA- BI-1 GU KE-2 PY-1	25.5 18.8 47.2 16.1 10.7 18.1	-	-	-	-
4	23957 GNV 11-09 (PR 35887-1-21-2-1) ISH58/ MATATAG 6	2015	5758 91 MS	13.5 18.0 12.5 -	HA-2 OD-1 BI-7 KA- KE- MP-	29.0 50.0 5.0 8.0 8.0 8.0	17.0 47.0 - - -	Z III-2 Z IV-2 Z V-8	23 42 7	- 72 -
		2014	5315 92 LS	13.6 30.0 - -	BI-9 TN-7 KA-6	26.0 5.0 25.0	- - 12.0	R5- 4	23.0	-
		2013	4894 89	- 35.0 - -	HA-9 GU- PY-8	27.1 14.2 17.0	-	-	-	-
5	23979 IR 83832-90-3-2-3 Introduction from IRRI	2015	5750 91 LS	13.4 17.9 12.4 -	HA- OD-3 MP-8 TEL-1 KA-3	9.32 32.0 9.0 17.0 23.0	- 29.0 - - 17.0	Z III- 5 Z IV -4 Z V-	18.0 30.0 6.0	- 58.0 -
		2014	5371 91 LS	14.8 31.3 - -	BI-8 KA-4 PY-9	28.0 29.0 24.9	- 16.0 -	R3-9 R5	13.0 11.0	-
		2013	5066 90	- 34.5 - -	UP-8 GU-4 PY-5	13.5 27.8 18.1	-	-	-	-
6	23951 NP 7008 (NP 7009/Mahsuri)	2015	5726 89 LB	12.92 17.43 11.90 -	UT-8 BI-3 WB-3 MP-3 TEL-4 KE-8 KA-4	14.0 11.0 9.0 24.0 10.0 9.0 18.0	- - 11.0 - - - 12.0	Z III-4 Z IV-6 Z V-2	18.0 13.0 22.0	- 37.0 -
		2014	5188 89 LB	10.9 26.8 - -	BI CG-8 KA	22.0 32.5 6.0	- - -	R4-5 R3	6.0 12.0	- -
		2013	4828 86	- 33.2 - -	UP-2 GU-3	27.9 30.5	-	-	-	-
7	23996 RP 5571-49-21-9-5-3-1-2 IR78877-208-B-1-1/ IR 78878-53-2-2-2	2015	5613 89 LB	10.7 15.1 9.7 -	UT-7 HA-6 BI-5 MP-4 GU-2 AP-6 TEL-3 KA-8	16.0 21.6 18.0 20.0 10.0 7.0 10.0 11.0	- 10.8 - - 10.0 - - 6.0	ZII-7 ZII- Z V-4	10.0 11.0 18.0	-

Code	IET No/ Designation / Cross Combination	Year	Over all mean yield	Yield adv (%) over NC/ ZC or RC /LC/HC	% Increase over best check					
					State			Zone/ Region		
					Rank/ Yield (kg/ha)	%BC	% HC	Rank	%BC	%HC
		2014	5569 89 LB	19.0 36.0 - -	BI- MP-7 KA-3	24.0 24.0 29.0	- - 16.0	R3-7 R4-7 R5-7	14.0 5.0 20.0	-
		2013	5050 87	- 39.3 7.7 -	HA-1 WB-2 GU PY	41.17 22.88 17.58 15.49		R2-2	12.8	
8	23354 RP 5125-12-5-3-B (IR84898-B-B) IR78877-208-B-1-1/ IR 78878-53-2-2-2	2015	5536 93 LB	11.2 16.2 10.5 -	PU-6 HA-4 OD-6 GU-3 TN-1 KA-2 PD-6	11.0 23.7 13.0 10.0 13.0 24.0 9.2	- 12.7 10.0 10.0 12.0 18.0 -	Z II ZIII-8 ZIV	5.0 14.0 14.0	- - -
		2014	5421 92 LB	15.8 32.5 - -	HA-5 BI- MP-9 KA-	14.3 16.0 20.0 19.0	- - - 7.0	R3- R5-8	6.0 20.0	-
		2013	5219 89 LB	5.67 43.97 11.28 -	PU-9 HA- BI- UP-5 MP-7 MH- GU-2 AP-2 PD-	16.81 25.88 9.44 17.12 13.85 5.19 30.47 7.89 8.51	-	R2-7 R4-2	7.84 15.62	-
9	23949 MTU 1159 MTU1010/ MTU1081	2015	5539 87 LS	9.23 13.60 8.25 -	PU- AP-3 KE-2 KA- PU-2	9.0 13.0 15.0 8.0 22.3	- - 54.0 - 11.2	Z II-6	10.0	-
		2014	5069 88 LS	8.3 23.9 - -	BI- CG- KA-5	14.0 19.7 29.0	- - 16.0	R5-	6.0	-
		2013	5248 86 MS	6.26 44.78 11.90	PU-1 HA-4 UP-3 MP- GU-6 TN-5 KA-2	34.29 31.76 22.52 11.82 21.38 7.73 10.41	-	R2-1 R4-6	20.50 11.31	-
10	23976 MTU 1160 Samba Mahsuri/ Azucena	2015	5411 87 LS	6.70 10.97 5.75 -	UT-5 PU-9 HA-1 BI-8 MP-6 MH-2 TEL-7 KA-5	19.0 9.0 31.3 15.0 11.0 8.0 6.0 16.0	- - 19.6 - - 6.0 - 10.0	Z II-3 ZIV-4 Z V-5	17.0 30.0 13.0	- 58.0 -
		2014	5218 87 LS	11.5 27.6 - -	BI- KA-	17.0 18.0	- 6.0	R5- R3-	11.0 6.0	
		2013	4941 85	0.0 36.3 5.4	PU-5 HA GU-7	23.46 38.82 20.42		R-IV	11.28	

Code	IET No/ Designation / Cross Combination	Year	Over all mean yield	Yield adv (%) over NC/ ZC or RC /LC/HC	% Increase over best check					
					State			Zone/ Region		
					Rank/ Yield (kg/ha)	%BC	% HC	Rank	%BC	%HC
				-	PY	14.48				
11	23947 TRC 2013-2 IRRI 132/ IR 74371-54-1-1	2015	5418 89 LS	6.84 11.12 5.88 -	UT-6 HA-7 OD-5 MP-5 KE- KA-9	19.0 18.2 14.0 12.0 7.0 11.0	- 7.0 12.0 - - 5.0	Z II-9 Z III-9 Z IV Z V-7	8.0 12.0 14.0 8.0	-
		2014	4902 89 LS	4.7 19.9 - -	HA-7 MP- MH-4	11.8 5.0 7.0	- - -	R4-4	6.0	
		2013	4966 85	0.0 37.0 5.9 -	PU-2 HAR UP-9 PY	25.65 27.05 11.71 12.76				
12	23392 BAU/IRRI 496 (IR 838614-673-B)	2015	5391 91 LS	6.31 10.56 5.35 -	OD-7 BI-6 MP- KE-7	12.0 16.0 7.0 13.0	10.0 - -	ZIII- ZIV- 1 Z V-6	9.0 47.0 9.0	- 78.0 -
		2014	5293 91 LS	13.1 29.4 - -	BI- TN-3 KA-	12.0 15.0 18.0	- 7.0 6.0	R5-2	25.0	6.0
		2013	4814 86	- 32.8 2.6	HAR BI-2 GU-8 PY-2	18.82 32.07 1808 18.09		R-IV-4	0.89	

ADVANCE VARIETY TRIAL – 1 EARLY (TRANSPLANTED) AVT-1E-TP

Locations : 29 **Entries : 31**

Checks : Gontra Bidhan 3, Anjali (National), PR124 (Northern), Luit (North Eastern), Sahbhagidhan (Central & Western), NDR 97(Eastern), DRR Dhan 43 (Southern)--Zonal, US 314 (Hybrid) and Local **Table : 3.7**

The trial was constituted with 26 test entries and five checks viz., national (Gontra Bidhan 3, Anjali**)**, zonal, local and hybrid. The trial was conducted in 29 locations in 19 states covering the zones II, III, IV, V, VI and VII in the country. In general crop stand was good at most of the locations. The CV% of the experiment was very high at Ranchi (48.63%) and very low at Waraseoni (2.35%), hence data was not included in the overall, zonal and state means. The data from the following locations viz.,Brahmavar, Pattambi, Pundibari and Sabour was not included in the analysis either due to high or low CV or less experimental mean yield. The CV% at rest of the locations was within acceptable limits. The experimental mean at the locations ranged from 593 kg/ha (Ranchi) to 8649 kg/ha (Jeypore). Data on grain yield state wise and zone wise are presented in table 3.8. The days to 50% flowering ranged from 73 days (Anjali) to 102 days (IET 24705). The information on days to 50% flowering, plant height, panicle/sq.m and quality parameters are presented in tables 3.9, 3.10, 3.11, 3.12.

Performance of entries in AVT-1-E-TP Kharif 2015

Rank	IET No/ Designation / Cross combination	GY / FD / GT	% Increase over best check						Remarks
			State			Zone			
			Rank	%BC	% HC	Rank	%BC	%HC	
Performance of entries in Zone II									
1.	*24797* *SAVA-134* *(hybrid)*	6683 92 LS	UT-1	9.0	14.0	Z-II-1	19.0	16.0	Drop due to Low AC
2.	24721 Huang-Hua-Zhan (Huang-Hua-Zhan/Feng-Hua-Zhan)	6476 88 LS	BI-3 TR-2 GU-3 AP-4 TEL- KE-	32.0 8.0 12.0 30.0 8.0 5.0	- 10.0 - 45.0 - -	Z-II-2 Z-IV-2	15.0 8.0	13.0 10.0	Drop due to Low AC
3.	24704 HHZ17-DT-6-Sal 3 DT1 (Huang-Hua-Zhan*2/ CDR-22)	6463 88 LS	UT-2 BI-5 WB-3 GU-1 AP KE	7.0 28.0 15.0 20.0 10.0 15.0	12.0 - 15.0 8.0 22.0 -	Z-II-3	15.0	12.0	Drop due to Low AC
4	*24796* *SVZ-1109* *Hybrid*	6214 88 SB	-	-	-	Z-II-4	10.0	8.0	
5	24040 RP 5125-8-10-2-B (IR78877-208-B-1/ IR78878-53-2-2-22)	6117 95 SB	OD-5 BI-6 TR-3 AP-2 TN-1 KE	6.0 23.0 7.0 42.0 10.0 6.0	8.0 - - 10.0 17.0 23.0	Z II-5 Z IV-3 Z VII-1	9.0 7.0 6.0	6.0 10.0 21.0	
6	24705	5929 102 LB	HA-4 BI-2 WB-4	30.0 32.0 14.0	18.0 - 14.0	Z II-6	5.0	-	
7	24708	5895 94 LB	HA-5	21.0	10.0	Z II- 7	5.0	-	
Performance of entries in Zone III and IV									
1	24798 *HRI-184* *(Hybrid)*	7387 94 LS	OD-1 BI-1 WB-1 TR-1	10.0 53.0 20.0	13.0 19.0 19.0	ZIII- 1 Z IV- 1	16.0 12.0	7.0 15.0	
Performance of entries in Zone VI									
1	24798 *HRI-184 (Hybrid)*	5858 90 LS	GU-2	18.0	17.0	Z-VI-1	10.0	17.0	
Performance of entries in Zone VII									
1	IET24040 RP 5125-8-10-2-B (IR 83387-B-B-40) (IR78877-208-B-1/ IR78878-53-2-2-22)	6387 90 LS	AP-2 TN-1 KE-	42.0 10.0 6.0	58.0 23.0. -	Z-VII-1	6.0	21.0	

Zone II

The locations under zone II were Pantnagar, Ludhiana and Kaul. The zonal mean ranged from 3052 kg/ha (IET 24744) to 6683 kg/ha (IET 24797). The entry IET 24797 *(SAVA-134)* a hybrid entry ranked first in the zone II with mean grain yield of 6683 kg/ha, 92 days to 50% flowering and long

slender grains. It showed the yield advantage of 19% over best check and 16% over hybrid check on zonal II mean . On zone II overall mean IET 24797 showed a yield advantage of 40.52, 62.64, 18.56, 19.30 and 16.10 % over checks viz., Gontra Bidhan, Anjali, zonal, local and hybrid check respectively. The entry registered yield superiority against best check and hybrid check at Pantnagar (6016 kg/ha, 1st) and Kaul (7559 kg/ha, 1st). In quality characters, it has 56.4 % head rice recovery, very occasionally chalky grains, intermediate ASV (4), very low AC (16.48%) and GC (100 mm) with long slender grains. Due to low AC (16.48%) the entry IET 24797 is dropped.

The entry IET 24721 (Huang-Hua-Zhan) derived from the cross (Huang-Zin-Zhan/Feng-Hua-Zhan) ranked second with mean grain yield of 6476 kg/ha and 88 days to 50% flowering with long slender grains. In zone II overall mean IET 24721 showed a yield advantage of 36.16, 57.60, 14.88, 15.60 and 12.50 % over checks viz., Gontra Bidhan, Anjali, zonal, local and hybrid check, respectively. The entry registered yield superiority against best check and hybrid check at Kaul (6437 kg/ha, 6th) only. It has 59.5 % HRR, without grain chalkiness, ASV (5), low AC (17.45) and GC (87) with long bold grains. Due to low AC (17.45%) the entry IET 24721 is dropped.

IET 24704 (HHZ17-DT-6-Sal 3 DT1) derived from the cross (Huang-Hua-Zhan*2/CDR-22) ranked third in the trial with mean grain yield of 6463 kg/ha and 88 days to 50% flowering with long slender grains. In zone II IET 24704 showed a yield advantage of 35.89, 57.28, 14.65, 15.36 and 12.28 % over national checks viz., Gontra Bidhan, Anjali, zonal, local and hybrid check respectively. In quality traits, it has 58.9 % HRR, ASV (7.0), low AC (19.03) and GC (100) with long slender grains. Due to low AC (19.03%) the entry IET 24704 is dropped.

The other entries viz., IET 24796, 24040, 24705 and 24708 also showed required yield superiority.

Zone III, IV and V

In zone III eight locations, in zone IV one location and zone V three locations data were furnished for the analysis. The overall mean ranged from 3955 kg/ha (IET 24744) to 7378 kg/ha (IET 24798). IET 24798 *(HRI-184)* a hybrid ranked first in zone III and IV with overall mean grain yield of 7387 kg/ha, 94 days to 50% flowering with long slender grains. On overall zonal III, IV and V means IET 24798 showed a yield advantage of 11.02, 66.94, 52.18, 38.91 and 7.78 % over checks viz., Gontra Bidhan, Anjali, zonal, local and hybrid check, respectively. The entry out yielded over best check and hybrid check at Jeypore (10889 kg/ha, 1st), Patna (9724 kg/ha, 1st), Sabour (4487 kg/ha, 1st), Chinsurah (7710 kg/ha, 1st). This entry stood first in zone III (16 and 7%) & IV (12 and 15%) over best check and hybrid check. In quality characters, it has 63.5 % HRR, intermediate ASV (5), AC (25.08) and (GC 50) with long bold grains.

Zone III:The entries IET 24798, 24704 and 24705 showed desirable yield advantage over checks.
Zone IV: IET 24798, 24721 and 24040 showed yield advantage over best check and hybrid check.
Zone V : The entry IET 24053 only showed the required yield superiority over best check and hybrid check. However, it recorded low HRR (32.7%), hence dropped from further testing.

Zone VI

The zone VI comprises of four locations viz., Karjat, Vadagaon, Navasari and Dabhoi. The zonal mean ranged from 3349 kg/ha (Anjali) to 5858 kg/ha (IET 24798). IET 24798 *(HRI-184)* also ranked first in zone VI with overall mean yield of 5858 kg/ha with 90 days to 50% flowering. It out yielded checks viz., Gontra Bidhan, Anjali, zonal, local and hybrid check by 9.52%, 74.92%, 48.49%, 23.61% and 16.79 % , respectively on zonal VI mean. It was significantly superior to best check and hybrid check at Dabhoi (5449 kg/ha, 1st) with acceptable grain quality characters.

Zone VII

The zone VII comprises of eleven locations covering six states. The mean yield ranged from 3838 kg/ha (IET 24748) to 6387 kg/ha (IET 24040). The entry IET 24040 (RP 5125-8-10-2-B (IR 83387-B-B-40)) ranked first in the zone VII with mean grain yield of 6387 kg/ha, 90 days to 50% flowering and short bold grains. In zone II only one entry IET 24040 showed yield advantage of 6 % and 21% over best check and hybrid check, respectively. The entry registered yield superiority against best check at Maruteru (5652 kg/ha, 2nd), Aduthurai (4978 kg/ha, 1st), and Kurumbapet (6267 kg/ha, 3rd). In quality characters, it has 49.8% HRR, ASV(4.0), AC (22.52) , GC(73) with short bold grains.

Considering yield advantage over best check on zonal means the following entries may be promoted to final year of testing.

Zone II : 24796, 24040, 24705 and 24708

Zone III : IET 24798 and 24705

Zone IV : IET 24798 and 24040

Zone VI : IET 24798

Zone VII : IET 24040

INITIAL VARIETY TRIAL – EARLY (TRANSPLANTED) IVT-E-TP

Locations	**:**	**27**	**Entries**	**:**	**64**
Checks	**:**	**Gontra Bidhan 3 and Anjali (National), PR124 (Northern), Luit (North Eastern), Sahbhagidhan (Central & Western), NDR 97 (Eastern), DRR Dhan 43 (Southern)-- Zonal and Local Check**	**Table**	**:**	**3.13**

The trial was constituted with 60 test entries including four checks viz., national (Gontra Bidhan 3, Anjali), zonal and local. The trial was conducted at 27 locations in 19 states covering the zones II, III, IV, V, VI and VII in the country. In general crop stand was good at most of the locations. The CV% of the experiment was within acceptable limits at all locations except Ranchi (38.87%). The data from the following locations viz.,Ranchi, Pundibari and Brahmavar was not included in the analysis due to less experimental mean yield. The experimental mean at the locations ranged from 504 kg/ha (Ranchi) to 8407 kg/ha (Jeypore). Data on grain yield state wise, zone wise and overall mean are presented in table 3.14. The days to 50% flowering ranged from 75 days (IET 25581) to 103 days (IET 25602). The information on days to 50% flowering, plant height and panicles/sq.m are presented in tables 3.15, 3.16 and 3.17. The overall mean yield of entries ranged from 3628 kg/ha (IET 25581) to 6216 kg/ha (Gontra Bidhan 3). On overall mean basis the national check Gontra Bidhan 3 ranked first in the trial with mean grain yield of 6216 kg/ha with 89 days to 50% flowering. Since the national check Gontra Bidhan 3 ranked first on overall mean basis and also in zone III and zone VII, the performance of entries were discussed in zones II, IV, V and VI and the performance of entries are given in table:

Performance of entries in Zone II, IV, V and VI in IVT-E-TP Kharif 2015

IET No	Designation	Days to 50% flowering	% Yield advantage over best check		
			Zone II	Zone IV	Zone V & VI
25551	JGL 23835	87	5.0	-	22.0
25576	CR 3846-1-2-1-1-1-2	87	-	25.0	6.0
25597	TRC-2015-10	92	-	14.0	9.0
25598	HUR-154	93	-	-	17.0, 7.0
25561	UPR 3838-1-1-1-1	88	5.0	-	-
25603	CRR 757-1(IR 92548-51)	88	-	61.0	-
25602	CR 2906-253-8	103	-	48.0	-
25604	CR 3848-2-1-3-1-4	90	-	36.0	-
25601	MTU1207 (MTU 2278-15-1-1)	102	-	34.0	-
25605	UPR 3823-2-1-1-2	88	-	25.0	-
25591	CB 12 532	89	-	21.0	-
25577	CBMAS 14 142	90	-	20.0	-
25592	IR 95797-CR-3847-23-2-1-1-2	87	-	19.0	-
25554	TRC-2015-17	96	-	18.0	-
25590	RTN 5-1-1-1-1	89	-	18.0	-
25600	TM 10085	91	-	16.0	-
25593	CRR 756-1(IR 92522-47)	87	-	15.0	-
25546	CB 12 581	81	-	12.0	-
25598	HUR-154	93	-	-	17.0
25553	HKR 12-2	85	-	-	16.0
25597	TRC-2015-10	92	-	-	11.0
25557	KAUM 265-1	98	-	-	10.0
25552	KNM-605	84	-	-	10.0
25548	AD 100003	83	-	-	10.0
25558	NLR 3242	87	-	-	10.0
25549	CRR 719-1-B	85	-	-	9.0
25574	PUSA 2011-27-26-92	88	-	-	9.0
25569	AD 091219	86	-	-	8.0
25579	CR 3745-3-2-4-1-1	91	-	-	8.0
25582	CUMRE 108	79	-	-	8.0
Best check yield (kg/ha)			6757	4396	6767, 5203

Zone II

The locations under zone II were Pantnagar, Ludhiana and Kaul. In zone II yield ranged from 3101 kg/ha (IET 25602) to 7083 kg/ha (IET 25551). The two entries viz., IET 25551 and IET 25561 showed the required yield superiority over best check along with the acceptable flowering duration.

Zone IV

The Zone IV comprises only one location Arundhutinagar. The yield ranged from 1636 kg/ha (IET 25581) to 7100 kg/ha (IET 25603). The fifteen entries viz., IET 25546, 25554, 25576, 25577, 25590, 25591, 25592, 25593, 25597, 25600, 25603, 25604, 25605 showed more than 10% yield advantage over the best check with acceptable days to 50% flowering for this trial.

Zone V:

Zone V includes three locations viz., Waraseoni, Jabalpur and Sakoli. The zone V yield ranged from 4696 kg/ha (IET 25594) to 8232 kg/ha (25551). IET 25551 stood first in zone V with 22% yield advantage over best check. The following entries viz., IETs 25548, 25549, 25551, 25552, 25553, 25557, 25558, 25569, 25574, 25576, 25579, 25582, 25597 and 25598 also showed the required yield advantage over best check.

Zone VI:

The four locations viz., Karjat, Vadagaon, Vyra and Dabhoi covering two states are under zone VI. Zone VI mean yield ranged from 3499 kg/ha (Anjali) to 5792 kg/ha (IET 25598). Only one entry IET 25598 showed 7% yield advantage over best check.

Considering yield advantage over best check on zonal means the following entries may be promoted to AVT- 1-E (TP).

Zone II : IET 25551, 25561

Zone IV : IET 25546, 25554, 25576, 25577, 25590, 25591, 25592, 25593, 25597, 25600, 25601, 25602, 25603, 25604, 25605

Zone V : IET 25548, 25549, 25551, 25552, 25553, 25557, 25558, 25569, 25574, 25576, 25579, 25582, 25597, 25598

Zone VI : IET 25598

Based on overall mean days to 50% flowering the following entries may be shifted to IVT- IM

IET 25602(103 days), IET 25601(102 days) and IET 25557(98 days).

Table 3.1: Composition of entries in Advance Variety Trial 2– Early (AVT 2- E TP), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
3rd year of testing				
801	23339	CRR 614-4-1	IR 55419-4*2/Way Rarem	LB
802	23949	MTU 1159	MTU 1010/MTU 1081	LS
803	23957	GNV 11-09 (PR 35887-1-21-2-1)	ISH 58/MATATAG 6	MS
804	**Shahbhagidhan (NC)**			
805	23392	BAU/IRRI 496 (IR 838614-673-B)	IR 78875-131-B-1-2/IR 64	LS
806	23356	RP 5125-17-6-3-2-1(IR 84898-B-B)	IR 78877-208-B-1-1/IR 78878-53-2-2-2	LB
807	23976	MTU 1160	Samba Mahsuri/Azucena	LS
808	23979	IR 83832-90-3-2-3	Introduction from IRRI	LS
809	**Govind -Northwestern, Narendra 97 -Eastern, Tulasi -Southern & Western — (ZC)**			
810	24075	***VNR -212 (Hybrid)***	-	LB
811	23947	TRC 2013-2	IRRI 132/ IR 74371-54-1-1	LS
812	23354	RP 5125-12-5-3-B(IR84898-B-B)	IR 78877-208-B-1-1/IR 78878-53-2-2-2	LB
813	**PA 6129(HC)**			
814	23951	NP 7008	NP 7009/Mahsuri	SB
815	23996	RP 5571-49-21-9 -5-3-1-2	IR 06L164/BP234E-MR-11	LB
816	24082	***HRI-183 (Hybrid)***	-	LB
817	**Local Check**			

Table No. 3.2 : Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	II						Zone II Mean (3)		III	
		UT		PUN		HAR				OD	
		PNT		LDN		KUL				JYP	
801	23339	4850		4507		6956	*	5438		6779	
802	23949	7103	4 * ...27%	5895	_9%	6847		6615	6 * 10%	7341	8 ...3% _1%
803	23957	5005		7073	1 #...13% _31%	8320	2 *#	6799	5 * 13%	10714	1 *#...50% _47%
804	Shahbhagidhan (NC)	5193		5259		6438		5630		5397	
805	23392	5012		5147		6792		5650		7989	7 ...12% _10%
806	23356	5721	9 ...2%	5955	8 _10%	8047	3 *#	6574	8 * 9%	8161	4 ...14% _12%
807	23976	6670	5 * ...19%	5901	9 _9%	8456	1 *#	7009	3 * 17% **1%**	5642	
808	23979	5073		6613	2 # ...6% _23%	7038	*	6241	4%	9418	3 *#...32% _29%
809	Zonal Check	5613		5016		4992		5207		3228	
810	24075	8247	3 * ...47%	6280	3 _16%	7365	8 *	7297	2 * 21% **5%**	10231	2 *#...44% _41%
811	23947	6659	6 * ...19%	5250		7610	7 *#	6507	9 * 8%	8148	5 ...14% _12%
812	23354	4897		5997	6 _11%	7965	4 *#	6286	5%	8022	6 ...13% _10%
813	PA 6129(HC)	8317	1 * ...48%	5397		7065	9 *	6926	4 * 15%	7275	9 ...2%
814	23951	6399	8 * ...14%	6116	5 _13%	6001		6172	3%	6885	
815	23996	6524	7 * ...16%	5492	_2%	7829	6 *#	6615	7 * 10%	5754	
816	24082	8304	2 * ...48%	5990	7 _11%	7911	5 *#	7401	1 *# 23% **7%**	7202	...1%
817	Local Check	5514		6263	4 _16%	6247		6008		7130	
	Exp Mean	**6183**		**5774**		**7169**		**6375**		**7372**	
	C.D. 5%	612		932		510		439		1088	
	C.V.%	5.96		9.70		4.28		7.36		8.87	
	Sowing Date	16-Jun		16-Jun		16-Jun				01-Jul	
	Planting Date	22-Jul		10-Jul		22-Jul				02-Aug	
	Local ©	Govind		PR 115		HKR 48				Mandakini	

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.2 Contd. : Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	III													
		BI		BI		BI (1)		JH		W.B		W.B		W.B	W.B (3)
		PTN-ICAR		@SBR		Mean		@RCI		CHN		PNB		KOL	Mean
801	23339	6206		2355		6206	*	2511	8	4157				5889	5023
802	23949	5978		2486		5978	*	3200	4	4611		4416	9	6111	5046
803	23957	7358	7	2943	9 *	7358	7 * 5%	3378	3	6727	1 *#	4178		6622	5842 4 **2%**
804	Shahbhagidhan (NC)	6517		2112		6517	*	2111		4762	8	5078	5	5800	5213
805	23392	7650	5	2807	*	7650	5 * 9%	2311		4308		5031	6	7289	3 5543
806	23356	6634		2581		6634	*	2889	5	5858	4 *#	6493	1 *	6733	6362 2 *# 9% **11%**
807	23976	7200	9	3154	6 *	7200	9 * 3%	2311		4649	9	3180		7222	5 5017
808	23979	7306	8	3093	7 *	7306	8 * 4%	3422	1	6387	3 *#	4207		6600	5731 9
809	Zonal Check	5461		2083		5461	*	1422		4082				7556	1 # 5819 6 **2%**
810	24075	7733	4	4196	1 *#	7733	4 * 10%	1933		6576	2 *#	5683	3	7222	6 6494 1 *# 12% **14%**
811	23947	5311		3562	4 *	5311	*	1889		5782	5 *#	4858	7	6822	5821 5 **2%**
812	23354	6450		2760	*	6450	*	2356	9	5631	6 *#	4398		7200	7 5743 8
813	PA 6129(HC)	8544	1 *	3646	3 *	8544	1 * 22%	2711	7	4611		5617	4	6933	5720
814	23951	7778	3	3385	5 *	7778	3 * 11%	1867		5593	7 *#			7089	8 6341 3 *# 9% **11%**
815	23996	7550	6	3087	8 *	7550	6 * 8%	2800	6	4535		5704	2	7044	9 5761 7 **1%**
816	24082	7817	2	3906	2 *	7817	2 * 12%	3422	2	4649		4851	8	7267	4 5589
817	Local Check	7000		1997		7000	*	1800		4649		3311		7422	2 5127
	Exp Mean	**6970**		**2950**		**6970**		**2490**		**5151**		**4786**		**6872**	**5654**
	C.D. 5%	931		471				1316		574		892		535	385
	C.V.%	8.03		9.60				31.78		6.70		11.10		4.68	7.27
	Sowing Date	21-Jun		17-Jul				26-Jun		30-Jun		13-Jun		30-Jul	
	Planting Date	15-Jul		08-Aug				10-Aug		29-Jul		11-Jul		21-Aug	
	Local ©	Rajendra Bhagwati		Prabhat				BD 103		Provat		MTU 1010		GS-1	

Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	III	Zone III Mean (6)	IV	V			
		U.P.		TR	M.P.	M.P.	M.P.	M.P. (2)
		VRN		ARD	@RS	JBP	REW	Mean
801	23339	6243 5	5855 4%	3582 8 ...4% _27%	6112	5978	3546	4762
802	23949	5533	5665	2428	6865	6696 *	3175	4935 2%
803	23957	6177 6	6963 2 * 23% **1%**	4870 2 *#...42% _72%	6603	7289 6 *	3121	5205 9 8%
804	Shahbhagidhan (NC)	5933 9	5581	3441 9 _22%	6752	5684	3744 6	4714
805	23392	4000	6045 * 7%	5046 1 *#...47% _78%	8273 2 *	6741 9 *	3607 7	5174 7%
806	23356	5893	6629 6 * 18%	4382 5 #...27% _55%	7497 8 *	5804	3190	4497
807	23976	5620	5585	2582	7359 9	6878 7 *	3814 5	5346 6 * 11%
808	23979	5960 8	6646 5 * 18%	4482 4 #...30% _58%	6391	6685 *	3824 4	5255 8 * 9%
809	Zonal Check	5423	5150	2980 _5%	6732	2981	2138	2559
810	24075	8427 2 *	7646 1 *# 36% **11%**	3820 7 ...11% _35%	7991 3 *	8411 2 *	3983 2	6197 1 * 29% **3%**
811	23947	5540	6077 * 8%	3220 _14%	7685 5 *	6774 8 *	3966 3	5370 5 * 12%
812	23354	6253 4	6326 8 * 12%	3224 _14%	7517 7 *	4890	3517	4204
813	PA 6129(HC)	8433 1 *	6902 3 * 22%	2830	9214 1 *	8438 1 *	3567 9	6002 2 * 25%
814	23951	5903	6650 4 * 18%	3875 6 ...13% _37%	7580 6 *	7644 5 *	4253 1	5949 3 * 24%
815	23996	6080 7	6111 9 * 8%	2837	7886 4 *	7997 4 *	3532	5764 4 * 20%
816	24082	7900 3 *	6614 7 * 17%	4582 3 *#...33% _62%	6736	8328 3 *	2306	5317 7 * 10%
817	Local Check	4337	5641	2111	7012	6026	3606 8	4816
	Exp Mean	**6097**	**6251**	**3547**	**7306**	**6661**	**3464**	**5063**
	C.D. 5%	785	360	1066	361	566	882	396
	C.V.%	7.74	8.76	18.06	2.97	5.11	15.32	6.79
	Sowing Date	16-Jun		16-Jul	24-Jun	24-Jun	11-Jul	
	Planting Date	07-Nov		11-Aug	14-Jul	15-Jul	05-Aug	
	Local ©			ASG-2401	MTU 1010	JR 201	Sahabhagi	

Table No 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	V	Zone V Mean (3)	VI					Zone VI Mean (4)
		MH		MH	MH	MH (3)	GU	GU	GU (2)	
		SKL		KJT	VDG	Mean	NVS	NWG	Mean	
801	23339	5805 8	5109 2%	5099 4	4257 8	5053 4 1%	5564	5349	5456	5067
802	23949	5431	5101 2%	5395 3	4329 5	5052 5 1%	5992 5	5407	5700	5281 3 4% **3%**
803	23957	5690 9	5367 8 7%	4236	4131	4685	5969 6	4983	5476	4829
804	Shahbhagidhan (NC)	5632	5020	5008 5	4329 6	4990 6	5834 8	4869	5352	5010
805	23392	6121 7	5490 6 * 9%	4241	4203	4855	4656	5133	4894	4558
806	23356	6810 1 *	5268 5%	5862 1 *#	5123 1 *#	5932 1 *# 19% **17%**	6463 2 *#	5887 9	6175 4 *# 6% **6%**	5833 1 *# 15% **14%**
807	23976	6322 5 *	5671 5 * 13%	4913 7	4888 3 *#	5374 2 * 8% **6%**	5794 9	4346	5070	4985
808	23979	5474	5328 6%	4766	3968	4736	5758	6231 6	5994 6 3% **3%**	5181 7 2% **1%**
809	Zonal Check	2945	2688	4977 6	3662	3861	5943 7	5745	5844 8	5082 9
810	24075	5546	5980 3 * 19%	5659 2 #	3571	4925 7	5306	6580 2 *#	5943 7 2% **2%**	5279 4 4% **3%**
811	23947	5560	5433 7 * 8%	3924	5014 2 *#	4833	4535	5654	5094	4782
812	23354	6408 4 *	4938	4229	4004	4880 9	6433 3 #	6405 5 *	6419 3 *# 10% **10%**	5268 6 4% **3%**
813	PA 6129(HC)	6480 2 *	6161 1 * 23%	4661	4131	5090 3 2%	5520	6144 7	5832 9	5114 8 1%
814	23951	6451 3 *	6116 2 * 22%	3908	4311 7	4890 8	5408	6593 1 *#	6000 5 3% **3%**	5055
815	23996	6293 6 *	5941 4 * 18%	3847	4419 4	4853	6410 4 #	6436 4 *	6423 2 *# 10% **10%**	5278 5 4% **3%**
816	24082	5388	5341 9 6%	4773 9	4095	4752	6986 1 *#	6466 3 *	6726 1 *# 15% **15%**	5580 2 *# 10% **9%**
817	Local Check	4741	4791	4786 8	4239 9	4589	5246	5926 8	5586	5049
	Exp Mean	**5712**	**5279**	**4722**	**4275**	**4903**	**5754**	**5774**	**5764**	**5131**
	C.D. 5%	553	373	833	363	337	504	371	314	270
	C.V.%	5.82	7.55	10.60	5.11	7.36	5.27	3.86	4.73	6.52
	Sowing Date	15-Jun		15-Jun	25-Jun		07-Oct	19-Jun		
	Planting Date	12-Jul		07-Oct	21-Jul			16-Jul		
	Local ©	SKL-6		Karjat 7	Pawana		GR 7	MAHISAGAR		

Table No. 3.2 Contd. : Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	VII																											
		A.P.			TEL			TEL			TEL (2)			TN			TN			TN (2)			KE			KE			KE (2)		
		MTU			KNM			RDR			Mean			CBT			ADT			Mean			PTB			MNC			Mean		
801	23339	4352			5741			7478			6610			3101			2567			2834			4188			4063	5		4125		5%
802	23949	5148	3	...13%	5904			7774			6839			4284			2033			3159			8750	1 *#		3312			6031	2 #	15% **54%**
803	23957	3690			5485			8956	4		7221	9	4%	4716			2767			3741			4594	8		3864	8		4229		8%
804	Shahbhagidhan (NC)	3602			5063			7267			6165			3702			2667			3184			5031	6 #		3825	9		4428	6	**13%**
805	23392	4602	7	...1%	7215	1 *		6675			6945			3552			3433	4		3493			5594	3 #		3256			4425	7	**13%**
806	23356	5176	2	...14%	6760	5		7816	9		7288	8	5%	4989	7		4100	2		4545	2	3% **3%**	5125	5 #		3777			4451	5	**13%**
807	23976	4162			7036	3		7689			7363	7	6%	4043			2267			3155			3188			3968	6		3578		
808	23979	3630			6056			10139	1 *		8098	2 *	17%	4842	9		2767			3804			4250			3153			3701		
809	Zonal Check	4370			5592			8238	7		6915			5127	6		3033	7		4080	9		5250	4 #					5250	3 #	**34%**
810	24075	5074	5	...12%	5556			9506	3		7531	6	9%	5372	5		2933	9		4153	7		6094	2 #		6419	1 *#		6256	1 *#	19% **59%**
811	23947	3361			6831	4		5619			6225			5793	2		3167	6		4480	3	2% **1%**	4563	9		3873	7		4218		7%
812	23354	4412	9		6009			7731			6870			4985	8		4967	1 *#		4976	1	13% **12%**	3844			3078			3461		
813	PA 6129(HC)	5403	1 *	...19%	6611	7		9970	2 *		8291	1 *	20%	5622	3		3233	5		4427	4		2969			4889	3		3929		
814	23951	3245			6701	6		8450	6		7575	4	10%	4497			3667	3		4082	8		4844	7 #		3753			4298	8	**9%**
815	23996	4880	6	...7%	7045	2		8196	8		7621	3	10%	4100			2200			3150			4188			3704			3946		
816	24082	5116	4	...13%	6161	9		8914	5		7538	5	9%	5380	4		3033	8		4207	6		4375			4983	2		4679	4	**19%**
817	Local Check	4546	8		6306	8		6967			6636			6081	1		2733			4407	5		3969			4537	4		4253	9	**8%**
	Exp Mean	**4398**			**6240**			**8081**			**7161**			**4717**			**3033**			**3875**			**4754**			**4028**			**4402**		
	C.D. 5%	712			798			1406			916			1086			1246			813			1706			808			899		
	C.V.%	9.73			7.69			10.46			11.10			13.85			24.70			18.21			21.57			12.03			17.70		
	Sowing Date	30-Jun			23-Jun			17-Jul						29-Jun			20-Jun						29-Jun			08-Jul					
	Planting Date	30-Jul			21-Jul			07-Aug						24-Jul			16-Jul						28-Jul			01-Aug					
	Local ©	MTU 1010			MTU 1010			MTU-1010						CO 51			ADT 45						Kanchana			PRATHYASA (MO 21)					

Table No. 3.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	VII														Zone VII Mean (10)			Overall Mean (27)			Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA			KA			KA			KA (2)			PUD												
		MND			@RM			GNV			Mean			KBP												
801	23339	3506			1151			9163	#		6334			4533			4869			5133			87	107	316
802	23949	4926	8 *		1822	#		8813	#		6869	*	8% **3%**	5933	2 *#		5688	5	4%	5539	*	8%	87	101	334
803	23957	4671			2023	7 #		9094	#		6882	*	8% **3%**	5167	7		5300			5758	5 *	13%	91	99	340
804	Shahbhagidhan (NC)	4226			2426	4 #		8038	#		6132			4567			4799			5071			86	104	318
805	23392	4045			2438	3 #		9181	9 #		6613		4%	5033	8		5259			5391	*	5%	91	108	332
806	23356	4333			2895	1 *#		9975	4 *#		7154	7 *#	13% **7%**	5433	4 *		5749	3	5%	5944	4 *	16%	92	124	322
807	23976	4864	9 *		1826	9 #		9831	5 #		7348	5 *#	16% **10%**	4967			5201			5411	*	6%	87	100	331
808	23979	5033	7 *		1776	#		10556	3 *#		7795	3 *#	23% **17%**	5033	9		5546	7	2%	5750	6 *	12%	91	106	348
809	Zonal Check	3243			1505			9463	7 #		6353			4833			5461	9		4876			88	102	336
810	24075	5251	6 *		1793	#		9331	8 #		7291	6 *#	15% **9%**	5833	3 *#		6137	1 *#	12% **7%**	6371	1 *#	25% **7%**	89	100	326
811	23947	5374	4 *		1986	8 #		8675	#		7025	9 *	11% **5%**	4400			5166			5418	*	6%	89	111	336
812	23354	4486			2266	5 #		11281	1 *#		7883	2 *#	24% **18%**	5300	6 *		5609	6	3%	5630	8 *	10%	93	119	297
813	PA 6129(HC)	6502	1 *		1505			6831			6667		5%	5333	5 *		5736	4	5%	5975	3 *	17%	89	101	308
814	23951	5440	3 *		2192	6 #		9531	6 #		7486	4 *#	18% **12%**	4533			5466	8		5726	7 *	12%	89	102	312
815	23996	5358	5 *		1600			8794	#		7076	8 *#	11% **6%**	4800			5326			5613	9 *	10%	89	103	318
816	24082	5667	2 *		1727	#		11250	2 *#		8458	1 *#	33% **27%**	6233	1 *#		6111	2 *#	12% **7%**	6145	2 *#	20% **3%**	90	101	329
817	Local Check	3984			2582	2 #		5631			4807			4850			4960			5117			88	101	328
	Exp Mean	**4759**			**1971**			**9143**			**6951**			**5105**			**5434**			**5584**			**89**	**105**	**326**
	C.D. 5%	625			141			506			363			355			323			164			1		10
	C.V.%	7.90			4.31			3.33			4.54			4.18			11.71			9.54			2.86		10.75
	Sowing Date	18-Aug			22-Jun			15-Jul						14-Aug											
	Planting Date	22-Sep			20-Jul			08-Aug						10-Sep											
	Local ©	KMP - 105 (Raksha)			MAHAVIRA			IET-19251						ADT 43											

Table No. 3.3: Days to 50% flowering of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (8)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN	
801	23339	96	90	93	93	89	83	81	82	101	89		100	94	100	92
802	23949	93	87	92	91	95	83	77	80	110	82	99	95	92	96	92
803	23957	102	92	93	96	94	87	89	88	110	90	96	93	93	104	95
804	Shahbhagidhan (NC)	92	89	90	90	88	83	79	81	94	88	94	103	95	100	91
805	23392	98	92	98	96	98	85	88	86	103	91	101	74	89	102	93
806	23356	101	90	94	95	98	86	89	87	110	92	99	117	103	100	99
807	23976	93	87	92	91	93	81	78	79	94	84	93	93	90	100	89
808	23979	99	85	94	93	99	85	89	87	110	91	98	105	98	100	97
809	Zonal Check	86	80	86	84	88	71	77	74	96	75		86	81	85	83
810	24075	91	87	90	89	91	82	79	81	106	91	93	92	92	98	92
811	23947	99	93	96	96	94	84	82	83	106	90	96	96	94	100	94
812	23354	99	90	92	94	96	87	88	88	109	90	98	110	100	101	97
813	PA 6129(HC)	91	85	87	88	94	79	77	78	104	86	91	112	97	95	92
814	23951	94	85	89	90	80	83	82	83	109	93		97	95	97	92
815	23996	99	85	95	93	94	85	85	85	103	92	91	90	91	99	92
816	24082	92	90	90	90	101	82	82	82	110	82	91	93	89	100	93
817	Local Check	95	93	90	92	90	85	73	79	103	83	87	115	95	107	93
	Exp Mean	**95**	**88**	**92**	**92**	**93**	**83**	**82**	**82**	**105**	**88**	**95**	**98**	**94**	**99**	**93**
	C.D. 5%	4	1	0	1	3	1	1	1	1	1	3	20	7	0	3
	C.V.%	2.48	0.98	0.00	1.66	1.69	0.41	0.74	0.54	0.64	0.54	1.97	12.41	7.80	0.28	4.81

Table No. 3.3 Contd.: Days to 50% flowering of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	IV	V					Zone V Mean (4)	VI						Zone VI Mean (4)
		TR	M.P.	M.P.	M.P.	M.P. (3)	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		ARD	WRS	JBP	REW	Mean	SKL		KJT	VDG	Mean	NVS	NWG	Mean	
801	23339	86	82	85	84	84	86	84	86	99	90	80	83	82	87
802	23949	82	79	85	84	83	84	83	86	90	86	82	88	85	87
803	23957	89	80	91	94	88	88	88	85	90	88	83	90	87	87
804	Shahbhagidhan (NC)	89	81	83	84	83	85	83	84	91	87	80	86	83	86
805	23392	91	85	88	89	87	88	88	86	91	88	85	91	88	89
806	23356	83	86	90	95	90	90	90	89	93	91	86	90	88	90
807	23976	82	79	86	83	83	83	83	85	94	87	82	85	83	86
808	23979	87	82	87	93	87	87	87	84	98	90	80	91	86	88
809	Zonal Check	81	70	76	79	75	79	76	90	99	89	90	92	91	93
810	24075	84	81	88	91	87	90	88	87	93	90	80	85	83	86
811	23947	81	82	86	88	85	86	85	85	91	88	86	89	88	88
812	23354	87	87	88	93	89	90	90	92	93	92	87	91	89	91
813	PA 6129(HC)	88	84	86	89	86	86	86	84	92	87	83	86	85	86
814	23951	83	81	88	92	87	90	88	84	96	90	80	86	83	87
815	23996	86	80	86	86	84	87	85	88	90	88	86	88	87	88
816	24082	83	86	90	95	90	87	90	90	93	90	86	85	86	89
817	Local Check	105	79	78	86	81	87	83	88	96	90	76	84	80	86
	Exp Mean	**86**	**81**	**86**	**89**	**85**	**87**	**86**	**87**	**93**	**89**	**83**	**88**	**85**	**88**
	C.D. 5%	4	1	1	4		1	1	2	4	1	1	1	0	1
	C.V.%	2.84	0.99	0.87	3.04		0.65	1.67	1.09	2.28	1.56	0.59	0.46	0.10	1.37

Table No. 3.3 Contd.: Days to 50% flowering of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	VII														Zone VII Mean (11)	Overall Mean (31)
		A.P.	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD	
		MTU	KNM	RDR	Mean	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP	
801	23339	81	91	84	87	84	86	85	89	77	83	81	82	78	80	76	83	87
802	23949	80	89	83	86	87	87	87	89	78	83	88	83	80	84	77	84	87
803	23957	94	91	86	89	92	88	90	95	79	87	93	87	89	90	81	89	91
804	Shahbhagidhan (NC)	83	88	82	85	85	88	86	87	75	81	81	86	78	82	74	82	86
805	23392	96	94	87	90	93	88	90	98	79	88	90	84	89	88	85	89	91
806	23356	92	94	87	90	91	94	93	97	79	88	91	90	90	90	80	90	92
807	23976	81	88	83	85	91	86	89	91	75	83	91	87	82	87	82	85	87
808	23979	94	92	86	89	91	88	89	96	79	88	93	97	91	94	83	90	91
809	Zonal Check	95	104	95	100	98	95	96	102		102	96	91	97	95	88	96	88
810	24075	81	90	87	89	91	92	91	104	79	92	92	88	89	90	84	89	89
811	23947	87	91	88	89	89	90	90	95	79	87	87	88	79	85	82	87	89
812	23354	92	93	86	90	92	95	94	101	82	92	95	89	91	92	85	91	93
813	PA 6129(HC)	83	89	88	89	92	93	93	92	79	86	93	88	90	90	84	88	89
814	23951	81	89	88	89	92	93	93	92	86	89	96	87	91	91	84	89	89
815	23996	92	92	85	89	86	86	86	95	78	86	98	85	84	89	78	87	89
816	24082	87	92	87	90	95	95	95	92	77	84	86	96	90	91	85	89	90
817	Local Check	82	89	92	90	84	87	86	92	82	87	83	88	77	83	80	85	88
	Exp Mean	**87**	**92**	**87**	**89**	**90**	**90**	**90**	**95**	**79**	**87**	**90**	**88**	**86**	**88**	**82**	**88**	**89**
	C.D. 5%	2	2	1	1	1	2	1	4	1	2	4	0	3	2	2	1	1
	C.V.%	1.43	1.18	0.69	0.78	0.80	1.13	0.77	2.36	0.71	1.83	2.66	0.00	1.78	1.84	1.74	1.56	2.86

Table No. 3.4: Plant Height (cm) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (8)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN	
801	23339	109	121	115	115	81	112	103	108	77	122		100	111	127	103
802	23949	102	102	147	117	76	110	95	103	79	105	99	95	100	115	97
803	23957	106	109	112	109	82	118	97	108	79	108	96	93	99	112	98
804	Shahbhagidhan (NC)	107	111	118	112	87	111	104	108	84	122	94	103	106	124	104
805	23392	118	119	115	117	87	116	110	113	88	120	100	74	98	127	103
806	23356	120	139	133	131	94	116	125	121	98	138	100	117	118	148	117
807	23976	106	104	113	108	80	111	96	104	79	108	93	93	98	113	97
808	23979	105	109	114	109	80	112	107	110	81	125	98	105	109	123	104
809	Zonal Check	80	92	88	87		100	84	92	64	93		86	90	98	88
810	24075	103	110	116	110	81	111	102	107	75	110	94	92	99	114	97
811	23947	105	123	125	118	80	114	112	113	87	126	96	96	106	126	105
812	23354	121	135	132	129	101	113	116	115	97	135	98	110	114	147	115
813	PA 6129(HC)	95	107	105	102	75	109	102	106	76	111	92	112	105	114	99
814	23951	106	113	99	106	70	112	99	106	70	105		97	101	118	96
815	23996	109	115	113	112	77	112	100	106	84	106	90	90	95	123	98
816	24082	103	115	100	106	76	111	98	105	80	110	91	93	98	112	96
817	Local Check	110	99	109	106	91	113	86	100	74	115	112	115	114	103	101
	Exp Mean	**106**	**113**	**115**	**111**	**82**	**112**	**102**	**107**	**81**	**115**	**97**	**98**	**104**	**120**	**101**
	C.D. 5%				0				0					0		4

Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	IV	V					Zone V Mean (4)	VI						Zone VI Mean (4)	VII		
		TR	M.P.	M.P.	M.P.	M.P. (3)	MH		MH	MH	MH (3)	GU	GU	GU (2)		A.P.	TEL	TEL
		ARD	WRS	JBP	REW	Mean	SKL		KJT	VDG	Mean	NVS	NWG	Mean		MTU	KNM	RDR
801	23339	89	107	100	90	99	106	101	113	92	104	136	117	127	115	127	107	110
802	23949	96	107	100	82	96	107	99	110	99	105	120	115	117	111	121	100	102
803	23957	96	103	95	68	88	98	91	103	95	99	111	117	114	106	122	102	100
804	Shahbhagidhan (NC)	85	109	105	85	100	107	102	116	98	107	115	114	114	110	133	110	96
805	23392	114	112	104	86	101	119	105	108	106	111	107	138	122	114	131	117	107
806	23356	131	126	134	91	117	132	121	140	124	132	113	153	133	133	158	131	123
807	23976	86	97	93	85	92	109	96	101	100	104	107	116	111	106	121	101	110
808	23979	112	109	103	78	97	112	100	113	101	109	108	115	112	109	135	103	108
809	Zonal Check	99	87	78	68	78	87	80	127	116	110	110	147	129	125	147	108	109
810	24075	76	109	93	81	94	105	97	103	89	99	99	122	110	103	117	98	109
811	23947	106	124	115	90	109	118	112	126	95	113	132	139	136	123	130	116	108
812	23354	99	121	116	95	111	119	113	128	126	124	120	138	129	128	148	125	114
813	PA 6129(HC)	80	113	90	80	94	106	97	113	89	103	125	110	118	109	114	101	109
814	23951	99	106	105	81	97	103	99	108	98	103	123	114	119	111	114	100	107
815	23996	88	110	103	91	101	108	103	106	90	101	115	116	115	107	135	104	109
816	24082	79	109	94	72	92	107	96	115	101	108	113	111	112	110	118	103	105
817	Local Check	105	106	102	90	99	97	99	94	94	95	118	111	115	104	123	102	99
	Exp Mean	**96**	**109**	**102**	**83**	**98**	**108**	**101**	**113**	**101**	**107**	**116**	**123**	**120**	**113**	**129**	**107**	**107**
	C.D. 5%							0						0				

Table No. 3.4 Contd.: Plant Height (cm) of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	VII												Zone VII Mean (11)	Overall Mean (31)
		TEL (2)	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		Mean	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
801	23339	109	106	92	99	117	92	104	82	105	120	102	128	108	107
802	23949	101	88	85	87	98	86	92	78	96	111	95	107	97	101
803	23957	101	92	88	90	106	93	100	77	94	100	90	115	99	99
804	Shahbhagidhan (NC)	103	97	84	91	112	93	103	80	96	107	95	128	103	104
805	23392	112	94	94	94	115	99	107	91	95	113	99	125	107	108
806	23356	127	117	121	119	127	104	116	98	106	133	112	140	123	124
807	23976	106	91	82	86	101	92	96	85	95	104	95	114	100	100
808	23979	106	102	95	98	119	99	109	80	95	114	96	125	107	106
809	Zonal Check	109	107	100	103	133		133	83	93	134	103	132	115	102
810	24075	104	92	88	90	116	94	105	76	96	104	92	123	101	100
811	23947	112	97	87	92	119	97	108	94	103	121	106	128	109	111
812	23354	120	118	106	112	128	100	114	98	103	145	115	145	121	119
813	PA 6129(HC)	105	105	87	96	108	91	99	89	97	105	97	123	103	101
814	23951	103	92	89	91	108	94	101	85	97	120	101	124	103	102
815	23996	106	98	83	90	117	94	106	77	98	124	99	117	105	103
816	24082	104	97	90	94	109	100	105	79	97	113	96	119	103	101
817	Local Check	101	97	76	87	107	98	102	72	95	96	88	114	98	101
	Exp Mean	**107**	**99**	**91**	**95**	**114**	**95**	**105**	**84**	**98**	**115**	**99**	**124**	**106**	**105**
	C.D. 5%	0						4							

Table No. 3.5: Panicles/M^2 of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (8)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN	
801	23339	268	343	295	302	393	258	215	236	155	374		191	283	363	278
802	23949	356	297	278	310	400	220	217	218	222	385	234	276	298	389	293
803	23957	393	348	326	355	607	231	233	232	200	396	250	285	311	354	320
804	Shahbhagidhan (NC)	339	321	287	315	383	239	254	246	145	286	195	216	232	360	260
805	23392	333	313	343	330	477	224	249	237	137	253	234	273	253	351	275
806	23356	321	301	352	325	467	242	189	216	170	385	218	183	262	349	275
807	23976	343	347	355	349	553	265	243	254	171	242	233	327	267	320	294
808	23979	364	312	307	328	450	250	232	241	180	396	252	320	323	420	313
809	Zonal Check	300	363	279	314	286	324	187	255	163	275		408	342	485	304
810	24075	279	286	314	293	430	263	214	239	131	286	91	322	233	401	267
811	23947	390	400	374	388	490	273	195	234	152	286	238	298	274	399	291
812	23354	255	290	289	278	357	220	188	204	164	264	215	237	239	344	249
813	PA 6129(HC)	243	297	294	278	417	260	226	243	156	242	115	267	208	371	257
814	23951	278	277	294	283	400	228	227	228	147	242		329	286	356	276
815	23996	287	337	325	316	373	226	240	233	135	286	94	317	232	375	256
816	24082	359	308	324	330	450	234	213	224	176	297	226	251	258	434	285
817	Local Check	337	310	286	311	317	276	216	246	153	319	271	236	275	434	278
	Exp Mean	**320**	**321**	**313**	**318**	**426**	**249**	**220**	**234**	**162**	**307**	**205**	**279**	**267**	**383**	**280**
	C.D. 5%	46	90	45	36	62	30	50	26	79	38	16	26	15	41	17
	C.V.%	8.71	16.92	8.61	12.04	8.80	7.26	13.70	9.75	29.11	7.40	4.73	5.56	6.06	6.52	10.45

Table No. 3.5 Contd.: Panicles/M^2 of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	IV	V					Zone V Mean (4)	VI						Zone VI Mean (4)
		TR	M.P.	M.P.	M.P.	M.P. (3)	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		ARD	WRS	JBP	REW	Mean	SKL		KJT	VDG	Mean	NVS	NWG	Mean	
801	23339	284	273	254	167	232	231	231	247	488	322	232	268	250	309
802	23949	267	298	247	233	260	216	249	376	475	356	281	303	292	359
803	23957	379	260	286	225	257	230	250	276	330	279	263	303	283	293
804	Shahbhagidhan (NC)	272	338	328	209	291	189	266	371	428	329	242	302	272	336
805	23392	374	335	284	211	277	192	256	324	451	323	233	263	248	318
806	23356	365	215	174	244	211	214	212	402	447	354	247	268	257	341
807	23976	284	255	270	214	246	212	238	367	433	337	258	246	252	326
808	23979	383	298	235	219	251	245	249	354	401	333	273	302	288	332
809	Zonal Check	396	383	353	216	317	196	287	401	319	305	285	275	280	320
810	24075	296	314	235	223	257	224	249	371	355	317	251	281	266	315
811	23947	325	284	235	187	235	249	239	297	476	341	263	301	282	334
812	23354	293	212	168	219	200	193	198	312	294	266	233	229	231	267
813	PA 6129(HC)	274	266	305	261	278	197	257	176	365	246	245	243	244	257
814	23951	297	255	256	210	240	216	234	255	428	300	263	251	257	299
815	23996	300	325	235	194	251	218	243	295	429	314	260	244	252	307
816	24082	314	288	263	189	247	201	235	265	328	265	258	276	267	282
817	Local Check	219	263	238	234	245	262	249	244	435	314	221	226	223	282
	Exp Mean	**313**	**286**	**257**	**215**	**253**	**217**	**244**	**314**	**405**	**312**	**253**	**270**	**261**	**310**
	C.D. 5%	49	14	13	53	18	32	16	28	30	14	47	18	17	16
	C.V.%	9.37	2.96	3.07	14.93	7.59	8.95	8.13	5.35	4.41	4.68	11.07	3.98	5.53	6.35

Table No. 3.5 Contd.: Panicles/M^2 of entries in AVT 2 E TP Kharif 2015

Entry No.	IET No.	VII															Zone VII Mean (11)	Overall Mean (31)
		A.P.	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		MTU	KNM	RDR	Mean	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
801	23339	290	277	316	296	407	157	282	520	363	442	477	320	528	442	527	380	316
802	23949	310	293	289	291	581	170	376	477	339	408	465	315	572	450	587	400	334
803	23957	288	280	252	266	593	163	378	573	363	468	421	310	497	410	623	397	340
804	Shahbhagidhan (NC)	317	297	259	278	578	131	355	440	363	402	447	335	450	411	532	377	318
805	23392	292	327	252	289	510	176	343	447	339	393	453	390	605	483	663	405	332
806	23356	293	270	282	276	594	131	363	447	363	405	391	345	501	412	613	384	322
807	23976	266	310	305	308	540	162	351	433	363	398	403	335	545	428	673	394	331
808	23979	301	314	255	284	618	145	381	577	339	458	465	365	513	448	707	418	348
809	Zonal Check	302	293	236	265	570	180	375	490		490	416	340	332	363	703	386	336
810	24075	321	287	268	278	645	176	411	390	416	403	409	340	546	432	727	411	326
811	23947	361	313	247	280	679	165	422	417	363	390	385	355	464	401	557	391	336
812	23354	257	270	259	265	635	167	401	363	315	339	341	320	653	438	667	386	297
813	PA 6129(HC)	268	273	235	254	653	185	419	387	387	387	450	305	493	416	680	392	308
814	23951	262	300	269	284	527	175	351	350	339	345	465	310	532	436	630	378	312
815	23996	260	303	233	268	546	167	357	427	339	383	446	355	608	470	693	398	318
816	24082	290	273	242	258	700	150	425	450	401	426	422	360	501	428	763	414	329
817	Local Check	284	397	331	364	650	152	401	500	387	444	391	370	546	435	677	426	328
	Exp Mean	**292**	**299**	**266**	**283**	**590**	**162**	**376**	**452**	**361**	**408**	**426**	**339**	**523**	**429**	**648**	**396**	**326**
	C.D. 5%	51	45	26	24	137	17	65	151	61	76	48	19	94	34	53	22	10
	C.V.%	10.49	8.97	5.93	7.33	13.93	6.33	15.05	20.14	10.14	16.25	6.77	3.33	10.77	8.50	4.91	11.56	10.75

Table 3.6: Grain quality characteristics of entries in AVT-2-E TP Kharif 2015

		IIRR											NRRI		
ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC	ASV	AC	GC
801	23339	79.2	70.8	59.7	6.06	2.27	2.66	LB	VOC	6	22.14	48	6.0	18.67	53
802	23949	82	72.5	61.1	6.35	2.05	3.09	LS	VOC	4	21.38	67	3.7	18.07	55
803	23957	79.7	72.8	61.6	6.31	2.01	3.13	LS	VOC	3	21.38	57	3.0	17.92	64
804	SAHBAGIDHAN	78	66	61.6	5.45	2.1	2.59	MS	VOC	7	23.87	48	6.0	21.00	31
805	23392	79.5	70.5	60.3	6.75	2.04	3.3	LS	VOC	4	22.14	59	4.3	16.50	69
806	23356	80.8	69.2	60.2	6.14	2.24	2.74	LB	OC	4	21.82	56	3.0	16.05	71
807	23976	80.4	71.8	64.3	6.25	2.01	3.1	LS	VOC	4	21.97	58	3.0	19.27	39
808	23979	79.5	69.6	60.5	6.65	1.88	3.53	LS	VOC	4	23.58	51	3.0	19.35	40
809	TULASI(ZC)	79	69.7	61.1	5.16	1.99	2.59	MS	OC	7	25.96	24	3.0	21.15	31
810	24075	75.9	64.6	58.6	6.3	2.25	2.8	LB	OC	7	25.66	42	7.0	18.67	44
811	23947	79.5	69.4	63.4	6.12	1.95	3.13	LS	VOC	7	22.14	55	6.0	19.42	34
812	23354	79.5	69.6	60.5	6.12	2.27	2.69	LB	VOC	4	19.65	55	3.0	18.30	47
813	PA6129(HC)	78.7	70.2	58.3	6.39	2.28	2.8	LB	VOC	7	21.38	47	7.0	20.02	32
814	23951	79.4	69.4	62	6.27	2.19	2.86	LB	OC	4	25.54	42	3.0	21.60	35
815	23996	79.3	71.1	62.9	5.64	2.45	2.3	SB	VOC	4	22.79	66	3.0	18.67	42
816	24082	77.6	69.4	65.2	6.1	2.27	2.68	LB	VOC	7	20.24	43	6.0	19.50	47

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 3.7: Composition of entries in Advance Variety Trial 1– Early (AVT 1- E TP), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
2nd year of testing				
901	24058	CB 08 702	Selection from IR 80013-B-141-4-1	SB
902	24055	BRR 0005(IR 83381- B-B-18-3)	IR 72022-46-2-3-3-2/IR 77080-B-34-1-1	MS
903	24716	GNV-10-89	Selection from GGV-05-01/NES-07-03	MS
904	24744	NVSR-V-2057	Lalkada /GR-103	SS
905	24748	CB 12599	CB 04 110/JGL 1798	LB
906	23748	KNM 118	MTU 1010/JGL 13595	LS
907	24704	HHZ17-DT-6-Sal 3-DT1	Huang-Hua-Zhan*2/ CDR-22	LS
908	24746	RCPR-14-IR 83373-B-B-24-4	IR 71700-247-1-1-2/ IR 72875-94-3-3-2	LB
909	**Gontra Bidhan 3 (NC)**			
910	24040	RP 5125-8-10-2-B (IR 83387-B-B-40)	IR 78877-208-B-1/IR 78878-53-2-2-22	SB
911	24797	***SAVA -134 (Hybrid)***	-	LS
912	24724	RCPR-12-IR 83381-B-B-55-4	IR 72022-46-2-3-3-2/ IR 77080-B-34-1-1	MS
913	24742	CB 12593	CB 04 110/ADT 43	MS
914	24729	RP 5907-54-6-4-3-2-2	IR 81454-B-B-172/IR06L164	LS
915	**Anjali (NC)**			

Entry No.	IET No.	Designation	Cross combination	Grain type
916	24721	Huang-Hua-Zhan	Huang-Xin-Zhan/Feng-Hua-Zhan	LB
917	24741	IR 84898-B-CRA-185-CR 3849-1	IR 78877-208-B-1-1/IR 78878-53-2-2-2	LS
918	24708	TM 09086	CB 04110/BPT 5204	SB
919	**PR 124 (Northern), Luit (North Eastern), Sahbhagidhan (Central & Western), NDR 97 (Eastern), DRR Dhan 43 (Southern)-- ZC**			
920	24743	RCPR-15-IR84899-B-183-CRA-19-1	IR 78877-208-B-1-1/IRRI 132	SB
921	**US 314 (HC)**			
922	24053	CRR 647-56-1	IR 78877-208-B-1-2/IR 74371-54-1-1	SB
923	24718	RP 5906-67-19-8-3-3-2	IR 50 / IR77080-B-34-3	LS
924	24750	NVSR-V-2051	GR-12/IET-20528	LB
925	24747	***ADV 1411***	-	LS
926	24727	RP 5904-21-9-5-2-2-1	IR 64*2/ O.rufipogon (Acc. 106412)	LS
927	**Local Check**			
928	24705	RCPR-11-IR 83387-B-B-27-4	IR 72022-46-2-3-3-2/ Sambha Mahsuri	MS
929	24737	HKR 10-2	Govind/HKR 99-53	LS
930	24796	***SVZ-1109 (Hybrid)***	-	LB
931	24798	***HRI-184 (Hybrid)***	-	LB

Table No. 3.8: Grain Yield (kg/ha) of entries in AVT 1-E TP Zone-2 Kharif 2015

Entry No.	IET No.	II						Zone II Mean (3)		Overall Mean(3)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		UT		PUN		HAR								
		PNT		LDN		KUL								
901	24058	4818		6114	9	5556		5496		5496		95	119	272
902	24055	5004		5823		5849	*	5559		5559		92	129	271
904	24744	2446		3907		2804		3052		3052		79	93	319
905	24748	2301		3679		3686		3222		3222		78	93	280
906	23748	4697		5234		7078	3 *#	5669	9 1%	5669	9 1%	92	104	314
907	24704	5894	2 # ...7% _12%	7404	1 # ...3% _22%	6090	9 *	6463	3 *# 15% **12%**	6463	3 *# 15% **12%**	88	90	268
908	24746	5324	_1%	5384		5502		5403		5403		94	117	302
909	Gontra Bidhan 3 (NC)	5530	7 _5%	3983		4754		4756		4756		90	107	242
910	24040	5721	3 # ...3% _8%	6809	6 _12%	5823	*	6117	5 *# 9% **6%**	6117	5 *# 9% **6%**	95	133	265
911	24797	6016	1 *# ...9% _14%	6473	8 _6%	7559	1 *#	6683	1 *# 19% **16%**	6683	1 *# 19% **16%**	92	98	280
912	24724	3555		4551		4647		4251		4251		93	114	298
913	24742	5459	8 _3%	4727		4861		5016		5016		82	101	271
915	Anjali (NC)	2804		4154		5369		4109		4109		75	114	266
916	24721	5660	5 # ...2% _7%	7331	2 # ...2% _20%	6437	6 *#	6476	2 *# 15% **13%**	6476	2 *# 15% **13%**	88	95	304
918	24708	5698	4 # ...3% _8%	5498		6490	5 *#	5895	7 5% **2%**	5895	7 5% **2%**	94	109	302
919	Zonal Check	5291		7188	3 # _18%	4434		5637		5637		101	95	315
920	24743	3329		3900		5021		4084		4084		95	126	301
921	US 314 (HC)	5275		6090		5903	*	5756	8 2%	5756	8 2%	95	114	295
922	24053	4268		6103		6010	*	5460		5460		95	116	263
923	24718	5580	6 ...1% _6%	5000		6357	7 *#	5645		5645		97	116	315
925	24747	5096		4469		5208		4924		4924		85	104	272
927	Local Check	4845		6912	4 # _14%	5048		5602		5602		92	111	267
928	24705	4230		6558	7 _8%	6998	4 *#	5929	6 5% **3%**	5929	6 5% **3%**	102	106	335
930	24796	5445	9 _3%	6894	5 # _13%	6303	8 *#	6214	4 *# 10% **8%**	6214	4 *# 10% **8%**	88	109	271
931	24798	3161		5765		7212	2 *#	5379		5379		98	116	309
	Exp Mean	**4698**		**5598**		**5640**		**5312**		**5312**		**91**	**109**	**288**
	C.D. 5%	367		768		372		302		301		1	5	27
	C.V.%	4.76		8.36		4.02		6.11		6.09		1.51	0.00	10.07
	Sowing Date	16-Jun		18-Jun		16-Jun								
	Planting Date	25-Jul		13-Jul		24-Jul								
	Local ©	Govind		PR 115		HKR 48								

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.8: Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-3,4 & 5 Kharif 2015

Entry No.	IET No.	III											
		OD		BI		BI		BI (1)		JH		W.B	
		JYP		PTN-ICAR		@SBR		Mean		@RCI		CHN	
901	24058	10556	3 *# …7% _10%	7027		2964		7027	10%	644	8	5064	7
902	24055	10722	2 *# …9% _11%	7422	7 *	3144	9	7422	7 * 16%	800	5	4497	
904	24744	4382		2862		1465		2862		422		3628	
905	24748	7181		5013		1352		5013		467		3326	
906	23748	9431		5942		3327	7	5942		889	2	4762	
907	24704	8778		8151	5 *	3388	6	8151	5 * 28%	467		6765	2 #
908	24746	10014	7 …2% _4%	7129	9	3098		7129	9 12%	333		4875	
909	Gontra Bidhan 3 (NC)	9861	8 _2%	5467		3782	3	5467		622		6311	3 #
910	24040	10444	5 # …6% _8%	7849	6 *	2930		7849	6 * 23%	844	3	5593	6
912	24724	8542		5796		2747		5796		400		5026	8
913	24742	9410		6884		2961		6884	8%	467		4119	
915	Anjali (NC)	8646		2707		2186		2707		267		4271	
916	24721	9167		8387	3 *	3877	2	8387	3 * 32% **3%**	511		3515	
918	24708	10139	6 …3% _5%	6702		2253		6702	5%	422		4649	
919	Zonal Check	3243		6373		2289		6373		444		4195	
920	24743	10472	4 *# …6% _9%	5382		2595		5382		578		4195	
921	US 314 (HC)	9632	9	8164	4 *	3602	4	8164	4 * 28%	644	9	5026	9
922	24053	7896		7271	8	3053		7271	8 14%	600		3666	
923	24718	8375		6884		3266	8	6884	8%	1067	1	6122	5 #
925	24747	5146		4209		2289		4209		844	4	4460	
927	Local Check	7708		4533		2198		4533		467		4308	
928	24705	8285		8409	2 *	3571	5	8409	2 * 32% **3%**	756	6	6311	4 #
931	24798	10889	1 *#…10% _13%	9724	1 *#	4487	1 *#	9724	1 *# 53% **19%**	689	7	7710	1 *#
	Exp Mean	**8649**		**6447**		**2905**		**6447**		**593**		**4887**	
	C.D. 5%	594		959		450		1007		475		650	
	C.V.%	4.18		9.04		9.41		9.50		48.63		8.08	
	Sowing Date	02-Jul		21-Jun		17-Jul				02-Jul		30-Jun	
	Planting Date	01-Aug		17-Jul		07-Aug				14-Aug		29-Jul	
	Local ©	Mandakini		Rajendra Bhagwati		Prabhat				BVD-110		Provat	

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-3,4 & 5 Kharif 2015

Entry No.	IET No.	III								Zone III (5) Mean		IV	
		W.B		W.B		W.B (2)		U.P.				TR	
		@PNB		KOL		Mean		VRN				ARD	
901	24058	3558	6	6097		5580	9	6293	9	7007	5 2%	3784	
902	24055	3007	8	6300		5399		5570		6902	6 1%	3030	
904	24744	2231		6187		4907		4893		4390		2735	
905	24748	2118		6707	4 #	5016		6357	7	5717		2823	
906	23748	2598		6140		5451		5770		6409		4466	9
907	24704	2842		6200		6482	3 *# 15% **15%**	6867	5	7352	3 * 7%	4055	
908	24746	2438		6500	6	5688	6 1% **1%**	3320		6368		4246	
909	Gontra Bidhan 3 (NC)	5191	1 #	4937		5624	8	7640	2	6843	9	5544	4 _2%
910	24040	3529	7	5433		5513		4050		6674		5932	3 …7% _10%
912	24724	2064		5977		5502		3337		5735		3509	
913	24742	2371		6287		5203		6147		6569		4213	
915	Anjali (NC)	2069		6327	8	5299		3283		5047		2503	
916	24721	3709	4	6200		4857		7220	3	6898	7 1%	5979	2 …8% _10%
918	24708	2498		4960		4804		6327	8	6555		4315	
919	Zonal Check	2953	9	6323	9	5259		5780		5183		3794	
920	24743	2891		7300	1 *#	5748	5 2% **2%**	4003		6271		3541	
921	US 314 (HC)	4891	2	6280		5653	7 1%	8053	1	7431	2 * 9%	5414	5
922	24053	2869		6413	7	5040		6253		6300		5245	7
923	24718	2224		6910	2 #	6516	2 *# 16% **15%**	6047		6868	8	5050	8
925	24747	2213		6080		5270		6633	6	5306		3424	
927	Local Check	2787		6730	3 #	5519		6270		5910		3642	
928	24705	4107	3	6560	5	6436	4 *# 14% **14%**	6913	4	7296	4 * 7%	5329	6
931	24798	3676	5	5790		6750	1 *# 20% **19%**	5590		7941	1 *# 16% **7%**	6207	1 …12% _15%
	Exp Mean	**2993**		**6202**		**5544**		**5766**		**6390**		**4295**	
	C.D. 5%	195		378		374		528		293		941	
	C.V.%	3.96		3.71		5.89		5.56		6.37		13.31	
	Sowing Date	26-Jun		20-Jul				16-Jun				01-Aug	
	Planting Date	20-Jul		20-Jul				11-Jul				14-Aug	
	Local ©	MTU 1010										Satabdi	

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.8 Contd. Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-3,4 & 5 Kharif 2015

Entry No.	IET No.	V								Zone V (2) Mean		Overall (8) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		M.P. @WRS		M.P. JBP		M.P. (1) Mean		MH SKL								
901	24058	6596	8	6613	4	6613	4	5333		5973	6	6346	8	91	117	285
902	24055	5898		5887		5887		5194		5541	8	6078		89	119	273
904	24744	8290	2 *#	3646		3646		3306		3476		3955		79	86	356
905	24748	4052		2236		2236		2639		2437		4535		80	91	265
906	23748	5697		5980	9	5980	9	4500		5240		5874		87	99	303
907	24704	5824		6343	6	6343	6	4472		5408		6454	5	90	92	277
908	24746	10777	1 *#	3697		3697		5500	9	4598		5660		90	111	304
909	Gontra Bidhan 3 (NC)	7440	6	6832	3	6832	3	6639	1 #	6736	2 # **10%**	6654	4	88	107	285
910	24040	6385		4396		4396		5750	5	5073		6181		92	122	278
912	24724	4199		3550		3550		5111		4330		5106		89	106	318
913	24742	5038		4338		4338		4306		4322		5713		84	91	319
915	Anjali (NC)	4492		3689		3689		3972		3830		4425		78	109	243
916	24721	5438		5313		5313		5556	7	5434	9	6417	7	90	94	269
918	24708	4561		6189	7	6189	7	5167		5678	7	6056		91	102	293
919	Zonal Check	4867		3598		3598		5528	8	4563		4854		83	88	304
920	24743	5294		6012	8	6012	8	4778		5395		5711		90	121	318
921	US 314 (HC)	7956	4 *	6843	2	6843	2	5417		6130	4	6854	2 3%	88	101	258
922	24053	7487	5	9193	1 *#	9193	1 *# 35% **34%**	5639	6	7416	1 *# 10% **21%**	6447	6	89	108	261
923	24718	8107	3 *	4861		4861		5833	4	5347		6260	9	92	108	319
925	24747	5227		4044		4044		4861		4452		4857		85	98	270
927	Local Check	6413	9	4877		4877		4472		4675		5318		88	95	290
928	24705	7284	7	5799		5799		6306	3 #	6052	5	6739	3 1%	93	99	316
931	24798	4839		6544	5	6544	5	6639	2 #	6591	3 # **8%**	7387	1 *# 11% **8%**	94	104	329
	Exp Mean	**6181**		**5238**		**5238**		**5083**		**5161**		**5821**		**88**	**103**	**293**
	C.D. 5%	239		593		597		495		386		242		1	9	11
	C.V.%	2.35		6.88		6.93		5.92		6.52		7.31		2.06	0.00	8.17
	Sowing Date	24-Jun		24-Jun				16-Jun								
	Planting Date	20-Jul		14-Jul				12-Jul								
	Local ©	MTU 1010		IR 64				SKL-6								

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No.3.8 : Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-6 Kharif 2015

Entry No.	IET No.	VI												Zone VI Mean (4)		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)
		MH KJT		MH VDG		MH (2) Mean		GU NVS		GU DBI		GU (2) Mean							
901	24058	4849		3734		4291		5945	7 *	4575	5 #	5260	6 * 8%	4776	7	4776	7	89	119
902	24055	4571		3914		4243		5262		4351	6 #	4807	9	4525		4525		88	117
903	24716	4925		3716		4320		4832		3538		4185		4253		4253		87	103
904	24744	4040		3463		3751		4204		3416		3810		3781		3781		77	94
905	24748	2181		3806		2993		4470		3671		4071		3532		3532		75	88
906	23748	4856		3283		4069		6509	3 *	4336	7 #	5422	4 * 12% **1%**	4746	8	4746	8	87	110
907	24704	6094	4	3698		4896	5 **5%**	6585	2 *	5050	2 *#	5817	1 *# 20% **8%**	5357	3 # **7%**	5357	3 # **7%**	88	100
908	24746	3296		3409		3352		4750		4085	#	4418		3885		3885		89	113
909	Gontra Bidhan 3 (NC)	7143	1 #	4744	3 #	5944	2 # **28%**	5248		4261	9 #	4755		5349	4 # **7%**	5349	4 # **7%**	89	107
910	24040	5508	6	3535		4521		5166		2702		3934		4228		4228		90	126
912	24724	4853		3698		4275		4132		3900		4016		4145		4145		89	114
913	24742	3364		4600	6 #	3982		5528	8	3013		4271		4126		4126		82	97
915	Anjali (NC)	2980		3571		3276		3488		3355		3422		3349		3349		73	114
916	24721	6238	3	4491	7 #	5365	3 # **15%**	6209	5 *	4673	3 #	5441	3 * 12% **1%**	5403	2 # 1% **8%**	5403	2 # 1% **8%**	89	99
918	24708	4424		4383	8 #	4403		5290		3453		4372		4388		4388		89	108
919	Zonal Check	3680		4058	9	3869		4873		3170		4021		3945		3945		87	110
920	24743	4516		3698		4107		5049		2026		3538		3822		3822		87	122
921	US 314 (HC)	5473	7	3842		4658	8	7117	1 *	3630		5374	5 * 11%	5016	6	5016	6	89	112
922	24053	5278	9	3950		4614		5324	9	3562		4443		4528		4528		88	114
923	24718	5765	5	4726	4 #	5245	4 # **13%**	4576		3246		3911		4578		4578		92	107
924	24750	3491		3752		3621		4150		4277	8 #	4213		3917		3917		76	91
925	24747	5309	8	4040		4675	7	5229		3747		4488		4581		4581		82	102
927	Local Check	4626		4618	5 #	4622	9	5093		4619	4 #	4856	8	4739	9	4739	9	93	106
928	24705	4914		4816	2 #	4865	6 **4%**	6407	4 *	3987	#	5197	7 7%	5031	5	5031	5	91	103
931	24798	7099	2 #	4834	1 #	5966	1 # **28%**	6050	6 *	5449	1 *#	5749	2 *# 18% **7%**	5858	1 *# 10% **17%**	5858	1 *# 10% **17%**	90	109
	Exp Mean	**4779**		**4015**		**4397**		**5259**		**3844**		**4552**		**4474**		**4474**		**86**	**107**
	C.D. 5%	777		410		438		657		326		356		278		267		0	8
	C.V.%	9.91		6.22		8.70		7.61		5.17		6.84		7.72		7.40		0.46	0.00
	Sowing Date	16-Jun		25-Jun				16-Jun		16-Jun									
	Planting Date	10-Jul		20-Jul				10-Jul		24-Jul									
	Local ©	Karjat 7		Pawana				GR7		GAR-13									

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.8 : Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII																			
		A.P.			TEL		TEL		TEL (2)			TN		TN		TN (2)					
		MTU			KNM		RDR		Mean			CBT		ADT		Mean					
901	24058	5522	3 *#...39% _54%		6317		7309	6	6813	8	**8%**	6484	8	4711	2 *#	5598	2	2%	**14%**		
902	24055	4630	7 *#...16% _29%		5972		7605	4	6788	9	**8%**	5169		2933		4051					
904	24744	4113	...3% _15%		3065		4858		3962			3512		3156		3334					
905	24748	3424			3234		4689		3962			4498		2400		3449					
906	23748	4276	# ...7% _19%		7656	2 #	7140		7398	2 #	**18%**	7579	2	3089		5334	4		**8%**		
907	24704	4375	#...10% _22%		5932		6337		6135			6051		3267		4659					
908	24746	4628	8 *#...16% _29%		7767	1 #	6041		6904	7	**10%**	5421		4133	3	4777					
909	Gontra Bidhan 3 (NC)	2765			7272	4 #	8154	1 #	7713	1 #	**23%**	7597	1	3422		5509	3		**12%**		
910	24040	5652	2 *#...42% _58%		7115	5 #	7562	5	7338	3 #	**17%**	7140	3	4978	1 *#	6059	1 #	10%	**23%**		
912	24724	3833	_7%		7558	3 #	6506		7032	4	**12%**	5565		3244		4405					
913	24742	3900	_9%		4649		5302		4975			5030		3067		4048					
914	24729	4059	...2% _13%		6714	7 #	7098		6906	6	**10%**	6210		2756		4483					
915	Anjali (NC)	3414			3118		7731	2	5425			1264		2711		1988					
916	24721	5175	4 *#...30% _45%		5910		7626	3	6768		8%	6124		3444	9	4784					
917	24741											4729		2889		3809					
918	24708	3846	_7%		6566	8	7267	7	6916	5	**10%**	6571	6	3244		4908		8			
919	Zonal Check	4402	#...10% _23%		5578		5872		5725			6578	5	4000	4	5289	5		**7%**		
920	24743	4284	# ...7% _20%		4581		5788		5184			5488		3111		4300					
921	US 314 (HC)	3580			5846		6717		6282			6869	4	2978		4924		7			
922	24053	4631	6 *#...16% _29%		5977		6168		6073			6437		3778	5	5107	6		**4%**		
923	24718	3962	_11%		6176		7224	9	6700		7%	5222		3511	8	4366					
925	24747	3445			3486		6253		4869			6151		3600	7	4876		9			
926	24727	3993	_12%		5962		7245	8	6604		5%	5826		2889		4357					
927	Local Check	5138	5 *#...29% _44%		6411	9	6603		6507		4%	6031		3689	6	4860					
928	24705	4471	9 #...12% _25%		6903	6 #	5458		6181			6355		2800		4577					
919	24737	3986	_11%		6065		7140		6603		5%	6491	7	3089		4790					
931	24798	5957	1 *#...49% _66%		6169		6886		6528		4%	6467	9	2933		4700					
	Exp Mean	**4287**			**5846**		**6638**		**6242**			**5810**		**3327**		**4568**					
	C.D. 5%	544			834		1334		780			1049		1235		751					
	C.V.%	7.73			8.70		12.26		10.92			11.03		22.65		14.36					
	Sowing Date	30-Jun			23-Jun		17-Jul					29-Jun		20-Jun							
	Planting Date	30-Jul			21-Jul		07-Aug					24-Jul		16-Jul							
	Local ©	MTU 1010			MTU 1010		MTU 1010					CO 51		ADT-45							

Table No. 3.8 Contd.: Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII																			
		KE			KE		KE (1)					KA		KA		KA		KA (2)			
		@TTB			MNC		Mean					MND		@BRM		GNV		Mean			
901	24058	5938	5		4156	9	4156	9 *	20%			3965		1752		10969	1 #	7467	3 #		**45%**
902	24055	4323			4381	7 *	4381	7 *	27%			4031		1423		8500	7 #	6265	#		**22%**
904	24744	2135			2492		2492	*				2885		1488		5613	#	4249			
905	24748	2396			2602		2602	*				2971		2068	7	6256	#	4614			
906	23748	3698			3717		3717	*	8%			5222	4	1608		8969	5 #	7095	4 #		**38%**
907	24704	5365	8		3953		3953	*	15%			3609		2027	9	8825	6 #	6217	#		**21%**
908	24746	5313	9		3222		3222	*				3854		2146	5	8481	8 #	6168	#		**20%**
909	Gontra Bidhan	6406	3		3451		3451	*				5920	2	2002		10613	2 #	8266	1 #		**61%**
910	24040	5052			3667		3667	*	6%			4591		1809		10513	3 #	7552	2 #		**47%**
912	24724	5052			2798		2798	*				3039		2237	2	5994	#	4516			
913	24742	3333			3100		3100	*				4897	9	1850		5350	#	5124			
914	24729	4792			2392		2392	*				4617		2031	8	7913	#	6265	#		**22%**
915	Anjali (NC)	2708			2950		2950	*				2730		2011		5825	#	4278			
916	24721	5781	7		3613		3613	*	5%			3391		2155	4	6338	#	4864			
917	24741	2135			1589		1589	*				4041		1887		5325	#	4683			
918	24708	4688			4106		4106	*	19%			4313		1620		8338	#	6325	9 #		**23%**
919	Zonal Check	5938	6					*				4237		1780		8419	9 #	6328	7 #		**23%**
920	24743	3125			2664		2664	*				3623		1850		6838	#	5230	2%		
921	US 314 (HC)	5052			5038	2 *	5038	2 *	46%			6045	1	2163	3	4231		5138			
922	24053	4531			4386	6 *	4386	6 *	27%			4062		1743		10075	4 #	7068	5 #		**38%**
923	24718	6146	4		4221	8	4221	8 *	22%			5714	3	2097	6	6213	#	5963	#		**16%**
925	24747	7813	1 #		4705	4 *	4705	4 *	36%			5132	5	1743		4925	#	5028			
926	24727	4010			4024		4024	*	17%			4996	8	1637		7506	#	6251	#		**22%**
927	Local Check	6510	2		4491	5 *	4491	5 *	30%			3835		1908		5294	#	4565			
928	24705	5313			4865	3 *	4865	3 *	41%			5115	6	1850		6669	#	5892	#		**15%**
919	24737	4661			2681		2681	*				4539		1965		8113	#	6326	8 #		**23%**
931	24798	4948			5613	1 *	5613	1 *	63%	**11%**		5027	7	2311	1	7794	#	6410	6 #		**25%**
	Exp Mean	**4710**			**3649**		**3649**					**4311**		**1895**		**7403**		**5857**			
	C.D. 5%	2308			774							422		389		674		388			
	C.V.%	29.91			12.93							5.98		12.54		5.56		5.79			
	Sowing Date	29-Jun			08-Jul							18-Aug		22-Sep		22-Sep					
	Planting Date	28-Jul			01-Aug							22-Sep		22-Sep		22-Sep					
	Local ©	Kanchana			Prathyasa							KMP -105									

Table No. 3.8 Contd. : Grain Yield (kg/ha) of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII PUD KBP		Zone VII Mean (9)		Overall Mean (9)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
901	24058	7067	1 *#	6278	2 # 4% **19%**	6278	2 # 4% **19%**	91	123	418
902	24055	5200		5380	2%	5380	2%	85	115	387
904	24744	5667	*	3929		3929		78	89	356
905	24748	4467		3838		3838		78	85	402
906	23748	6067	7 *	5968	4 # **13%**	5968	4 # **13%**	85	99	372
907	24704	5933	9 *	5365	1%	5365	1%	88	93	419
908	24746	5333		5431	8 **3%**	5431	8 **3%**	87	109	399
909	Gontra Bidhan	5133		6036	3 # **14%**	6036	3 # **14%**	91	104	393
910	24040	6267	3 *	6387	1 *# 6% **21%**	6387	1 *# 6% **21%**	90	126	420
912	24724	6600	2 *	5015		5015		89	110	387
913	24742	4800		4455		4455		81	95	407
914	24729	5200		5218		5218		94	104	396
915	Anjali (NC)	5267		3890		3890		78	108	386
916	24721	6200	6 *	5313	1%	5313	1%	89	95	375
917	24741	4800		3895		3895		88	103	398
918	24708	4133		5376	2%	5376	2%	87	100	415
919	Zonal Check	6067	8 *	5644	7 # **7%**	5644	7 # **7%**	89	107	403
920	24743	5267		4627		4627		86	119	405
921	US 314 (HC)	6267	4 *	5286		5286		84	100	408
922	24053	5667	*	5687	6 # **8%**	5687	6 # **8%**	85	108	390
923	24718	4867		5234		5234		87	105	380
925	24747	5933	*	4848		4848		82	95	404
926	24727	6267	5 *	5412	9 **2%**	5412	9 **2%**	84	104	417
927	Local Check	5000		5166		5166		84	99	406
928	24705	4467		5234		5234		89	101	434
919	24737	4733		5204		5204		85	102	404
931	24798	5667	*	5835	5 # **10%**	5835	5 # **10%**	90	103	407
	Exp Mean	**5494**		**5198**		**5198**		**86**	**104**	**399.5**
	C.D. 5%	398		289		271		1		21.1
	C.V.%	4.43		10.39		9.76		1.71		10.9
	Sowing Date	14-Aug								
	Planting Date	09-Sep								
	Local ©	ADT-37								

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.9: Days to 50% flowering of entries in AVT 1-E TP Zone-2 Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	Overall Mean (3)
		UT	PUN	HAR		
		PNT	LDN	KUL		
901	24058	101	89	94	95	95
902	24055	98	84	94	92	92
904	24744	86	71	79	79	79
905	24748	84	71	80	78	78
906	23748	97	84	96	92	92
907	24704	96	82	87	88	88
908	24746	100	87	95	94	94
909	Gontra Bidhan 3 (NC)	98	82	91	90	90
910	24040	102	88	95	95	95
911	24797	96	85	94	92	92
912	24724	100	83	95	93	93
913	24742	89	72	84	82	82
915	Anjali (NC)	84	65	77	75	75
916	24721	95	82	88	88	88
918	24708	100	88	95	94	94
919	Zonal Check	104	96	102	101	101
920	24743	103	85	96	95	95
921	US 314 (HC)	101	87	96	95	95
922	24053	99	89	95	95	95
923	24718	104	87	101	97	97
925	24747	92	77	87	85	85
927	Local Check	96	88	92	92	92
928	24705	104	96	107	102	102
930	24796	96	83	86	88	88
931	24798	98	94	101	98	98
	Exp Mean	**97**	**84**	**92**	**91**	**91**
	C.D. 5%	4	1	0	1	1
	C.V.%	2.35	1.02	0.00	1.54	1.51

Table No. 3.10: Plant Height (cm) of entries in AVT 1-E TP Zone-2 Kharif 2015

Entry No.	IET No.	II NH			Zone II Mean (3)	Overall Mean (3)
		UT	PUN	HAR		
		PNT	LDN	KUL		
901	24058	115	122	121	119	119
902	24055	122	122	142	129	129
904	24744	83	91	105	93	93
905	24748	84	101	95	93	93
906	23748	104	100	108	104	104
907	24704	90	88	92	90	90
908	24746	117	113	122	117	117
909	Gontra Bidhan 3 (NC)	108	106	107	107	107
910	24040	123	136	141	133	133
911	24797	100	99	95	98	98
912	24724	117	119	105	114	114
913	24742	95	100	108	101	101
915	Anjali (NC)	106	117	119	114	114
916	24721	94	93	97	95	95
918	24708	107	108	113	109	109
919	Zonal Check	98	96	90	95	95
920	24743	120	121	137	126	126
921	US 314 (HC)	110	116	117	114	114
922	24053	107	116	124	116	116
923	24718	116	110	121	116	116
925	24747	97	103	111	104	104
927	Local Check	123	97	112	111	111
928	24705	108	106	103	106	106
930	24796	112	107	108	109	109
931	24798	115	117	115	116	116
	Exp Mean	**107**	**108**	**112**	**109**	**109**
	C.D. 5%				5	5
	C.V.%				0.00	0.00

Table No. 3.9 : Days to 50% flowering of entries in AVT 1-E TP ZONE-3,4 & 5 Kharif 2015

Entry No.	IET No.	III										Zone III Mean (8)	IV	V				Zone V Mean (3)	Overall Mean (12)
		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH		
		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL		
901	24058	106	91	88	90	105	90	87	86	88	86	92	86	88	90	89	91	90	91
902	24055	95	90	86	88	104	91	90	87	89	79	90	80	86	88	87	89	88	89
904	24744	81	77	72	75	91	72	81	93	82	72	80	79	76	77	77	77	77	79
905	24748	81	78	74	76	102	73	80	92	81	76	82	74	74	80	77	79	78	80
906	23748	94	88	81	85	102	86	86	93	88	76	88	80	79	91	85	84	85	87
907	24704	98	86	83	84	106	92	91	93	92	80	91	83	85	92	89	89	89	90
908	24746	98	91	85	88	104	92	89	94	92	82	92	81	84	91	88	90	88	90
909	Gontra Bidhan 3 (NC)	96	85	83	84	109	90	82	93	88	79	90	77	86	89	88	90	88	88
910	24040	105	92	90	91	107	90	88	95	91	87	94	73	86	94	90	93	91	92
912	24724	99	88	90	89	106	79	92	90	87	80	90	77	88	95	92	85	89	89
913	24742	88	84	79	82	101	78	84	94	85	72	85	83	73	87	80	80	80	84
915	Anjali (NC)	72	71	71	71	99	78	81	93	84	65	79	76	68	80	74	77	75	78
916	24721	95	86	85	85	108	88	86	101	92	75	91	82	87	93	90	88	89	90
918	24708	97	91	85	88	106	87	94	94	92	86	92	83	85	93	89	87	88	91
919	Zonal Check	86	77	75	76	101	81	80	92	84	72	83	70	83	90	86	87	87	83
920	24743	106	85	90	88	103	86	86	93	89	85	92	79	82	94	88	85	87	90
921	US 314 (HC)	94	87	83	85	105	88	92	93	91	85	91	79	77	92	84	86	85	88
922	24053	95	87	84	85	102	86	96	93	92	86	91	73	81	92	87	89	87	89
923	24718	100	97	86	92	102	93	87	95	92	85	93	83	87	93	90	88	90	92
925	24747	90	83	80	81	99	84	85	93	87	77	86	80	78	84	81	83	82	85
927	Local Check	106	85	78	82	88	85	88	97	90	94	90	74	79	94	87	90	88	88
928	24705	104	95	90	92	106	87	92	93	91	87	94	83	91	96	94	90	92	93
931	24798	103	93	90	91	106	93	98	94	95	94	96	76	92	96	94	90	93	94
	Exp Mean	**95**	**86**	**83**	**85**	**103**	**86**	**88**	**93**	**89**	**81**	**89**	**79**	**82**	**90**	**86**	**87**	**86**	**88**
	C.D. 5%	3	1	1	1	1	1	3	3	1	3	1	6	3	4		1	2	1
	C.V.%	2.11	0.42	0.96	0.78	0.83	0.61	2.39	1.78	1.79	2.39	1.62	4.54	1.95	2.63		0.65	1.97	2.06

Table No. 3.9: Days to 50% flowering of entries in AVT 1-E TP ZONE-6 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	Overall Mean (4)
		MH	MH	MH (2)	GU	GU	GU (2)		
		KJT	VDG	Mean	NVS	DBI	Mean		
901	24058	84	92	88	83	96	90	89	89
902	24055	85	89	87	83	93	88	88	88
903	24716	81	90	86	83	93	88	87	87
904	24744	75	83	79	70	79	75	77	77
905	24748	70	82	76	68	79	74	75	75
906	23748	82	93	88	82	91	87	87	87
907	24704	85	92	89	80	96	88	88	88
908	24746	82	93	88	86	96	91	89	89
909	Gontra Bidhan 3 (NC)	82	94	88	86	95	91	89	89
910	24040	88	91	90	83	98	91	90	90
912	24724	82	91	87	86	96	91	89	89
913	24742	80	91	86	72	83	78	82	82
915	Anjali (NC)	68	82	75	67	74	71	73	73
916	24721	88	93	90	82	91	87	89	89
918	24708	80	93	87	86	97	92	89	89
919	Zonal Check	81	92	87	82	92	87	87	87
920	24743	78	90	84	81	98	90	87	87
921	US 314 (HC)	82	90	86	85	97	91	89	89
922	24053	82	93	87	85	91	88	88	88
923	24718	88	94	91	88	97	93	92	92
924	24750	70	89	80	71	75	73	76	76
925	24747	80	90	85	74	85	80	82	82
927	Local Check	85	95	90	87	104	96	93	93
928	24705	87	94	91	86	98	92	91	91
931	24798	86	92	89	80	100	90	90	90
	Exp Mean	**81**	**91**	**86**	**81**	**92**	**86**	**86**	**86**
	C.D. 5%	2	2	2	1	1	0	1	0
	C.V.%	1.37	1.43	1.59	0.53	0.45	0.36	1.05	0.46

Table No. 3.9: Days to 50% flowering of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII															Zone VII Mean (11)	Overall Mean (11)
		A.P.	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		MTU	KNM	RDR	Mean	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
901	24058	89	92	88	90	91	96	94	96	78	87	101	88	91	93	88	91	91
902	24055	84	89	83	86	87	82	84	95	75	85	86	84	85	85	81	85	85
904	24744	77	74	81	78	78	80	79	80	73	76	83	76	78	79	82	78	78
905	24748	78	77	80	78	79	80	80	82	72	77	85	77	77	80	73	78	78
906	23748	81	89	83	86	87	80	84	91	75	83	90	86	86	87	81	85	85
907	24704	86	91	87	89	94	88	91	88	77	82	99	88	92	93	82	88	88
908	24746	85	90	87	89	88	89	89	95	78	86	90	90	87	89	81	87	87
909	Gontra Bidhan 3 (NC)	85	89	89	89	97	90	93	101	82	91	103	89	99	97	81	91	91
910	24040	86	92	88	90	89	88	89	100	80	90	95	95	91	94	88	90	90
912	24724	85	92	94	93	89	91	90	98	79	89	88	88	89	88	89	89	89
913	24742	81	78	82	80	83	80	82	85	77	81	83	80	80	81	79	81	81
914	24729	97	95	95	95	98	100	99	99	79	89	93	92	93	93	94	94	94
915	Anjali (NC)	78	70	87	79	68	80	74	83	73	78	70	77	86	78	81	78	78
916	24721	87	92	90	91	95	88	91	91	79	85	96	90	93	93	82	89	89
917	24741					88	87	88	92	88	90	91	88	85	88	86	88	88
918	24708	85	90	88	89	88	90	89	92	78	85	92	88	83	88	83	87	87
919	Zonal Check	85	93	87	90	90	86	88	99		99	93	85	89	89	79	89	89
920	24743	86	90	85	88	84	88	86	89	79	84	91	84	84	86	87	86	86
921	US 314 (HC)	81	88	81	85	83	84	84	91	76	83	85	85	84	85	81	84	84
922	24053	86	89	84	87	84	82	83	88	75	81	93	86	89	89	77	85	85
923	24718	95	90	82	86	85	84	85	97	78	88	91	87	88	89	83	87	87
925	24747	85	78	83	81	83	80	82	85	72	78	89	84	84	86	82	82	82
926	24727	96	78	80	79	84	82	83	89	77	83	91	87	84	87	81	84	84
927	Local Check	80	90	92	91	80	80	80	98	82	90	82	92	76	83	70	84	84
928	24705	96	92	96	94	92	96	94	90	77	84	93	78	89	87	82	89	89
919	24737	87	89	84	87	89	82	85	95	76	85	91	84	82	86	78	85	85
931	24798	93	93	86	89	92	92	92	93	81	87	94	95	89	93	87	90	90
	Exp Mean	**86**	**87**	**86**	**87**	**87**	**86**	**86**	**92**	**77**	**85**	**90**	**86**	**86**	**88**	**82**	**86**	**86**
	C.D. 5%	1	1	1	1	1	1	1	5	1	2	4	0	3	2	2	1	1
	C.V.%	0.91	1.00	0.96	1.01	0.88	1.00	0.89	3.01	0.66	2.24	2.74	0.00	2.20	2.03	1.62	1.72	1.71

Table No. 3.10: Plant Height (cm) of entries in AVT 1-E TP ZONE-3,4 & 5 Kharif 2015

Entry No.	IET No.	III										Zone III Mean (8)	IV	V				Zone V Mean (3)	Overall Mean (12)
		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH		
		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL		
901	24058	108	118	111	115	71	116	115	101	111	130	109	142	152	121	137	114	129	117
902	24055	106	124	120	122	79	130	136	96	121	142	117	114	134	111	122	132	126	119
904	24744	70	94	88	91	63	86	102	96	94	100	87	69	91	85	88	89	88	86
905	24748	75	100	96	98	54	101	112	95	103	104	92	81	102	86	94	91	93	91
906	23748	80	106	95	101	59	98	104	102	102	115	95	109	117	100	108	98	105	99
907	24704	77	97	87	92	57	105	106	98	103	99	91	87	109	96	102	90	98	92
908	24746	93	116	110	113	64	110	129	101	113	125	106	130	119	118	119	121	119	111
909	Gontra Bidhan 3 (NC)	87	108	103	105	65	125	111	105	114	120	103	131	124	94	109	109	109	107
910	24040	103	135	121	128	78	143	128	94	122	144	118	150	120	115	117	134	123	122
912	24724	78	133	101	117	68	132	121	99	117	131	108	112	112	91	101	100	101	106
913	24742	73	98	96	97	60	109	111	91	103	98	92	86	95	81	88	95	90	91
915	Anjali (NC)	92	110	119	115	73	138	112	92	114	119	107	83	139	104	122	129	124	109
916	24721	83	102	91	96	51	103	105	93	101	100	91	110	105	89	97	95	96	94
918	24708	91	113	107	110	59	107	113	93	104	118	100	99	114	99	107	110	108	102
919	Zonal Check	62	83	88	86	54	95	100	90	95	93	83	79	113	98	106	103	105	88
920	24743	104	123	128	126	77	145	135	86	122	153	119	115	128	117	122	141	129	121
921	US 314 (HC)	85	115	106	111	62	117	86	89	97	120	98	108	110	97	104	112	106	101
922	24053	97	115	110	112	68	119	119	91	109	121	105	126	116	103	109	114	111	108
923	24718	92	123	110	117	74	120	122	89	110	122	106	113	118	99	109	120	112	108
925	24747	79	108	99	104	62	99	112	84	98	111	94	117	108	90	99	110	103	98
927	Local Check	90	97	91	94	68	114	111	93	106	106	96	71	106	101	104	98	102	95
928	24705	77	109	103	106	66	104	113	91	103	125	98	113	105	87	96	98	97	99
931	24798	88	115	101	108	63	114	115	92	107	105	99	121	122	102	112	109	111	104
	Exp Mean	**87**	**111**	**104**	**107**	**65**	**114**	**114**	**94**	**107**	**117**	**101**	**107**	**116**	**99**	**107**	**109**	**108**	**103**
	C.D. 5%				6											0			9
	C.V.%				0.00											0.00			0.00

Table No. 3.10: Plant Height (cm) of entries in AVT 1-E TP ZONE-6 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	Overall Mean (4)
		MH	MH	MH (2)	GU	GU	GU (2)		
		KJT	VDG	Mean	NVS	DBI	Mean		
901	24058	122	108	115	129	117	123	119	119
902	24055	120	94	107	129	124	127	117	117
903	24716	103	84	93	111	116	113	103	103
904	24744	97	80	88	102	97	99	94	94
905	24748	89	76	82	98	90	94	88	88
906	23748	123	86	105	116	114	115	110	110
907	24704	100	82	91	104	116	110	100	100
908	24746	115	98	107	120	117	118	113	113
909	Gontra Bidhan 3 (NC)	115	93	104	108	111	109	107	107
910	24040	133	116	125	134	122	128	126	126
912	24724	102	109	105	128	119	123	114	114
913	24742	98	76	87	106	110	108	97	97
915	Anjali (NC)	106	110	108	116	124	120	114	114
916	24721	105	83	94	102	105	103	99	99
918	24708	112	82	97	118	118	118	108	108
919	Zonal Check	114	102	108	106	120	113	110	110
920	24743	124	100	112	144	122	133	122	122
921	US 314 (HC)	115	92	103	116	125	121	112	112
922	24053	123	99	111	111	124	118	114	114
923	24718	113	87	100	115	113	114	107	107
924	24750	96	80	88	90	98	94	91	91
925	24747	114	85	100	106	104	105	102	102
927	Local Check	97	100	98	107	120	113	106	106
928	24705	107	71	89	119	117	118	103	103
931	24798	117	89	103	106	123	114	109	109
	Exp Mean	**110**	**91**	**101**	**113**	**115**	**114**	**107**	**107**
	C.D. 5%						10	8	8
	C.V.%						0.00	0.00	0.00

Table No. 3.10: Plant Height (cm) of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII															Zone VII Mean (11)	Overall Mean (11)
		A.P.	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		MTU	KNM	RDR	Mean	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
901	24058	129	126	121	123	125	117	121	126	102	114	109	125	134	123	140	123	123
902	24055	138	121	113	117	85	110	98	125	103	114	95	127	121	114	132	115	115
904	24744	104	86	80	83	77	76	76	86	98	92	72	93	86	83	123	89	89
905	24748	99	86	88	87	73	85	79	91	68	79	73	86	89	83	99	85	85
906	23748	115	108	98	103	111	97	104	100	88	94	81	85	109	92	103	99	99
907	24704	98	93	87	90	88	97	92	106	85	96	72	93	94	86	107	93	93
908	24746	139	113	101	107	97	106	102	117	93	105	82	104	117	101	128	109	109
909	Gontra Bidhan 3 (NC)	110	111	90	100	103	93	98	118	97	108	86	105	108	100	122	104	104
910	24040	148	151	119	135	141	132	136	126	104	115	101	106	141	116	114	126	126
912	24724	133	114	112	113	121	109	115	112	98	105	86	95	115	99	119	110	110
913	24742	128	90	89	90	87	89	88	97	80	89	81	97	103	94	109	95	95
914	24729	127	113	93	103	96	99	97	106	99	102	84	95	113	97	119	104	104
915	Anjali (NC)	126	109	124	116	103	88	96	127	97	112	96	108	100	101	111	108	108
916	24721	89	96	83	90	98	98	98	110	88	99	79	94	97	90	115	95	95
917	24741					92	96	94	122	105	113	80	96	126	101	110	103	103
918	24708	124	110	89	99	97	96	97	108	92	100	76	96	109	94	106	100	100
919	Zonal Check	121	114	103	108	102	98	100	116		116	83	97	116	99	120	107	107
920	24743	135	155	125	140	99	111	105	128	99	113	95	97	137	109	127	119	119
921	US 314 (HC)	123	105	89	97	89	104	97	112	103	107	80	95	87	87	119	100	100
922	24053	133	122	113	117	96	97	96	119	92	106	89	98	116	101	114	108	108
923	24718	109	107	118	112	97	99	98	128	82	105	79	96	111	95	124	105	105
925	24747	92	100	94	97	94	96	95	110	96	103	73	93	81	82	117	95	95
926	24727	124	112	101	106	97	102	100	108	95	101	86	96	106	96	118	104	104
927	Local Check	120	106	99	103	89	84	87	123	94	108	68	100	90	86	118	99	99
928	24705	112	102	91	97	98	104	101	99	98	99	77	99	102	92	132	101	101
919	24737	136	119	108	113	86	97	91	103	91	97	82	97	105	95	100	102	102
931	24798	119	113	98	105	114	90	102	110	97	104	80	87	113	93	110	103	103
	Exp Mean	**120**	**111**	**101**	**106**	**98**	**99**	**99**	**112**	**94**	**103**	**83**	**98**	**108**	**97**	**117**	**104**	**104**
	C.D. 5%				0			6			8				0		0	0
	C.V.%				0.00			0.00			0.00				0.00		0.00	0.00

Table No. 3.11: Panicles/ M² of entries in AVT 1-E TP Zone-2 Kharif 2015

Entry No.	IET No.	II NH			Zone II Mean (3)	Overall Mean (3)
		UT	PUN	HAR		
		PNT	LDN	KUL		
901	24058	229	251	338	272	272
902	24055	224	253	337	271	271
904	24744	251	376	332	319	319
905	24748	241	319	280	280	280
906	23748	238	332	372	314	314
907	24704	229	282	293	268	268
908	24746	223	286	396	302	302
909	Gontra Bidhan 3 (NC)	217	264	244	242	242
910	24040	215	293	287	265	265
911	24797	269	258	314	280	280
912	24724	246	279	369	298	298
913	24742	220	304	288	271	271
915	Anjali (NC)	209	308	281	266	266
916	24721	247	328	339	304	304
918	24708	243	293	370	302	302
919	Zonal Check	224	297	425	315	315
920	24743	244	286	372	301	301
921	US 314 (HC)	235	266	382	295	295
922	24053	230	275	284	263	263
923	24718	232	321	393	315	315
925	24747	235	332	248	272	272
927	Local Check	226	288	285	267	267
928	24705	226	332	448	335	335
930	24796	230	279	305	271	271
931	24798	232	280	417	309	309
	Exp Mean	**233**	**295**	**336**	**288**	**288**
	C.D. 5%	24	66	48	28	27
	C.V.%	6.33	13.70	8.73	10.39	10.07

Table No.3.11: Panicles/ M² of entries in AVT 1-E TP ZONE-3, 4 & 5 Kharif 2015

Entry No.	IET No.	III										Zone III Mean (8)	IV	V				Zone V Mean (3)	Overall Mean (12)
		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH		
		JYP	PTN-ICAR	SBR	Mean	RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL		
901	24058	560	249	228	239	103	352	275	205	277	333	288	384	358	177	268	192	242	285
902	24055	527	273	205	239	118	286	270	240	265	324	280	364	274	217	246	183	225	273
904	24744	748	383	237	310	107	363	379	278	340	536	379	365	347	295	321	238	294	356
905	24748	477	246	210	228	101	308	252	160	240	429	273	306	262	321	292	109	231	265
906	23748	557	346	232	289	124	341	252	196	263	433	310	384	332	242	287	204	259	303
907	24704	410	273	231	252	100	352	301	180	278	407	282	363	279	254	266	170	234	277
908	24746	610	301	207	254	127	319	320	230	290	441	319	339	332	203	268	225	253	304
909	Gontra Bidhan 3 (NC)	453	254	234	244	133	308	257	270	278	413	290	353	301	215	258	233	250	285
910	24040	580	231	212	221	109	363	240	266	289	348	294	359	266	177	222	183	209	278
912	24724	763	348	202	275	159	253	273	205	244	368	322	397	374	195	285	279	283	318
913	24742	760	336	198	267	115	286	360	296	314	440	349	320	297	196	247	227	240	319
915	Anjali (NC)	587	209	170	190	94	187	247	281	238	398	272	185	183	162	173	212	186	243
916	24721	433	260	206	233	102	187	321	288	265	396	274	403	210	228	219	193	210	269
918	24708	543	316	222	269	110	308	274	319	300	397	311	331	225	234	230	234	231	293
919	Zonal Check	540	351	206	279	142	319	409	251	327	463	335	260	254	224	239	230	236	304
920	24743	688	339	230	285	130	264	277	257	266	426	326	363	299	317	308	222	279	318
921	US 314 (HC)	427	220	207	214	109	275	253	300	276	307	262	375	218	216	217	190	208	258
922	24053	400	237	212	225	112	253	260	280	264	352	263	359	254	185	219	230	223	261
923	24718	487	342	221	282	116	407	367	339	371	370	331	383	324	224	274	246	264	319
925	24747	377	283	218	251	111	330	263	252	282	367	275	330	310	163	236	232	235	270
927	Local Check	533	364	225	295	71	341	260	241	281	463	312	290	227	216	222	247	230	290
928	24705	607	343	213	278	141	385	298	256	313	402	331	398	226	257	241	261	248	316
931	24798	640	255	240	248	126	352	293	295	313	481	335	373	383	256	319	250	296	329
	Exp Mean	**552**	**294**	**216**	**255**	**116**	**310**	**291**	**256**	**286**	**404**	**305**	**347**	**284**	**225**	**255**	**217**	**242**	**293**
	C.D. 5%	63	44	34	27	42	36	18	30	17	34	14	56	18	16	8	46	17	11
	C.V.%	6.88	9.13	9.52	9.28	21.88	7.03	3.76	7.04	6.31	5.04	7.95	9.74	3.80	4.44	2.79	12.87	7.46	8.17

Table No. 3.11: Panicles/ M² of entries in AVT 1-E TP ZONE-6 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	Overall Mean (4)
		MH KJT	MH VDG	MH (2) Mean	GU NVS	GU DBI	GU (2) Mean		
901	24058	217	310	263	269	223	246	255	255
902	24055	169	318	244	246	250	248	246	246
903	24716	170	296	233	243	219	231	232	232
904	24744	205	362	284	283	286	284	284	284
905	24748	231	281	256	283	263	273	265	265
906	23748	220	372	296	259	262	261	278	278
907	24704	231	274	253	231	248	239	246	246
908	24746	334	363	349	271	212	241	295	295
909	Gontra Bidhan 3 (NC)	225	400	312	215	293	254	283	283
910	24040	217	362	289	217	207	212	251	251
912	24724	274	324	299	293	258	275	287	287
913	24742	270	387	328	248	295	272	300	300
915	Anjali (NC)	212	364	288	226	239	233	260	260
916	24721	213	371	292	263	244	254	273	273
918	24708	222	363	292	264	267	266	279	279
919	Zonal Check	181	344	263	229	226	227	245	245
920	24743	216	394	305	307	248	277	291	291
921	US 314 (HC)	166	342	254	243	214	229	241	241
922	24053	175	342	258	227	236	231	245	245
923	24718	291	369	330	253	258	256	293	293
924	24750	271	412	341	257	235	246	294	294
925	24747	228	337	282	252	212	232	257	257
927	Local Check	251	428	339	308	265	286	313	313
928	24705	258	402	330	245	263	254	292	292
931	24798	254	371	313	284	289	287	300	300
	Exp Mean	**228**	**356**	**292**	**257**	**248**	**253**	**272**	**272**
	C.D. 5%	20	37	20	24	8	12	12	12
	C.V.%	5.39	6.27	6.11	5.68	1.95	3.98	5.49	5.47

Table No. 3.11: Panicles/ M² of entries in AVT 1-E TP ZONE-7 Kharif 2015

Entry No.	IET No.	VII											Overall Mean (11)
		A.P. MTU	TEL KNM	TEL RDR	TN CBT	TN ADT	KE PTB	KE MNC	KA MND	KA BRM	KA GNV	PUD KBP	
Code	IET NO.	320	320	256	630	136	525	409	490	345	528	640	418
901	24058	330	313	259	597	161	423	330	360	350	522	617	387
902	24055	267	310	262	473	171	460	330	403	325	472	447	356
904	24744	287	330	246	498	141	720	301	453	335	486	623	402
905	24748	248	310	240	533	168	387	301	459	340	576	527	372
906	23748	284	350	261	658	176	530	330	490	365	624	537	419
907	24704	259	330	256	615	181	503	330	465	340	485	630	399
908	24746	264	340	265	575	165	553	301	428	310	431	690	393
909	Gontra Bidhan 3 (NC)	269	367	253	592	168	543	330	384	315	755	647	420
910	24040	287	297	234	520	203	523	330	471	325	489	583	387
912	24724	314	303	252	557	192	537	301	595	375	413	637	407
913	24742	317	327	243	510	189	490	330	496	340	573	547	396
914	24729	307	343	255	602	155	453	272	540	315	442	557	386
915	Anjali (NC)	238	327	253	432	157	440	301	508	380	473	617	375
916	24721	281	323	252	627	134	547	330	428	340	512	610	398
917	24741				507	134	570	215	496	375	460	567	415
918	24708	284	350	257	637	182	517	358	446	345	451	607	403
919	Zonal Check	294	353	265	633	136	410		465	315	509	667	405
920	24743	287	363	265	573	161	523	301	478	335	525	680	408
921	US 314 (HC)	221	343	247	663	175	420	387	440	325	446	617	390
922	24053	277	293	258	632	186	313	358	440	375	487	565	380
923	24718	310	363	265	542	171	523	330	446	360	504	627	404
925	24747	287	327	275	635	144	453	401	446	340	607	667	417
926	24727	287	300	277	600	173	503	358	428	340	548	647	406
927	Local Check	297	320	331	607	150	663	387	552	320	585	557	434
928	24705	304	327	264	600	149	530	401	508	305	469	587	404
919	24737	314	323	264	685	163	507	330	428	360	517	587	407
	Exp Mean	**286**	**329**	**260**	**583**	**164**	**503**	**333**	**465**	**341**	**514**	**603**	**400**
	C.D. 5%	28	37	15	123	41	143	58	79	32	55	42	21
	C.V.%	6	7	4	13	15	17	11	10	6	7	4	11

Table 3.12: Grain Quality characteristics of entries in AVT 1-E TP, kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC	ASV	AC	GC
901	24058	76.7	66.3	64.2	5.51	2.32	2.37	SB	OC	3.0	22.49	80	3.0	18.50	47
902	24055	78.4	66.2	59.2	5.66	2.00	2.83	MS	VOC	5.3	27.60	53	5.7	20.85	38
903	24716	82.6	70.0	60.6	5.48	1.89	2.89	MS	VOC	4.0	24.20	57	5.0	19.35	37
904	24744	78.5	52.9	20.9	5.53	1.78	3.10	SS	VOC	4.0	25.96	23	4.0	23.47	29
905	24748	78.3	68.2	61.3	6.09	2.24	2.71	LB	VOC	7.0	26.51	41	7.0	22.80	31
906	23748	79.4	66.9	57.4	6.30	2.07	3.04	LS	VOC	3.0	24.22	60	3.0	18.22	42
907	24704	76.8	68.5	58.9	6.67	2.00	3.33	LS	A	7.0	19.03	100	6.3	20.47	36
908	24746	77.7	67.7	54.3	6.37	2.21	2.88	LB	VOC	5.0	18.24	100	6.0	18.07	45
909	Gontra Bidhan 3 (NC)	79.9	62.3	51.3	5.23	2.21	2.36	SB	F	4.0	25.87	40	3.0	21.07	33
910	24040	76.2	64.8	49.8	5.65	2.35	2.40	SB	F	4.0	22.52	73	3.0	18.15	43
911	24797	78.1	67.1	56.4	6.49	2.12	3.06	LS	VOC	4.0	16.48	100	3.5	22.57	34
912	24724	79.8	64.9	50.8	5.87	2.07	2.83	MS	VOC	7.0	23.05	69	3.5	21.67	36
913	24742	76.1	64.9	59.8	5.84	2.02	2.89	MS	VOC	4.0	25.37	43	3.0	18.45	39
914	24729	76.6	63.1	55.6	6.50	2.01	3.23	LS	VOC	4.0	25.84	48	3.0	19.27	38
915	Anjali (NC)	79.4	69.6	52.5	5.44	2.55	2.13	SB	VOC	4.0	22.85	30	3.0	18.15	47
916	24721	80.4	67.2	59.5	6.39	2.23	2.86	LB	A	5.0	17.45	87	6.0	20.92	37
917	24741	78.5	67.6	58.4	6.54	1.94	3.37	LS	A	7.0	17.89	80	7.0	21.67	30
918	24708	79.9	68.1	52.3	4.98	2.00	2.49	SB	VOC	4.0	25.81	51	4.7	19.42	32
919	DRR Dhan 43 (ZC)	76.2	64.5	31.7	6.17	2.35	2.62	LB	VOC	7.0	25.72	36	7.0	19.72	37
920	24743	76.9	58.2	26.8	5.37	2.28	2.35	SB	VOC	4.0	21.41	48	3.0	20.32	34
921	US 314 (HC)	79.1	64.5	30.5	5.45	2.19	2.48	SB	VOC	4.0	21.85	47	4.0	17.92	58
922	24053	78.0	66.9	32.7	5.75	2.31	2.48	SB	F	3.0	22.23	79	3.0	23.02	31
923	24718	78.3	64.7	38.3	6.72	2.04	3.29	LS	VOC	4.0	22.67	66	3.0	18.52	51
924	24750	77.4	60.1	54.3	6.29	2.10	2.99	LB	VOC	7.0	24.69	22	7.0	23.10	29
925	24747	79.7	67.6	36.7	6.56	2.00	3.28	LS	VOC	4.0	22.52	82	4.2	19.20	39
926	24727	77.4	63.7	49.8	6.64	1.92	3.43	LS	VOC	3.0	22.41	77	3.0	20.10	36
927	LC	77.2	65.1	54.8	6.25	2.07	3.01	LS	VOC	3.0	24.66	53	3.0	19.27	40
928	24705	76.5	63.8	49.1	5.85	2.04	2.86	MS	OC	7.0	25.87	48	3.0	21.52	31
929	24737	78.3	66.8	47.7	6.48	1.95	3.32	LS	VOC	4.0	24.22	79	3.7	20.92	31
930	24796	81.1	69.1	49.9	6.21	2.16	2.87	LB	VOC	4.0	25.98	48	4.7	20.17	33
931	24798	80.3	71.2	63.5	6.10	2.14	2.85	LB	VOC	5.0	25.08	50	4.2	18.15	47

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Trial 3.13: Composition of entries in Initial Variety Trial – Early (IVT – E -TP), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
1st year of testing				
1001	25546	CB 12 581	CB 04110/KJTCMS5B	MS
1002	25547	CR 3947-2-1-1-1-1	IR 64/PSB RC 18	LS
1003	25548	AD 10003	ADT 43/IET 19390	MS
1004	25549	CRR 719-1-B	IR 77298-5-6-18/IR 05N359	LS
1005	25550	RP 5588-B-B-B-B-316-1	IR 64/IR 75870-5-8-5-B-1B	LS
1006	25551	JGL 23835	JGL 17004/RP 2421	LS
1007	25552	KNM-605	MTU 1010/JGL 11727	LS
1008	25553	HKR 12-2	HKR 126/HKR 47	LS
1009	25554	TRC-2015-17	Naveen/RCPL 1-128	LS
1010	25555	NDR 1132-6	Annada/NDR 1092-6	SB
1011	25556	KMP-200	IR64/IET16348	LB
1012	25557	KAUM 265-1	Selection from IR 50138	LB
1013	25558	NLR 3242	BPT 5204/MTU 1010	MS
1014	25559	RCPR-28-IR87759-5-2-1-3	IR 06L164/IR 81421-B-B-66	LS
1015	25560	UBKVR-66	Satabdi/BR 28	MS
1016	25561	UPR 3838-1-1-1-1	UPR 2750-16-2-1/UPRI 2005-8	LS

Entry No.	IET No.	Designation	Cross combination	Grain type
1017	25562	REWA 842-12-1-5	GP 41/WR 3-2-1	MS
1018	25563	TM 12375	Improved White Ponni/Rasi	MS
1019	25564	MALI 10-1	Selection from Seg F2 from cross between ESF4-6-1/ EF5-10	MS
1020	**Gontra Bidhan-3 (NC)**			
1021	25565	NLR 4002	BPT 5204/MTU 2077	LS
1022	25566	PAU 4998-9-3-1	PAU 2520/PR 114 (Xa38)	LS
1023	25567	RP 5588-B-B-B-B-327-1	IR 64/IR 75870-5-8-5-B-1B	LS
1024	25568	CR 3952-2-3-1-1-1	IR 64//BG 90-2//Pusa Basmati-1	LS
1025	25569	AD 091219	ADT (R) 45/ ACK 03002	MS
1026	25570	ORJ-1169(IR11C120)	IRRI 149/IR 2006 P12-12-2-2	LS
1027	25571	UBKVR-64	Satabdi/IET 21255	SB
1028	25572	NDR 1127	Panidhan/IR 36 // N-22	SB
1029	25573	HUR-154	Pusa Sugandh-2/Narendra 97	LS
1030	25574	PUSA 2011-27-26-92	Annada/Danteshwari	MS
1031	25575	RP 5588-B-B-B-B-321-1	IR 64/IR 75870-5-8-5-B-1B	LS
1032	25576	CR 3846-1-2-1-1-1-2	IR 72/PSB RC 18	LS
1033	25577	CBMAS 14 142	Improved White Ponni/APO	LS
1034	**Anjali (NC)**			
1035	25578	CHR 34	IR 30/Basmati 370	LS
1036	25579	CR 3745-3-2-4-1-1	Pooja/Lalat	MS
1037	25580	RP 5587-B-B-B-253-2	IR 64/IR 75870-5-8-5-B-2-B	LS
1038	25581	ORJ-1211(IR05A235)	IR73008-138-2-2-2/IR00A103	LS
1039	25582	CUMRE 108	Sel.from F2 pouplation of rice hybrid Hera	MS
1040	25583	KMP-201	IR 64/IET 16348	LS
1041	25584	RP 5940-96-7-2-1-1	MTU 1010//IR64*2/O.glaberrima	LS
1042	25585	BRR 0014 (IR74052-153-5-3-1-3)	IR 65610-24-3-6-3-2-3/IR 67406-49-2-3-6-3-1	MS
1043	25586	RNR 19416	MTU 1010/JGL 3844	LB
1044	25587	RCPR-26-IR88966-43-1-1-4	IRRI 123/IR05A260	LS
1045	**PR 124 (Northern), Luit (North Eastern), Sahbhagidhan (Central & Western), NDR 97 (Eastern), DRR Dhan 43 (Southern)--ZC**			
1046	25588	KAUM 259-5-3-1-1-1	Pokkali/IR 50138	LB
1047	25589	RP 5586-32-27-4-2-1-1	IR 64 *3/ O.glaberrima (TOG 5674)	
1048	25590	RTN 5-1-1-1-1	PLU-1/RP-4-14	LS
1049	25591	CB 12 532	CB 04110/JGL 1798	MS
1050	25592	IR 95797-CR 3847-23-2-1-1-2	IR 84852-B-12-2/ IR 79643-39-2-2	LS
1051	25593	CRR 756-1(IR 92522-47)	IR 08L183/MTU 1010	LS
1052	25594	HKR 12-1	HKR 126/HKR 47	LS
1053	25595	UBKVR-60	Satabdi/BR 28	MS
1054	25596	IR 83141-B-17-B	IR 06G103/IR 06G112	LS
1055	25597	TRC-2015-10	TRC-87-251/Sambha Mahsuri	MS
1056	25598	HUR-153	MPR 7/WGL 24623	LS
1057	**Local Check**			
1058	25599	NVSR -2091	IR 65912-90-1-6-3-2R/GR-3	LS
1059	25600	TM 10085	ADT 43/IR 36	MS
1060	25601	MTU 1207 (MTU 2278-15-1-1)	MTU 1010/FL478	LB
1061	25602	CR 2906-253-8	IR 20/Dandi	MS
1062	25603	CRR 757-1 (IR 92548-51)	Thadokkam 1/IR 77298-14-2-10	LS
1063	25604	CR 3848-2-1-3-1-4	Vandana/BG 90-2//PSB RC 18	MS
1064	25605	UPR 3823-2-1-1-2	UPR 3782/UPR 2870-98-125	LS

Table No. 3.14: Grain Yield (kg/ha) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	II						Zone II Mean (3)		III							
		UT		PUN		HAR				OD		BI		BI		BI (2)	
		PNT		LDN		KUL				JYP		PTN-ICAR		SBR		Mean	
1001	25546	5379		3074		4450		4301		8021		3511		2455		2983	
1002	25547	6214		5772		5900		5962		10744	7	5867		3199		4533	
1003	25548	6399		3966		4450		4938		6205		4767		2753		3760	
1004	25549	5474		5952		6900		6109		9286		4000		2455		3228	
1005	25550	4209		5491		4900		4867		8259		5300		3646		4473	
1006	25551	7133	5	6667	2 …9%	7450	6 *	7083	1 5%	10595	9	4611		3720		4166	
1007	25552	6583		6056		7850	3 *	6830	4 1%	10938	1 …1%	4517		3795		4156	
1008	25553	6027		5920		7150	8 *	6366		10833	5	6278		3557		4917	
1009	25554	6141		5489		6450		6027		9896		6422		4018	6	5220	
1010	25555	4487		4045		5050		4528		5446		4978		2381		3679	
1011	25556	5367		4502		5900		5256		7723		3944		2604		3274	
1012	25557	4713		4409		3150		4091		8333		5389		3943	8	4666	
1013	25558	7273	4	6021		7400	7 *	6898	3 2%	10774	6	8767	1 *	3876	9	6322	1 7%
1014	25559	6071		5569		7550	5 *	6397		10387		6978	9	3720		5349	8
1015	25560	5060		3106		5350		4505		10149		4294		2009		3152	
1016	25561	7013	7	6098	8	8100	1 *	7070	2 5%	6920		6544		3720		5132	
1017	25562	3926		4015		5175		4372		3571		2200		3125		2663	
1018	25563	6484		5093		6100		5892		9866		5606		3274		4440	
1019	25564	5681		3915		4700		4765		9598		4956		3051		4003	
1020	Gontra Bidhan-3 (NC)	8077	2	5695		6500		6757	6	10863	4	6922		4911	2	5916	2
1021	25565	6447		5808		8050	2 *	6768	5	9911		4067		3869		3968	
1022	25566	6429		5364		4800		5531		5997		6178		3646		4912	
1023	25567	3899		5841		6300		5346		9762		7172	6	3869		5521	5
1024	25568	5794		4650		6900		5781		9732		6083		3423		4753	
1025	25569	5071		5373		5700		5382		4985		6200		4315	4	5258	
1026	25570	4310		4631		5950		4964		6994		4894		2976		3935	
1027	25571	4377		4317		3800		4165		4464		6311		2381		4346	
1028	25572	4224		2567		5600		4131		3423		6461		2292		4376	
1029	25573	4497		3620		5100		4406		7455		7817	3	3043		5430	7
1030	25574	5691		2845		3200		3912		3423		6189		2679		4434	
1031	25575	5803		4274		5500		5192		10372		6883		3274		5079	
1032	25576	5637		5211		7800	4 *	6216		9405		4867		3497		4182	
1033	25577	6974	8	4573		6600		6049		9048		4294		3348		3821	
1034	Anjali (NC)	5854		2903		5150		4636		4390		3711		2158		2934	
1035	25578	4191		4738		5450		4793		7515		2222		3348		2785	
1036	25579	6453		5584		5550		5862		8780		5356		3720		4538	
1037	25580	5511		6134	6 …1%	6050		5899		10119		6989	8	4464	3	5727	4
1038	25581	4165		2349		4100		3538		3571		4422		2381		3402	
1039	25582	5630		3737		5000		4789		5804		5567		2902		4234	
1040	25583	5741		3886		4300		4643		6027		3544		2679		3112	
1041	25584	5211		6558	3 …8%	6250		6006		10893	3	6056		3497		4776	
1042	25585	3303		5743		5850		4965		9494		5967		2180		4073	
1043	25586	6171		5108		7100	9 *	6126		10327		5672		4985	1	5329	9
1044	25587	5771		5973		6400		6048		10402		6844		3490		5167	
1045	Zonal Check	6149				4400		5274		6146		4594		2760		3677	
1046	25588	6076		4654		5100		5277		3289		1556		2902		2229	
1047	25589	5940		4205		3050		4398		9435		7083	7	3795		5439	6
1048	25590	3437		4515		4700		4217		7738		7200	5	3051		5125	
1049	25591	5224		4392		5100		4905		8705		6206		3051		4628	
1050	25592	4631		5552		5400		5195		10417		6200		3571		4886	
1051	25593	6438		6134	7 …1%	6350		6307		10074		5050		3869		4460	
1052	25594	5781		5840		5900		5840		10521		5267		4018	7	4642	
1053	25595	4846		3391		5350		4529		6905		5494		3051		4273	
1054	25596	6681	9	6214	5 …2%	7000	*	6632	7	9896		4211		3638		3925	
1055	25597	6099		6692	1 …10%	7100	*	6630	8	10908	2	6117		4315	5	5216	
1056	25598	7626	3	6413	4 …5%	4900		6313		8780		6000		3051		4525	
1057	Local Check	6349		6093	9	6050		6164		8557		6528		2016		4272	
1058	25599	8221	1 …2%	5182		6050		6484		9360		6578		3341		4959	
1059	25600	4889		5168		5400		5152		7693		6378		3423		4900	
1060	25601	1749		5802				3775		10208		7861	2	3795		5828	3
1061	25602	1603		4599				3101		10045		4961		3869		4415	
1062	25603	5525		5085		5300		5303		10655	8	6667		3795		5231	
1063	25604	6093		5256		5600		5650		10268		7461	4	2976		5219	
1064	25605	7034	6	5730		6950		6571	9	7738		4217		3274		3745	
	Exp Mean	**5551**		**4977**		**5753**		**5426**		**8407**		**5551**		**3315**		**4433**	
	C.D. 5%	956		1251		459		605		1012		1641		742		878	
	C.V.%	8.62		12.57		3.99		9.80		6.03		14.80		11.20		14.15	
	Sowing Date	24-Jun		23-Jun		23-Jun				04-Jul		21-Jun		15-Jul			
	Planting Date	21-Jul		21-Jul		25-Jul				04-Aug		16-Jul		06-Aug			
	Local ©	Govind		PR 115		HKR 48				Mandakini		Sahbhagi Dhan		Prabhat			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.14 Contd.: Grain Yield (kg/ha) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	III																		IV		V							
		JH		W.B		W.B		W.B		W.B (2)		U.P.		Zone III Mean (6)						TR		M.P.		M.P.		M.P. (2)			
		@RCI		CHN		@PNB		KOL		Mean		VRN								ARD		WRS		JBP		Mean			
1001	25546	250		3685		2070		6075		4880		3880		4605						4936	...12%	6845		7936		7391			
1002	25547	500		4932		2492		6310		5621		6440	7	6249						3786		7000		7591		7296			
1003	25548	350		3571		3361	5	6090		4831		5615		4834						4625	...5%	8690		8978	3	8834	4 *	17%	
1004	25549	550		3685		1962		6065		4875		6095		5264						3029		8536		8451		8493	7 *	12%	
1005	25550	500		4875		2247		6400		5638		7815	2	6049						2589		7452		8327		7890		4%	
1006	25551	250		3571		3098		6315		4943		6105		5820						3504		10065	1 *	8171		9118	2 *	21%	
1007	25552	600		3515		1900		6440		4977		6255		5910						2704		8696		7969		8333	*	10%	
1008	25553	250		3345		1724		6410		4877		6080		6084						3893		8536		8184		8360	9 *	10%	
1009	25554	150		4592		2283		4990		4791		6935	4	6142						5186	* ...18%	8994	8	5605		7300			
1010	25555	900	4	4308		2180		5375		4842		5470		4660						2411		6435		7109		6772			
1011	25556	750		3118		2331		6910	7	5014		6625	6	5154						1961		6286		7643		6964			
1012	25557			6689	6 *	2440		6000		6345	9 7%			6071						4546	...3%	9631	2	6901		8266	*	9%	
1013	25558	750		4819		1987		6385		5602		6000		6770	5					3386		7470		9030	2	8250	*	9%	
1014	25559	850	6	6689	7 *	2265		6150		6420	8 8%	4450		6396						3100		8592		6589		7590			
1015	25560	150		3741		2115		6325		5033		5930		5408						3796		6452		6829		6641			
1016	25561	700		4082		1803		6325		5203		5550		5523						3593		6661		5625		6143			
1017	25562	500		4478		1933		5165		4822		5500		4007						4071		7292		6615		6953			
1018	25563	650		4819		1883		4980		4899		5800		5724						2836		7155		5573		6364			
1019	25564	350		3175		2267		6455		4815		6200		5572						3236		7131		5814		6472			
1020	Gontra Bidhan-3 (NC)	100		4138		2142		7710	1	5924		7960	1	7084	1					4396		9149	6	5983		7566			
1021	25565	700		3458		1975		6575		5017		4950		5472						2604		6857		4336		5597			
1022	25566	250		4252		2208		6705		5478		6660	5	5573						2700		8244		5898		7071			
1023	25567	400		6973	4 *	3066		6700		6836	2 * 15%	5580		6676	6					2386		7589		6061		6825			
1024	25568	750		4195		2732		6930	5	5563		5990		6059						3457		7851		8112		7982		5%	
1025	25569	600		4705		2605		6090		5398		5000		5216						3921		8012		8822	5	8417	8 *	11%	
1026	25570	150		3231				5080		4156		6305		4913						2068		7292		8477		7884		4%	
1027	25571	900	5	3061		2123		7005	4	5033		5360		4764						2354		7470		8457		7964		5%	
1028	25572	800	9	3061		2100		6560		4811		3990		4298						2104		4857		8757	6	6807			
1029	25573	150		4025		2372		5710		4867		6380	9	5738						2118		5815		8184		7000			
1030	25574	200		3288		2005		6875	8	5081		4885		4556						2068		9411	4	8724	7	9067	3 *	20%	
1031	25575	600		3231		2517		5790		4511		5550		5850						3436		6708		6875		6792			
1032	25576	850	7	3288				6920	6	5104		5335		5552						5511	5 * ...25%	7345		8652		7999		6%	
1033	25577	300		6406	*	3157		6070		6238	5%	6420	8	5931						5296	8 * ...20%	7411		8835	4	8123	*	7%	
1034	Anjali (NC)	350		3118		4219	2	6445		4781		4815		4106						1993		6250		8203		7227			
1035	25578	850	8	4422		2478		5995		5208		4855		4726						2618		5524		7428		6476			
1036	25579	100		5215	*	4607	1 *	6665		5940		3835		5595						2464		8012		8698	8	8355	*	10%	
1037	25580	300		7540	1 *	3031		6180		6860	1 * 16%	6335		6938	2					1857		7506		7721		7614		1%	
1038	25581	450		3288		1744		5305		4296		4130		3850						1636		4798		8210		6504			
1039	25582	1200	2 *	4138		2556		6505		5322		6040		5159						2250		9149	7	8288		8718	5 *	15%	
1040	25583	950	3	3231		2267		6430		4831		5085		4499						3768		7208		8685	9	7947		5%	
1041	25584	500		5952	*	3137		6250		6101	3%	4845		6249						3875		7935		8145		8040	*	6%	
1042	25585	100		7029	3 *	2552		5540		6285	6%	4865		5846						4807	...9%	7286		8522		7904		4%	
1043	25586	300		6236	*	2583		7035	2	6635	4 * 12%	5670		6654	7					2886		6911		8418		7664		1%	
1044	25587	800		6463	9 *	2704		4345		5404		6170		6286						2475		7893		6953		7423			
1045	Zonal Check	700		3515		1850		4975		4245		5905		4649						3371		7393		5638		6515			
1046	25588	750		4082		3748	3	7025	3	5553		4835		3948						3421		8113		6868		7491			
1047	25589	100		4875		2535		6565		5720		5005		6126						3275		6423		6849		6636			
1048	25590	200		5159	*	2500		5620		5389		3215		5330						5179	* ...18%	5780		5762		5771			
1049	25591	450		5272	*	3093		6085		5679		5590		5818						5311	7 * ...21%	5375		6406		5891			
1050	25592	800		7143	2 *	3535	4	6485		6814	3 * 15%	5480		6549	9					5239	9 * ...19%	6863		6810		6836			
1051	25593	1400	1 *	5329	*	2598		5885		5607		5430		5940						5046	...15%	7012		8216		7614		1%	
1052	25594	450		6293	*	1867		6565		6429	6 9%	4745		6235						4125		5429		3685		4557			
1053	25595	150		5782	*	3185		6135		5959	1%	5825		5532						3918		7690		5658		6674			
1054	25596	800		6009	*	3106		5890		5950		5265		5818						4118		7655		5332		6493			
1055	25597	450		6803	5 *	3348	6	5590		6196	5%	7560	3	6882	4					5011	...14%	8702	9	8353		8528	6 *	13%	
1056	25598	450		5782	*	2537		5670		5726		5215		5750						3664		9232	5	9134	1	9183	1 *	21%	
1057	Local Check	550		4592		2903		6680		5636		4595		5495						3446		7274		6921		7097			
1058	25599	650		6009	*	2470		6840	9	6425	7 8%	5055		6197						3568		6342		8594		7468			
1059	25600	200		6689	8 *	3341	7	6305		6497	5 10%	4890		5896						5118	...16%	7262		8177		7719		2%	
1060	25601	250		6293	*	3291	9	6300		6296	6%			6891	3					5893	4 * ...34%	9595	3	6751		8173	*	8%	
1061	25602			4989		3117		6715		5852				6116						6486	2 * ...48%	6458		8672		7565			
1062	25603	550		6179	*	3119		6295		6237	5%	5720		6552	8					7100	1 * ...61%	6208		8464		7336			
1063	25604	600		6009	*	3331	8	5815		5912		6015		6424						5961	3 * ...36%	6256		8451		7353			
1064	25605	100		5556	*	2944		6050		5803		5900		5456						5479	6 * ...25%	6994		8236		7615		1%	
	Exp Mean	**504**		**4812**		**2607**		**6189**		**5500**		**5574**		**5642**						**3703**		**7382**		**7459**		**7420**			
	C.D. 5%	392		526		332		1170		620		1247		448						729		565		1099		446			
	C.V.%	38.87		5.47		6.37		9.46		8.05		11.19		9.90						9.85		3.83		7.37		4.30			
	Sowing Date	04-Jul		29-Jun		28-Jun		30-Jul				23-Jun								05-Aug		29-Jun		08-Jul					
	Planting Date	04-Aug		28-Jul		24-Jul		21-Aug				09-Jul								19-Aug		18-Jul		29-Jul					
	Local ©	BVD 110		Provat		MTU 1010		GB-1												Satabdi		MTU1010		Dhanteshwari					

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.14 Contd.: Grain Yield (kg/ha) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	V		Zone V Mean (3)		VI										Zone VI Mean (4)		VII									
		MH				MH		MH		MH (3)		GU		GU		GU (2)				A.P.		TEL		TN		TN		TN (2)	
		SKL				KJT		VDG		Mean		VYR		DBH		Mean				MTU		KNM		CBT		ADT		Mean	
1001	25546	3618		6133		4029		4266		3971		5225		3333		4279		4213		3261		4167		4251		3000		3625	
1002	25547	5685	6	6759		5450		3175		4770		6407		5049		5728		5020		5625	4 ...17%	6423		6048		4467		5257	9
1003	25548	4587		7418	7* 10%	3491		3770		3949		4137		3529		3833		3732		2654		5020		4375		3800		4088	
1004	25549	5233		7406	9* 9%	4667		3108		4336		5825		6054	8	5940	8	4914		5036	...5%	6858		5412		3133		4273	
1005	25550	4264		6681		5883	6	3009		4385		6366		4510		5438		4942		4611		5597		6114		3467		4790	
1006	25551	6460	2*	8232	1* 22%	5912	5	3274		5215	3 7%	5386		5225		5306		4950		4955	...3%	7983	3	6721	7	3667		5194	
1007	25552	5620	8	7428	6* 10%	4982		3373		4659		6381		4975		5678		4928		4275		6911		7186	1	3000		5093	
1008	25553	6783	1*	7834	3* 16%	5924	4	3042		5250	2* 8%	4880		4958		4919		4701		4547		6349		7019	5	3667		5343	5
1009	25554	5426		6675		5275		2844		4515		7498	1	6324	4	6911	1 10%	5485	6 1%	6187	1* ...28%	4852		5325		3333		4329	
1010	25555	4587		6043		3333		3307		3742		5219		3186		4202		3761		2138		3796		4319		4800	3	4560	
1011	25556	3941		5957		3158		3638		3579		5744		3652		4698		4048		2264		4840		6032		4800	4	5416	4
1012	25557	5814	3*	7449	5* 10%	4234		4167		4738		4886		5392		5139		4670		2989		7526	8	6158		4167		5163	
1013	25558	5749	4	7417	8* 10%	5404		4464		5206	4 7%	6537	8	6078	7	6308	3	5621	3 3%	5344	6 ...11%	8230	1 ...2%	4907		3733		4320	
1014	25559	4974		6718		4439		3075		4163		6517	9	3833		5175		4466		3397		7843	4	6288		3467		4877	
1015	25560	4587		5956		4261		3042		3963		5717		4240		4979		4315		3514		5460		5980		4500	9	5240	
1016	25561	4522		5603		4667		4630	6	4606		6307		4748		5527		5088		4819		5920		6118		3900		5009	
1017	25562	2713		5540		2620		3373		2902		5258		3588		4423		3710		2065		3093		2018		4533	7	3275	
1018	25563	5491		6073		3731		3241		4154		5537		4221		4879		4182		4547		6499		5728		5467	1	5597	1
1019	25564	3876		5607		4643		3836		4118		4507		5368		4937		4588		3089		6907		5095		2667		3881	
1020	Gontra Bidhan-3 (NC)	5168		6767		5076		4365		4870	8	5098		5784		5441		5081		3705		8052	2	6699	9	3667		5183	
1021	25565	5297		5497		3661		3108		4022		4217		5392		4805		4095		3986		6571		5019		3667		4343	
1022	25566	4134		6092		3725		3373		3744		6141		4730		5436		4492		2056		6295		4360		4467		4413	
1023	25567	4522		6057		4322		3108		3984		5592		5368		5480		4597		3986		6697		5698		3533		4616	
1024	25568	4910		6958	3%	4175		3604		4230		4366		5564		4965		4427		4701		7674	5	6292		3467		4879	
1025	25569	5103		7312	* 8%	3778		3505		4129		6203		4534		5369		4505		2889		5142		4152		3600		3876	
1026	25570	4587		6785		4257		3638		4160		4829		4412		4620		4284		3315		4514		4481		2333		3407	
1027	25571	3824		6584		3246		3505		3525		5646		4265		4955		4165		2246		5492		4157		4533	8	4345	
1028	25572	4651		6088		3152		4563	9	4122		4232		3971		4101		3980		2373		5190		2039		3467		2753	
1029	25573	4651		6217		5310		4233		4731		5402		4289		4845		4808		3116		5723		4689		4000		4344	
1030	25574	4005		7380	* 9%	4713		4464		4394		4754		3627		4191		4390		3388		4240		3759		4000		3880	
1031	25575	5685	7	6423		5082		3836		4868	9	6459		2966		4713		4586		3895		5928		6072		3267		4669	
1032	25576	5620	9	7206	6%	4965		3108		4565		7281	3	3824		5552		4795		4121		7321	9	6697		3800		5249	
1033	25577	4587		6944	3%	5421		2976		4328		4205		3799		4002		4100		5507	5 ...14%	4730		4132		2600		3366	
1034	Anjali (NC)	3747		6067		2421		3902		3357		4339		3333		3836		3499		1902		4340		2746		3933		3340	
1035	25578	5620		6191		4602		3505		4576		5680		4436		5058		4556		5245	9 ...9%	5605		5597		4033		4815	
1036	25579	5168		7293	* 8%	5754	7	3373		4765		5427		4755		5091		4827		2364		6108		4769		4400		4584	
1037	25580	5233		6820	1%	4988		3968		4730		5771		5245		5508		4993		4964	...3%	6686		6144		3833		4989	
1038	25581	3295		5434		2304		3571		3057		4080		4240		4160		3549		2237		1483		1598		3667		2632	
1039	25582	4393		7276	* 8%	3181		3406		3660		5524		5858	9	5691		4492		2600		5794		4562		4000		4281	
1040	25583	4328		6740		3322		3042		3564		5673		4069		4871		4026		2745		6146		4410		2567		3488	
1041	25584	4780		6953	3%	4080		4233		4364		5212		5539		5376		4766		4022				6141		4000		5070	
1042	25585	4134		6647		4567		4696	5	4466		5117		5343		5230		4931		4891	...2%			4135		4467		4301	
1043	25586	5749	5	7026	4%	4322		3241		4437		5034		7353	1*	6193	5	4987		3424		7647	6	7068	3	3200		5134	
1044	25587	5168		6671		4550		3571		4430		5254		5245		5250		4655		5009	...4%	6635		3221		3467		3344	
1045	Zonal Check	4393		5808		4673		4497		4521		6788	4	5784		6286	4	5436	7	3261		5301		6364		4800	5	5582	2
1046	25588	5233		6738		3982		3241		4152		7397	2	3578		5488		4550		3524		5145		5082		3933		4508	
1047	25589	4134		5802		4003		4365		4168		4793		5172		4982		4583		5806	2 ...20%	5316		6035		4333		5184	
1048	25590	4587		5376		4702		3142		4143		3975		5245		4610		4266		3714		5958		4351		2733		3542	
1049	25591	4199		5327		3965		3902		4022		6541	7	3578		5060		4497		2690		6757		4808		4267		4538	
1050	25592	5362		6345		3901		4200		4487		6037		3431		4734		4392		5317	8 ...10%	6447		6705	8	3733		5219	
1051	25593	4910		6713		6310	2*	4365		5195	5 7%	5242		6152	6	5697		5517	5 2%	4574		7574	7	7051	4	3467		5259	8
1052	25594	4974		4696		5070		4398		4814		6636	6	5196		5916	9	5325	8	4411		6383		6807	6	3833		5320	6
1053	25595	4328		5892		3902		3836		4022		6037		3529		4783		4326		3252		5424		6205		4333		5269	7
1054	25596	4199		5729		4409		3175		3928		5642		4559		5101		4446		4266		7105		6102		4167		5134	
1055	25597	5556		7537	4* 11%	5719	8	3439		4905	7 1%	5693		4608		5151		4865		5344	7 ...11%	7065		5850		3800		4825	
1056	25598	5362		7909	2* 17%	6427	1*	4630	7	5473	1* 12%	6693	5	5417		6055	6	5792	1 7%	5743	3 ...19%	5951		4883		3667		4275	
1057	Local Check	4910		6368		5170		4464		4848		5466		5711		5588		5203		4819		7172		6488		3800		5144	
1058	25599	4651		6529		4091		3373		4038		5332		6176	5	5754		4743		3759		6047		4720		3000		3860	
1059	25600	5103		6847	1%	5491	9	4762	2	5119	6 5%	6383		5711		6047	7	5587	4 3%	3714		6108		5360		3800		4580	
1060	25601	3359		6569		4409		4894	1	4221		6231		7108	2*	6669	2 6%	5660	2 4%	4873	...1%	5623		5094		4200		4647	
1061	25602	4457		6529		6246	3*	3439		4714		5402		5441		5421		5132		4882	...1%	3437		5371		4567	6	4969	
1062	25603	4845		6506		4860		4762	3	4822		4783		6740	3	5762		5286	9	4194		5669		4962		4200		4581	
1063	25604	5039		6582		4199		4630	8	4622		6003		5711		5857		5136		4792		4379		7088	2	3800		5444	3
1064	25605	4457		6562		3784		4729	4	4323		5980		5245		5612		4934		3478		5412		5044		5200	2	5122	
	Exp Mean	**4787**		**6542**		**4475**		**3762**		**4341**		**5577**		**4848**		**5213**		**4666**		**3913**		**5912**		**5283**		**3831**		**4557**	
	C.D. 5%	629		446		831		476		377		1549		1292		869		560		1020		1409		1729		979		1153	
	C.V.%	6.57		5.99		9.30		6.33		7.63		13.90		13.33		11.92		12.19		13.04		11.91		16.37		12.78		18.09	
	Sowing Date	29-Jul				24-Jun		25-Jun				06-Jul		26-Jun						30-Jun		29-Jun		30-Jun		20-Jun			
	Planting Date	29-Jul				19-Jul		23-Jul						23-Jul						30-Jul		22-Jul		27-Jul		16-Jul			
	Local ©	SKL-6				Karjat 7		Pawana				GR 7		Mahisagar						MTU 1010		MTU 1010		CO 51		ADT 45			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.14 Contd.: Grain Yield (kg/ha) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	VII																Zone VII Mean (9)		Overall Mean(26)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KE		KE		KE (2)		KA		KA		KA		KA (2)		PUD								
		PTB		MNC		Mean		MND		@KRM		GNV		Mean		KBP								
1001	25546	5063		2218		3640		3413		1797		4338		3875		4500		3801		4420		81	105	330
1002	25547	3600		4695	6	4148		4060		2007		8644		6352		7688	3 *	5694	4	5799	8	91	120	329
1003	25548	6188		4403		5295		4670		2183		4663		4666		6125		4655		4905		83	95	345
1004	25549	4725		2935		3830		3626		2405	8	6463		5044		5625		4868		5332		85	98	371
1005	25550	5288		2809		4048		3095		2179		5950		4523		6188		4791		5247		92	109	321
1006	25551	6188		3619		4903		3840		2171		7269		5554		6438		5631	8	5956	4	87	101	353
1007	25552	6300		4082		5191		5220	3	1143		5506		5363		6188		5408		5743		84	113	333
1008	25553	4613		3382		3997		4585		2401		5238		4911		6313		5079		5673		85	114	349
1009	25554	6413		3013		4713		2839		2623	3	9313	5	6076		6688		5329		5771		96	105	358
1010	25555	3713		3126		3419		3639		2134		4688		4163		5313		3948		4333		79	118	334
1011	25556	3713		2812		3262		4762		2039		5544		5153		5000		4419		4711		79	101	339
1012	25557	7313	2	3453		5383	7	928		2323		9400	4	5164		5625		5284		5430		98	121	329
1013	25558	4500		4441	8	4470		4096		2405	9	5644		4870		7688	4 *	5398		6078	3	87	103	335
1014	25559	5513		4286		4899		6148	1 *	2430	6			6148		6750		5461		5695		89	110	339
1015	25560	6525		5078	2	5802	2	3871		2364		6975		5423		4625		5170		5055		87	105	336
1016	25561	5625		4733	5	5179		3852		2216		6088		4970		5375		5159		5444		88	109	340
1017	25562	3938		2203		3070		2088		1637		4969		3528		5125		3337		3951		83	102	321
1018	25563	4500		4364		4432		4096		2282		6931		5514		4500		5181		5248		86	101	341
1019	25564	4050		2493		3272		4145		1727		5506		4826		4563		4279		4794		80	95	335
1020	Gontra Bidhan-3 (NC)	7650	1	3021		5336	8	4634		1912		10131	2	7382	1	6250		5979	1	6216	1	89	106	329
1021	25565	4500		3001		3750		4701		1896		8538		6619	6	7438	7 *	5269		5232		84	101	349
1022	25566	4613		2193		3403		3309		2002		5569		4439		5125		4221		4883		86	94	335
1023	25567	5400		2304		3852		4976	6	2410	7	7863		6419	8	6375		5204		5457		93	104	359
1024	25568	6638	8	4191		5414	6	4896	8	1891		5725		5311		7688	5 *	5697	3	5654		84	103	320
1025	25569	6638	9	3052		4845		4103		1653		4200		4151		5125		4322		5008		86	99	348
1026	25570	4050		2828		3439		3065		2364		6525		4795		5875		4110		4651		86	100	340
1027	25571	2925		2296		2610		2198		1579		4750		3474		4625		3691		4349		79	95	341
1028	25572	3150		1687		2419		2411		2319		4519		3465		4500		3260		3992		84	127	315
1029	25573	6188		3298		4743		2827		2373		6438		4632		6438		4746		5014		89	99	392
1030	25574	6750	6	4439	9	5594	4	3040		2393		6056		4548		4625		4477		4659		88	89	349
1031	25575	4613		3292		3952		3614		2027		6513		5063		5625		4758		5175		90	108	360
1032	25576	4838		4046		4442		4805	9	2204		9250	6	7027	3	6250		5681	5	5746		87	104	353
1033	25577	5063		3571		4317		3706		1682		8731		6218		7438	8 *	5053		5452		90	105	375
1034	Anjali (NC)	2813		2407		2610		2857		1398		4631		3744		6063		3521		4016		76	118	323
1035	25578	4050		3928		3989		3840		2048		8044		5942		5875		5135		4937		87	129	343
1036	25579	5963		2798		4380		1514		1427		6369		3941		6688		4552		5222		91	113	352
1037	25580	5063		3058		4060		4274		2344		8975	8	6624	5	8688	1 *	5743	2	5896	5	93	106	363
1038	25581	4275		2252		3264		3034		2405		4931		3983		5000		3164		3628		75	89	328
1039	25582	4838		3775		4306		5299	2	2701	1	5319		5309		4500		4521		4925		79	87	344
1040	25583	2925		2346		2636		5116	4	2179		7144		6130		5625		4336		4617		77	101	327
1041	25584	4613		4947	3	4780		5024	5	2188		8094		6559	7	6438		5410		5704		86	109	363
1042	25585	6750	7	3236		4993		3339		1863		8819	9	6079		6688		5291		5471		96	112	350
1043	25586	3938		3683		3810		4750		2220		9506	3	7128	2	5250		5385		5796		86	110	342
1044	25587	4275		3706		3990		4219		1838		7488		5853		6438		4940		5439		85	101	373
1045	Zonal Check	6975	4	4647	7	5811	1	4017		1789		6950		5484		5625		5327		5157		84	101	359
1046	25588	3825		3287		3556		4066		2126		4681		4374		5625		4352		4635		79	94	339
1047	25589	1688		2948		2318		3974		2196		6250		5112		5375		4636		5027		88	109	348
1048	25590	5288		1708		3498		2509		2229		4900		3705		4875		4004		4578		89	121	302
1049	25591	6863	5	3462		5162		3168		2048		5713		4440		4625		4706		5048		89	101	379
1050	25592	6188		3738		4963		4976	7	1941		6881		5928		6938	*	5658	7	5679		87	107	350
1051	25593	5063		3401		4232		4194		1809		8100		6147		7188	9 *	5623	9	5862	6	87	100	347
1052	25594	4388		2692		3540		3803		1974		8550		6177		6000		5208		5435		86	105	335
1053	25595	5513		2967		4240		2955		1891		7331		5143		7938	2 *	5102		5061		88	102	332
1054	25596	4725		2711		3718		4017		2434	5	7206		5612		6125		5158		5397		86	103	332
1055	25597	6075		4278		5176		3681		1830		9056	7	6369	9	5875		5669	6	6127	2	92	103	380
1056	25598	5288		4059		4673		3425		1965		7494		5459		6000		5168		5789		93	99	380
1057	Local Check	5625		3947		4786		3901		2701	2	5725		4813		5875		5261		5468		84	100	363
1058	25599	5288		3054		4171		2808		2225		5638		4223		5438		4417		5328		84	100	347
1059	25600	5513		2862		4187		4121		2052		7275		5698		5375		4903		5499		91	97	378
1060	25601	7200	3	3419		5310	9	3083		2442	4	10169	1	6626	4	5250		5435		5798	9	102	110	354
1061	25602	6188		5202	1	5695	3	3510		1579		8369		5940		5375		5211		5428		103	124	345
1062	25603	4163		1912		3037		3608		1896		6550		5079		6438		4633		5565		88	102	377
1063	25604	6300		4834	4	5567	5	4621		1830		6938		5779		6313		5452		5800	7	90	107	355
1064	25605	5850		3243		4547		3040		1645		7969		5505		7688	6 *	5214		5549		88	111	337
	Exp Mean	**5129**		**3373**		**4251**		**3781**		**2069**		**6809**		**5283**		**5951**		**4880**		**5232**		**87**	**105**	**346**
	C.D. 5%	2049		1238		1199		876		376		942		638		500		438		224		1	21	18
	C.V.%	19.99		18.36		20.16		11.59		9.09		6.92		8.63		4.20		13.72		11.15		2.00	0.00	14.04
	Sowing Date	29-Jun		08-Jul				18-Aug		25-Jun		15-Jul				28-Aug								
	Planting Date	28-Jul		01-Aug				23-Sep		24-Jul		19-Aug				23-Sep								
	Local ©	Kanchana		PRATHYASA (MO 21)				KMP - 105 (Raksha)		MAHAVIRA		IET-19251				TPS-5								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.15 : Days to 50% flowering of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (7)	IV	V				Zone V Mean (3)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	@RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL	
1001	25546	79	78	84	80	87	80	82	81	94	79	101	85	88	71	83	59	76	94	85	80	83
1002	25547	106	100	99	102	106	97	91	94	102	94	112	85	97	86	96	61	85	99	92	90	91
1003	25548	87	87	92	88	88	84	82	83	103	79	99	89	89	71	84	62	77	96	86	81	84
1004	25549	89	90	93	91	92	85	81	83	92	78	108	91	92	71	86	58	77	98	87	82	85
1005	25550	95	97	98	97	111	90	91	90	104	95	112	96	101	77	96	63	85	104	94	88	92
1006	25551	93	92	92	92	91	86	84	85	106	79	113	97	96	78	90	61	116	97	106	82	98
1007	25552	91	90	88	89	92	82	84	83	96	78	102	97	92	73	87	59	78	97	87	83	86
1008	25553	88	81	88	86	92	84	88	86	104	86	106	99	97	78	90	61	79	98	88	83	86
1009	25554	108	101	98	102	112	93	95	94	118	84	117	91	97	87	97	61	84	104	94	88	92
1010	25555	83	85	80	83	83	82	78	80	92	75	101	87	87	73	83	51	77	88	82	76	80
1011	25556	77	76	78	77	85	72	74	73	92	72	114	85	90	69	81	57	74	88	81	75	79
1012	25557	110	110	128	116	110	107	101	104		84	113	89	95		100	76	70	109	89	101	93
1013	25558	96	98	98	97	94	87	82	85	104	80	113	90	94	86	90	62	83	98	90	87	89
1014	25559	95	93	96	95	98	91	82	86	101	82	102	93	92	78	89	64	83	103	93	85	90
1015	25560	88	91	93	91	94	83	82	82	106	77	109	87	91	79	87	64	80	98	89	84	87
1016	25561	89	94	95	93	104	86	85	85	97	81	115	92	96	77	91	66	82	100	91	83	88
1017	25562	87	86	84	85	84	87	86	87	94	86	105	93	94	77	88	58	70	95	82	83	83
1018	25563	89	91	92	91	108	77	82	80	98	79	100	97	92	78	89	67	75	103	89	81	86
1019	25564	93	77	79	83	84	72	78	75	96	78	101	77	85	71	80	56	74	98	86	79	83
1020	Gontra Bidhan-3 (NC)	88	91	91	90	104	84	83	84	117	85	105	99	96	84	92	66	85	103	94	90	92
1021	25565	89	91	93	91	86	84	82	83	95	80	103	87	90	72	85	66	77	104	90	81	87
1022	25566	89	92	93	91	89	89	85	87	104	79	125	87	97	86	91	58	83	105	94	88	92
1023	25567	97	99	101	99	105	89	95	92	103	86	104	89	93	86	93	66	87	110	98	88	95
1024	25568	84	90	93	89	89	86	83	84	97	79	103	83	88	72	85	68	75	95	85	81	83
1025	25569	80	90	93	87	104	84	86	85	104	83	115	97	98	72	92	68	77	93	85	83	84
1026	25570	93	92	93	93	105	88	87	87	104	80		101	91	73	89	68	78	94	86	85	85
1027	25571	95	93	91	93	83	86	77	81	93	75	111	82	89	73	84	48	74	86	80	79	79
1028	25572	89	91	91	90	89	84	85	84	93	80	115	90	95	76	88	59	76	91	83	81	82
1029	25573	93	96	92	94	96	87	91	89	105	90	97	93	93	79	90	69	76	105	90	88	89
1030	25574	89	89	86	88	94	84	83	84	105	80	122	86	96	76	89	68	78	104	91	85	89
1031	25575	89	98	95	94	110	89	91	90	99	89	111	87	95	79	93	67	85	102	93	88	91
1032	25576	89	96	93	93	93	89	87	88	103	81		110	95	76	89	67	81	95	88	85	87
1033	25577	90	91	94	92	101	79	91	85	106	91	97	94	94	79	90	67	83	98	90	88	89
1034	Anjali (NC)	78	74	79	77	79	74	74	74	88	74	77	79	77	64	74	50	71	87	79	77	78
1035	25578	96	96	97	96	103	86	83	84	94	89	94	99	94	77	90	61	78	96	87	83	85
1036	25579	95	98	96	96	105	91	94	93	116	93	99	93	95	82	94	67	88	107	97	93	96
1037	25580	97	99	101	99	108	98	96	97	105	94	77	95	88	82	93	70	87	106	96	97	96
1038	25581	75	71	78	74	77	79	74	76	87	73	83	84	80	61	76	50	68	85	76	73	75
1039	25582	77	78	79	78	83	77	78	78	94	79	93	87	86	69	81	54	75	91	83	77	81
1040	25583	79	77	80	78	84	71	76	73	86	77	77	83	79	67	76	53	73	86	79	78	79
1041	25584	91	92	94	92	94	84	82	83	104	88	96	80	88	77	86	69	81	98	89	83	87
1042	25585	107	100	104	104	99	96	95	95	107	86	88	109	94	92	95	76	91	109	100	92	97
1043	25586	90	92	93	92	104	83	83	83	103	87	89	92	89	77	88	69	87	99	93	82	89
1044	25587	89	91	94	91	90	87	87	87	102	91	94	89	91	76	88	61	87	98	92	85	90
1045	Zonal Check	96		100	98	79	76	76	76	94	78	102	80	87	67	80	51	84	88	86	85	86
1046	25588	77	77	79	78	86	79	75	77	94	84	77	83	81	70	79	54	77	91	84	79	82
1047	25589	96	91	97	94	97	87	92	90	115	92	87	91	90	70	88	67	84	98	91	87	89
1048	25590	108	91	128	109	94	89	93	91	98	87	98	85	90	78	89	67	87	98	92	87	90
1049	25591	95	99	100	98	103	93	91	92	104	93	88	91	90	80	91	67	86	101	93	87	91
1050	25592	88	92	95	92	94	89	91	90	94	91	93	93	92	77	90	67	78	98	88	85	87
1051	25593	89	99	100	96	94	89	88	88	97	89	84	95	89	79	88	67	85	96	90	86	89
1052	25594	92	92	93	92	93	86	85	85	97	88	104	88	93	75	88	67	81	101	91	85	89
1053	25595	79	97	92	89	108	91	86	88	105	88	89	90	89	80	90	67	84	101	92	87	90
1054	25596	89	90	90	90	105	84	81	82	102	89	87	84	86	73	86	67	78	96	87	82	85
1055	25597	93	96	98	96	109	94	92	93	107	93	89	93	92	80	93	67	86	103	94	92	93
1056	25598	106	107	105	106	105	97	79	88	106	91	88	91	90	81	90	76	89	106	97	100	98
1057	Local Check	78	94	92	88	91	83	79	81	74	85	90	89	88	88	86	51	79	89	84	86	84
1058	25599	88	91	84	88	93	79	81	80	99	90	87	93	90	73	85	60	78	98	88	80	85
1059	25600	105	98	101	101	94	93	96	94	99	93	91	90	91	84	91	61	88	102	95	94	94
1060	25601	109	113		111	114	115	111	113	118	105	106	94	101		107	86	106	113	109	113	110
1061	25602	109	115		112	115	121	109	115		107	114	104	108		111	76	109	113	111	112	111
1062	25603	97	96	93	95	105	89	91	90	99	89	89	87	88	76	89	66	82	99	90	87	89
1063	25604	98	100	94	97	103	87	91	89	104	90	95	94	93	81	92	66	84	98	91	87	89
1064	25605	93	93	92	92	94	84	86	85	105	88	91	87	88	80	87	59	84	103	93	88	91
	Exp Mean	**91**	**92**	**93**	**92**	**96**	**87**	**86**	**86**	**100**	**85**	**99**	**90**	**91**	**77**	**89**	**63**	**81**	**98**	**90**	**85**	**88**
	C.D. 5%	8	2	0	3	2	6	2	3	2	1	4	7	3	0	1	2	1	1	1	1	1
	C.V.%	4.17	0.91	0.00	2.46	0.84	3.44	0.96	2.53	0.84	0.56	2.24	3.81	2.60	0.21	2.23	1.90	0.86	0.71	0.43	0.71	0.75

Table No. 3.15 Contd.: Days to 50% Flowering of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	VII													Zone VII Mean (10)	Overall Mean (28)
		MH	MH	MH (3)	GU	GU	GU (2)		A.P.	TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		KJT	VDG	Mean	VYR	DBH	Mean		MTU	KNM	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
1001	25546	80	90	83	78	85	81	83	81	75	82	74	78	87	81	84	91	84	89	88	75	82	81
1002	25547	89	91	90	86	96	91	90	94	87	87	90	88	87	89	88	92	92	90	91	80	89	91
1003	25548	83	88	84	79	84	81	83	79	78	84	85	84	85	86	85	94	88	81	87	76	83	83
1004	25549	80	91	84	80	86	83	84	85	80	86	80	83	87	88	88	94	88	86	89	78	85	85
1005	25550	91	94	91	85	95	90	91	99	93	92	89	90	95	81	88	96	88	94	93	89	91	92
1006	25551	86	90	86	83	85	84	86	82	80	83	80	81	88	77	83	89	88	86	87	75	83	87
1007	25552	84	89	85	83	85	84	85	85	82	84	78	81	86	72	79	88	88	86	87	80	83	84
1008	25553	82	93	86	84	83	83	85	82	77	86	74	80	89	77	83	95	90	93	93	74	83	85
1009	25554	95	102	95	92	96	94	96	99	96	100	99	99	96	94	95	109	90	99	99	94	97	96
1010	25555	78	83	79	74	78	76	78	78	75	75	85	80	82	73	77	82	75	85	81	71	78	79
1011	25556	74	84	77	75	78	76	78	76	75	82	85	83	82	73	78	84	92	84	87	74	81	79
1012	25557	106	107	105	96	76	86	96	97	102	103	84	93	76	95	85	112	90	105	102	95	96	98
1013	25558	85	91	87	84	90	87	87	81	80	83	86	84	88	75	82	86	89	86	87	74	83	87
1014	25559	86	94	88	87	91	89	89	97	86	86	92	89	92	82	87	93	89		91	81	88	89
1015	25560	90	95	90	85	86	86	89	82	80	93	92	92	93	85	89	98	89	93	93	77	88	87
1016	25561	84	95	87	81	91	86	88	86	80	90	89	89	91	92	91	91	90	86	89	74	87	88
1017	25562	76	84	81	76	79	78	79	81	81	77	89	83	85	88	86	84	88	86	86	71	83	83
1018	25563	84	93	86	81	85	83	86	83	80	89	89	89	88	85	86	93	85	88	88	77	85	86
1019	25564	77	86	80	76	79	77	79	79	74	79	74	76	85	77	81	87	87	81	85	74	80	80
1020	Gontra Bidhan-3 (NC)	88	97	91	85	86	85	89	81	86	96	81	88	92	88	90	104	88	93	95	77	89	89
1021	25565	83	91	85	78	81	79	83	83	80	89	85	87	88	77	82	93	85	86	88	73	84	84
1022	25566	85	95	89	85	81	83	86	82	80	80	79	79	88	77	83	94	85	87	88	76	83	86
1023	25567	92	96	92	88	92	90	92	102	97	96	90	93	96	87	91	96	90	94	93	80	93	93
1024	25568	83	90	84	77	83	80	83	85	81	83	82	82	88	79	84	92	88	89	89	78	84	84
1025	25569	78	91	84	82	83	82	83	85	80	83	84	83	88	85	87	86	93	85	88	71	84	86
1026	25570	86	93	88	81	90	85	87	85	87	87	87	87	89	86	87	91	76	89	85	75	85	86
1027	25571	78	88	81	73	79	76	79	80	72	77	84	80	81	70	75	72	82	80	78	63	76	79
1028	25572	85	86	84	75	82	78	82	87	80	86	90	88	88	87	88	83	88	81	84	69	84	84
1029	25573	86	94	89	83	90	86	88	85	88	91	91	91	95	90	92	96	90	94	93	84	90	89
1030	25574	87	95	89	81	84	82	86	97	80	93	83	88	92	86	89	99	88	93	93	76	89	88
1031	25575	91	94	91	89	93	91	92	100	88	90	80	85	90	88	89	92	90	90	91	77	88	90
1032	25576	85	93	88	81	94	87	88	89	82	90	86	88	83	80	81	85	88	88	87	78	85	87
1033	25577	93	103	94	84	96	90	94	86	85	93	87	90	97	83	90	99	92	93	95	87	90	90
1034	Anjali (NC)	94	87	86	71	72	71	81	74	72	76	85	80	84	72	78	76	75	77	76	68	76	76
1035	25578	88	95	89	85	90	87	89	87	81	90	85	87	94	73	83	89	90	87	89	74	85	87
1036	25579	84	95	91	89	95	92	91	88	86	93	81	87	93	82	87	96	91	90	92	80	88	91
1037	25580	95	100	97	86	97	91	94	98	89	96	84	90	97	93	95	96	91	99	95	90	93	93
1038	25581	94	82	83	68	67	67	78	86	65	68	90	79	85	77	81	76	75	77	76	67	76	75
1039	25582	76	88	80	72	75	73	78	95	72	82	84	83	85	74	79	84	75	78	79	74	80	79
1040	25583	79	89	82	74	74	74	79	79	72	78	85	81	83	77	80	88	77	79	81	68	78	77
1041	25584	82	102	89	80	86	83	87	84		92	80	86	87	77	82	94	91	92	92	75	86	86
1042	25585	95	101	96	92	96	94	96	98		103	88	95	105	97	101	101	92	99	97	88	97	96
1043	25586	83	94	86	81	76	78	83	81	82	88	85	86	89	77	83	96	89	88	91	75	85	86
1044	25587	82	91	86	81	81	81	84	86	82	86	80	83	89	78	83	86	88	86	87	76	83	85
1045	Zonal Check	85	90	87	83	85	84	85	86	88	90	85	87	95	79	87	92	89	89	90	80	87	84
1046	25588	78	85	80	73	74	74	77	76	80	81	83	82	87	75	81	90	87	85	87	71	81	79
1047	25589	84	97	89	86	91	88	89	90	88	91	82	86	87	77	82	97	90	86	91	76	86	88
1048	25590	97	97	93	84	91	88	92	93	77	86	84	85	92	78	85	86	88	79	84	73	83	89
1049	25591	86	95	89	83	90	86	88	87	86	90	85	87	91	79	85	98	90	94	94	80	88	89
1050	25592	88	92	88	83	88	85	88	93	80	85	82	83	92	77	84	90	89	92	90	76	85	87
1051	25593	85	94	88	83	86	84	87	84	82	90	89	89	94	81	88	92	88	91	90	75	86	87
1052	25594	86	93	88	81	85	83	86	83	81	87	88	87	90	77	84	94	85	88	89	75	85	86
1053	25595	89	95	90	84	86	85	88	84	81	93	85	89	92	84	88	107	83	94	95	79	88	88
1054	25596	82	90	84	80	84	82	84	83	82	87	91	89	87	85	86	93	103	92	96	76	88	86
1055	25597	89	101	94	84	94	89	92	93	95	92	87	89	101	85	93	99	92	93	95	80	91	92
1056	25598	95	105	100	92	86	89	94	100	91	94	82	88	105	88	97	94	90	93	92	78	91	93
1057	Local Check	86	105	92	89	85	87	91	81	83	83	73	78	90	82	86	88	88	78	85	76	82	84
1058	25599	80	94	84	80	81	80	84	91	75	88	87	87	92	84	88	90	85	87	87	75	85	84
1059	25600	89	94	92	86	91	88	90	89	97	90	86	88	100	88	94	88	85	92	88	80	89	91
1060	25601	99	102	104	95	96	95	98	101	103	103	93	98	107	90	99	100	89	103	97	82	97	102
1061	25602	105	109	109	96	79	87	97	110	110	104	89	97	96	92	94	102	90	104	99	89	99	103
1062	25603	88	94	89	84	90	87	89	87	87	90	80	85	90	76	83	91	89	92	91	74	85	88
1063	25604	88	95	90	84	91	87	89	94	102	91	78	84	90	77	83	96	88	92	92	81	89	90
1064	25605	96	96	93	81	90	85	91	82	86	100	82	91	95	81	88	90	92	93	92	89	89	88
	Exp Mean	**86**	**93**	**88**	**82**	**86**	**84**	**87**	**87**	**83**	**88**	**85**	**86**	**90**	**82**	**86**	**92**	**88**	**89**	**89**	**77**	**86**	**87**
	C.D. 5%	2	2	1	1	1		1	4	2	1	5	2	7	1	3	6	0	4	2	3	1	1
	C.V.%	1.18	1.24	1.15	0.60	0.36		1.01	2.20	1.16	0.73	2.92	1.95	3.68	0.43	2.75	3.01	0.00	2.39	2.23	1.93	2.23	2.00

Table No. 3.16: Plant Height (cm) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (7)	IV	V				Zone V Mean (3)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	@RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL	
1001	25546	103	115	84	101	100	109	113	111	64	115	102	103	106	107	107	100	104	102	103	118	108
1002	25547	128	121	122	124	117	128	118	123	68	142	111	120	124	135	125	99	124	122	123	121	122
1003	25548	98	90	95	94	79	97	95	96	53	108	98	117	108	104	100	82	107	90	99	96	98
1004	25549	100	95	103	99	90	107	101	104	57	105	109	96	103	103	101	74	110	100	105	109	106
1005	25550	123	108	103	111	92	108	108	108	62	123	113	107	114	127	111	92	120	111	116	118	116
1006	25551	101	101	108	103	94	94	99	96	53	108	114	102	108	107	103	95	104	95	99	108	102
1007	25552	130	119	121	123	116	122	113	118	71	122	104	126	117	129	119	105	108	103	105	122	111
1008	25553	129	117	64	103	113	117	114	115	60	130	105	146	127	133	122	105	115	111	113	120	115
1009	25554	113	93	99	102	91	100	103	101	51	121	117	105	114	105	106	94	113	93	103	116	107
1010	25555	123	130	132	128	112	142	117	129	80	128	99	114	114	133	121	119	122	119	121	132	124
1011	25556	100	104	106	103	94	101	99	100	60	113	115	114	114	114	107	86	112	95	104	114	107
1012	25557	117	119	109	115	111	129	124	126		135	111	99	115		118	116	138	109	124	144	130
1013	25558	117	101	104	107	91	107	102	104	61	117	111	113	114	114	108	92	115	95	105	112	107
1014	25559	116	107	118	114	105	114	111	112	72	108	104	128	114	124	113	93	128	96	112	115	113
1015	25560	101	108	104	104	97	113	98	105	64	118	108	109	112	115	108	95	114	97	106	111	107
1016	25561	116	109	115	113	100	120	109	114	73	95	115	107	106	121	110	99	113	86	99	115	105
1017	25562	104	106	113	108	99	112	100	106	50	97	106	104	102	121	106	101	108	82	95	99	96
1018	25563	105	109	106	107	95	112	102	107	62	87	100	103	97	116	102	91	121	87	104	117	108
1019	25564	97	91	104	97	90	107	87	97	49	108	103	117	109	101	102	87	88	82	85	99	90
1020	Gontra Bidhan-3 (NC)	114	107	103	108	90	111	100	105	55	111	106	106	108	113	105	100	133	75	104	110	106
1021	25565	109	104	104	106	90	111	95	103	54	108	103	121	111	107	105	90	103	83	93	111	99
1022	25566	100	93	95	96	87	107	88	97	54	99	122	124	115	92	103	82	105	75	90	91	90
1023	25567	94	100	101	98	104	102	104	103	59	108	102	106	106	115	106	92	121	92	107	112	108
1024	25568	101	107	102	103	91	110	101	105	63	105	102	104	104	114	104	93	97	96	96	112	102
1025	25569	93	92	103	96	86	105	98	101	54	111	114	127	117	105	107	82	109	91	100	96	99
1026	25570	97	103	99	100	87	101	94	98	59	103		117	110	117	103	91	103	97	100	111	104
1027	25571	99	102	128	110	77	98	95	96	62	115	109	104	109	115	102	84	94	94	94	97	95
1028	25572	137	144	121	134	108	282	127	205	72	119	115	103	112	145	143	118	135	123	129	131	130
1029	25573	107	103	110	107	86	101	100	100	58	127	96	101	108	109	103	78	97	102	100	95	98
1030	25574	87	85	91	88	73	94	81	87	49	116	122	116	118	91	99	74	102	76	89	92	90
1031	25575	115	104	110	110	92	109	119	114	62	109	112	116	112	123	111	87	123	113	118	113	116
1032	25576	100	105	112	106	92	114	110	112	56	112		114	113	115	109	92	115	98	107	110	108
1033	25577	107	107	116	110	92	91	98	95	62	108	96	113	106	114	102	93	116	103	109	112	110
1034	Anjali (NC)	107	117	126	117	121	114	115	114	66	138	78	124	113	102	113	107	126	134	130	129	130
1035	25578	131	140	145	139	117	142	136	139	90	141	94	114	117	146	127	117	142	131	137	144	139
1036	25579	110	115	107	111	105	121	116	119	62	123	98	99	107	132	114	101	120	127	124	113	120
1037	25580	108	104	92	101	98	107	102	105	57	118	78	138	111	124	109	79	115	103	109	116	111
1038	25581	77	89	88	85	88	99	91	95	49	87	85	105	92	102	94	81	98	91	95	92	94
1039	25582	77	88	88	84	78	95	88	91	51	95	91	95	94	101	92	32	110	78	94	93	94
1040	25583	99	110	108	106	88	104	106	105	63	110	77	125	104	119	104	98	106	99	102	111	105
1041	25584	110	117	97	108	107	112	108	110	60	112	95	111	106	121	109	109	118	108	113	115	114
1042	25585	107	126	96	110	98	117	116	116	48	124	89	112	108	119	111	112	121	106	113	112	113
1043	25586	106	114	108	109	106	119	107	113	64	120	90	127	112	122	113	106	117	105	111	119	114
1044	25587	98	99	97	98	96	105	98	101	72	100	96	160	119	113	110	87	103	83	93	97	94
1045	Zonal Check	97		81	89	82	98	91	94	50	100	103	101	101	94	95	96	104	73	89	109	95
1046	25588	94	94	104	97	71	99	93	96	51	105	79	89	91	98	91	92	101	77	89	94	91
1047	25589	108	109	141	119	105	117	113	115	62	121	86	113	107	131	112	92	122	94	108	118	111
1048	25590	108	117	125	117	121	141	122	131	76	140	98	124	121	137	126	106	126	114	120	140	127
1049	25591	100	102	96	99	98	102	97	99	53	109	88	112	103	117	103	90	102	93	98	104	100
1050	25592	106	107	100	104	96	117	111	114	59	115	92	106	104	98	105	101	119	94	106	117	110
1051	25593	99	94	113	102	83	182	95	138	60	100	85	121	102	98	109	82	108	81	95	97	95
1052	25594	106	109	105	107	96	108	107	107	57	111	103	124	113	109	108	91	120	86	103	106	104
1053	25595	99	101	109	103	81	99	98	98	59	106	90	106	101	111	99	103	121	82	101	109	104
1054	25596	103	108	112	108	98	107	103	105	58	109	88	104	100	111	103	90	119	77	98	110	102
1055	25597	105	105	113	108	92	106	108	107	56	120	90	111	107	111	106	84	104	91	97	109	101
1056	25598	104	95	89	96	88	106	92	99	51	112	87	114	105	105	100	93	103	91	97	97	97
1057	Local Check	90	93	109	97	112	110	88	99	65	115	112	99	109	111	107	99	108	76	92	95	93
1058	25599	105	99	110	105	88	100	98	99	58	124	88	138	117	105	106	97	107	95	101	109	104
1059	25600	99	97	99	98	93	108	93	100	47	110	89	105	101	106	101	83	107	87	97	93	96
1060	25601	101	109		105	98	117	107	112	50	122	106	95	108		108	121	126	103	114	113	114
1061	25602	109	125		117	114	130	118	124		119	114	125	119		120	122	136	124	130	121	127
1062	25603	102	98	107	102	95	110	101	105	57	115	88	111	105	110	104	90	111	93	102	111	105
1063	25604	107	109	115	110	98	118	111	114	61	126	97	112	112	112	110	96	108	98	103	109	105
1064	25605	110	123	138	124	87	123	102	112	56	123	90	127	113	103	108	93	113	103	108	122	113
	Exp Mean	**106**	**106**	**107**	**106**	**96**	**114**	**104**	**109**	**60**	**114**	**100**	**113**	**109**	**114**	**108**	**94**	**113**	**97**	**105**	**111**	**107**
	C.D. 5%				0				8							12				0		0
	C.V.%				0.00				0.00							0.00				0.00		0.00

Table No. 3.16 Contd.: Plant Height (cm) of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	VII														Zone VII Mean (10)	Overall Mean (28)
		MH	MH	MH (3)	GU	GU	GU (2)		A.P.	TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		KJT	VDG	Mean	VYR	DBH	Mean		MTU	KNM	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
1001	25546	119	65	101	116	115	116	104	126	113	103	90	96	121	102	111	85	105	82	91	122	105	105
1002	25547	128	99	116	110	128	119	116	143	137	125	111	118	126	104	115	92	105	117	105	135	120	120
1003	25548	106	78	93	124	105	115	103	98	95	80	81	80	100	84	92	75	93	86	85	110	90	95
1004	25549	90	85	95	116	110	113	100	110	106	85	74	80	102	93	98	74	96	97	89	107	94	98
1005	25550	131	89	113	123	119	121	116	131	122	87	94	90	117	102	110	78	93	96	89	118	104	109
1006	25551	110	90	103	106	117	111	106	117	110	86	79	83	95	92	94	74	100	98	91	122	97	101
1007	25552	119	96	112	125	131	128	118	123	129	91	106	99	116	100	108	90	105	101	99	106	107	113
1008	25553	128	89	112	119	132	126	117	136	122	93	112	102	127	102	114	94	94	106	98	123	111	114
1009	25554	104	83	101	115	133	124	109	125	97	98	103	100	120	98	109	72	116	104	98	114	105	105
1010	25555	118	94	115	117	134	126	116	131	122	103	110	106	119	103	111	96	98	100	98	136	112	118
1011	25556	92	82	96	113	114	114	101	108	111	87	87	87	102	98	100	74	106	84	88	109	97	101
1012	25557	131	103	126	140	128	134	125	143	131	122	120	121	140	107	124	83	97	127	102	131	120	121
1013	25558	104	80	99	119	116	118	105	114	111	92	91	91	109	95	102	75	104	83	87	109	98	103
1014	25559	107	94	105	110	131	121	111	128	113	91	91	91	114	97	106	86	101		93	129	105	110
1015	25560	113	95	106	114	117	116	110	108	104	87	105	96	115	99	107	76	105	97	93	112	101	105
1016	25561	122	109	115	115	136	126	120	129	106	95	95	95	123	104	114	90	78	104	91	127	105	109
1017	25562	102	81	94	124	122	123	107	119	99	84	98	91	106	99	102	74	102	88	88	94	96	102
1018	25563	96	79	97	126	114	120	104	105	110	97	89	93	103	98	100	78	90	97	88	110	98	101
1019	25564	82	84	88	131	106	119	101	105	98	77	84	81	95	97	96	73	98	79	83	103	91	95
1020	Gontra Bidhan-3 (NC)	113	101	108	114	119	116	112	128	114	102	91	96	101	97	99	77	96	100	91	126	103	106
1021	25565	102	89	101	112	114	113	104	118	109	98	84	91	98	87	92	80	87	103	90	106	97	101
1022	25566	99	87	92	113	108	111	102	99	92	74	84	79	102	78	90	71	87	77	79	112	88	94
1023	25567	107	96	105	119	118	118	110	121	109	98	95	96	106	100	103	75	86	106	89	110	101	104
1024	25568	108	100	107	110	118	114	109	123	109	95	88	91	105	96	101	78	91	100	90	119	100	103
1025	25569	106	97	100	126	122	124	113	122	94	92	83	88	105	74	89	75	88	78	81	111	92	99
1026	25570	109	95	105	112	115	114	108	115	101	87	86	86	102	92	97	78	85	95	86	109	95	100
1027	25571	99	88	95	118	108	113	103	98	98	77	63	70	87	77	82	66	113	81	87	85	85	95
1028	25572	137	117	128	109	137	123	125	151	141	127	99	113	129	75	102	102	86	125	104	125	116	127
1029	25573	104	101	100	94	110	102	102	104	98	86	99	92	103	104	104	72	95	105	90	100	96	99
1030	25574	93	85	90	96	97	96	93	103	82	77	76	76	94	79	87	68	87	78	78	88	83	89
1031	25575	117	109	113	100	122	111	112	131	113	91	91	91	114	98	106	81	101	105	96	94	102	108
1032	25576	114	100	108	102	125	113	110	125	116	97	82	90	106	87	96	82	98	102	94	96	99	104
1033	25577	101	102	105	119	146	133	117	111	102	96	96	96	119	98	109	71	106	101	93	117	102	105
1034	Anjali (NC)	102	122	118	134	125	129	121	123	133	117	88	102	133	97	115	181	82	92	119	129	117	118
1035	25578	146	124	138	111	146	128	132	156	149	142	93	118	136	99	117	102	98	128	109	133	123	129
1036	25579	125	107	115	125	128	126	121	120	121	86	100	93	128	104	116	85	106	110	100	128	109	113
1037	25580	105	94	105	116	122	119	109	136	112	92	90	91	110	96	103	80	105	106	97	111	104	106
1038	25581	89	68	83	113	93	103	91	114	72	70	84	77	82	87	84	65	103	83	84	88	85	89
1039	25582	95	75	87	121	95	108	96	79	98	71	77	74	99	78	89	70	100	73	81	106	85	87
1040	25583	106	93	103	123	108	115	107	111	118	73	79	76	101	93	97	77	88	102	89	103	94	101
1041	25584	117	98	110	110	126	118	113	132		102	87	95	112	92	102	89	107	103	99	123	105	109
1042	25585	122	105	113	115	123	119	116	128		112	110	111	118	98	108	81	109	117	102	123	110	112
1043	25586	116	108	114	108	129	119	115	129	125	90	90	90	112	98	105	85	102	116	101	118	107	110
1044	25587	93	89	93	112	119	115	103	117	104	88	86	87	100	94	97	75	99	104	93	105	97	101
1045	Zonal Check	111	106	108	105	127	116	112	128	102	96	96	96	123	103	113	76	100	100	92	126	105	101
1046	25588	99	89	94	111	110	111	102	102	94	88	80	84	105	85	95	73	101	92	89	109	93	94
1047	25589	112	112	114	112	122	117	115	114	115	90	110	100	116	97	107	85	106	85	92	118	104	109
1048	25590	129	122	130	102	139	121	123	134	130	116	99	107	138	103	121	91	110	111	104	142	117	121
1049	25591	100	87	97	114	121	118	106	116	119	90	92	91	115	92	104	74	92	113	93	105	101	101
1050	25592	115	101	111	126	127	126	117	131	120	87	89	88	117	96	106	82	102	106	97	110	104	107
1051	25593	103	93	98	107	113	110	104	114	101	96	85	91	105	77	91	72	89	102	88	102	94	100
1052	25594	113	105	108	117	128	122	116	116	104	91	104	97	117	99	108	74	92	99	88	110	101	105
1053	25595	106	96	104	122	119	121	111	105	107	95	98	97	115	94	104	65	99	103	89	122	100	102
1054	25596	105	104	106	109	123	116	110	108	107	97	107	102	106	98	102	74	98	94	89	117	101	103
1055	25597	113	101	108	101	126	113	110	125	117	93	84	88	108	87	97	69	94	113	92	109	100	103
1056	25598	104	95	99	111	116	113	106	119	102	85	102	94	109	82	96	67	95	96	86	103	96	99
1057	Local Check	97	100	97	107	117	112	105	121	102	90	81	85	104	99	101	70	86	93	83	116	96	100
1058	25599	109	100	106	106	120	113	109	113	96	74	83	78	100	88	94	73	83	94	83	114	92	100
1059	25600	102	84	93	121	118	119	106	114	95	72	86	79	107	99	103	71	82	97	83	107	93	97
1060	25601	116	116	115	93	131	112	114	126	104	112	110	111	116	104	110	82	103	112	99	118	109	110
1061	25602	134	141	132	134	147	141	139	163	118	114	136	125	139	105	122	89	106	112	102	135	122	124
1062	25603	109	95	105	107	124	115	108	115	105	90	106	98	110	97	104	71	96	101	89	103	99	102
1063	25604	108	107	108	130	121	125	116	122	104	85	85	85	111	98	104	76	95	104	92	127	101	107
1064	25605	122	115	120	111	124	117	118	128	115	114	83	98	125	101	113	88	87	113	96	140	109	111
	Exp Mean	**110**	**97**	**106**	**115**	**121**	**118**	**111**	**120**	**110**	**94**	**93**	**93**	**111**	**95**	**103**	**80**	**97**	**100**	**92**	**114**	**101**	**105**
	C.D. 5%						14						8			0							21
	C.V.%						0.00						0.00			0.00							0.00

Table No. 3.17: Panicles/ M² of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	II			Zone II Mean (3)	III										Zone III Mean (7)	IV	V				Zone V Mean (3)
		UT	PUN	HAR		OD	BI	BI	BI (2)	JH	W.B	W.B	W.B	W.B (3)	U.P.		TR	M.P.	M.P.	M.P. (2)	MH	
		PNT	LDN	KUL		JYP	PTN-ICAR	SBR	Mean	@RCI	CHN	PNB	KOL	Mean	VRN		ARD	WRS	JBP	Mean	SKL	
1001	25546	265	333	311	303	545	229	258	243	142	314	163	195	224	347	293	312	413	292	352	234	313
1002	25547	333	274	310	305	445	214	222	218	85	446	160	236	281	336	294	176	302	271	286	208	260
1003	25548	329	314	314	319	595	251	237	244	86	314	182	276	257	435	327	242	363	301	332	246	303
1004	25549	321	320	368	336	715	324	310	317	76	281	191	275	249	454	364	238	459	310	385	254	341
1005	25550	276	284	342	301	485	235	247	241	80	314	188	158	220	332	280	190	315	218	267	200	244
1006	25551	346	297	368	337	665	266	243	254	50	281	225	187	231	403	324	170	433	279	356	272	328
1007	25552	340	264	406	337	475	257	188	222	104	281	181	193	218	398	282	135	313	274	293	269	285
1008	25553	365	330	362	352	520	244	256	250	82	248	179	234	220	346	289	203	375	315	345	240	310
1009	25554	376	310	278	321	485	274	249	261	52	413	261	295	323	393	338	253	375	245	310	270	296
1010	25555	324	234	370	309	615	257	233	245	77	396	173	249	272	408	333	106	344	295	319	233	290
1011	25556	335	301	316	317	745	256	280	268	102	215	163	276	218	376	330	162	362	290	326	176	276
1012	25557	334	215	362	303	545	281	211	246		314	163	206	227		287	142	349	256	302	213	272
1013	25558	319	261	354	311	545	259	241	250	82	297	184	347	276	346	317	185	332	323	327	235	296
1014	25559	369	261	292	307	695	248	263	255	100	347	166	350	287	361	347	153	335	350	342	178	287
1015	25560	407	248	281	312	515	253	302	277	69	248	159	282	229	356	302	186	324	354	339	179	286
1016	25561	330	264	417	337	515	279	211	245	91	264	182	288	244	366	300	267	313	275	294	213	267
1017	25562	343	254	343	313	550	281	243	262	78	297	194	237	243	360	309	222	258	324	291	166	249
1018	25563	329	281	326	312	655	258	215	236	112	347	169	319	278	375	334	156	322	273	298	202	266
1019	25564	291	337	283	303	485	274	209	241	76	281	215	252	249	387	300	182	325	365	345	226	305
1020	Gontra Bidhan-3 (NC)	308	284	327	306	465	236	236	236	46	314	190	257	253	369	295	159	278	216	247	157	217
1021	25565	335	330	403	356	650	257	257	257	140	297	136	300	244	427	332	162	378	290	334	198	289
1022	25566	317	297	385	333	495	258	245	251	79	297	207	280	261	410	313	233	336	280	308	248	288
1023	25567	363	327	345	345	445	234	270	252	71	330	215	339	294	364	314	139	342	337	339	253	310
1024	25568	257	307	261	275	545	234	225	229	120	297	176	325	266	318	303	182	214	320	267	142	225
1025	25569	368	330	367	355	460	293	267	280	136	314	241	253	269	449	325	246	337	385	361	218	313
1026	25570	337	287	296	307	560	332	208	270	67	248		249	248	408	334	186	342	274	308	254	290
1027	25571	434	297	329	353	565	289	223	256	143	248	216	242	235	403	312	198	391	338	364	133	287
1028	25572	331	255	251	279	535	223	244	233	81	215	227	258	233	336	291	111	390	310	350	212	304
1029	25573	326	386	363	358	760	328	320	324	92	281	239	326	282	499	393	206	354	274	314	312	313
1030	25574	387	267	259	304	565	325	293	309	86	248	136	260	215	441	324	209	313	324	318	218	285
1031	25575	395	258	356	336	525	341	211	276	118	281	190	296	255	391	319	208	351	374	362	277	334
1032	25576	331	350	388	356	460	294	256	275	108	231		258	245	445	324	243	334	280	307	238	284
1033	25577	308	271	335	304	640	311	275	293	57	413	251	304	323	419	373	231	405	379	392	220	335
1034	Anjali (NC)	276	224	280	260	465	219	190	204	72	248	210	331	263	360	289	129	380	260	320	210	283
1035	25578	339	258	295	297	555	265	255	260	119	347	243	254	281	360	325	227	342	324	333	189	285
1036	25579	264	314	280	286	530	232	262	247	48	380	243	376	333	386	344	227	325	359	342	229	304
1037	25580	227	251	377	285	730	304	233	268	101	413	293	224	310	373	367	160	459	395	427	239	364
1038	25581	345	277	264	295	505	279	256	267	133	248	201	299	249	395	312	103	341	281	311	238	286
1039	25582	297	268	297	287	650	270	286	278	120	347	243	269	286	368	347	172	337	274	305	189	266
1040	25583	283	261	323	289	460	213	210	211	87	248	206	228	227	319	269	210	467	255	361	193	305
1041	25584	330	310	310	317	645	299	238	269	107	429	189	239	286	351	341	218	455	264	359	182	300
1042	25585	267	294	343	301	660	309	256	282	60	413	196	318	309	355	358	167	362	354	358	174	296
1043	25586	278	288	340	302	395	282	305	293	92	413	231	285	309	338	321	151	348	299	323	187	278
1044	25587	375	271	378	341	555	306	269	288	107	380	209	208	266	454	340	189	427	354	390	233	338
1045	Zonal Check	334		402	368	565	321	245	283	106	281	230	328	279	431	343	180	372	321	346	227	307
1046	25588	351	254	298	301	570	303	225	264	119	330	262	280	290	372	334	227	353	318	336	255	309
1047	25589	306	248	315	290	605	238	241	239	74	363	263	269	298	305	326	180	385	314	349	176	292
1048	25590	261	231	346	279	430	248	257	253	52	314	212	198	241	309	281	222	276	282	279	185	248
1049	25591	359	267	335	320	560	260	250	255	104	380	299	209	296	398	336	1136	304	320	312	194	272
1050	25592	309	251	364	308	550	255	262	258	93	413	258	257	309	385	340	164	445	283	364	218	315
1051	25593	283	278	303	288	545	319	275	297	115	281	163	230	224	426	320	169	333	283	308	246	287
1052	25594	265	271	294	276	515	229	223	226	85	314	254	250	272	397	311	161	357	209	283	215	260
1053	25595	424	225	286	312	575	214	340	277	45	281	212	256	249	366	320	210	268	285	277	135	229
1054	25596	383	281	336	333	495	234	220	227	118	264	227	310	267	339	298	167	339	245	292	246	277
1055	25597	321	334	392	349	635	317	265	291	107	380	266	281	309	338	354	177	356	340	348	253	316
1056	25598	386	311	343	346	515	312	270	291	126	347	260	268	291	480	350	188	459	361	410	233	351
1057	Local Check	279	314	363	319	495	333	268	300	36	380	275	223	292	463	348	186	249	349	299	254	284
1058	25599	388	254	395	346	455	330	267	298	101	314	185	308	269	366	318	250	343	312	327	271	308
1059	25600	281	267	403	317	560	284	285	284	54	363	285	312	320	432	360	296	384	310	347	233	309
1060	25601	320	254		287	555	234	263	248	45	314	211	297	274		312	308	357	412	384	163	310
1061	25602	271	353		312	450	302	284	293		264	232	278	258		301	309	290	350	320	202	280
1062	25603	338	324	363	341	630	312	271	291	110	380	310	236	309	419	365	216	311	373	342	180	288
1063	25604	474	314	353	380	450	264	259	261	144	396	237	319	317	397	332	175	327	313	320	200	280
1064	25605	295	307	323	308	490	265	198	232	41	363	368	223	318	409	331	276	331	332	331	158	273
	Exp Mean	**329**	**285**	**335**	**316**	**551**	**272**	**251**	**262**	**90**	**320**	**216**	**268**	**268**	**386**	**323**	**211**	**351**	**308**	**329**	**215**	**291**
	C.D. 5%	81	90	34	42	21	33	44	27	63	61	18	52	27	58	16	314	21	20	15	25	13
	C.V.%	12.39	15.85	5.03	11.62	1.91	6.15	8.79	7.47	34.88	9.49	4.17	9.65	8.79	7.48	6.80	74.32	3.06	3.20	3.22	5.78	3.91

Table No. 3.17 Contd.: Panicles/ M² of entries in IVT-E TP 2015 Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	VII													Zone VII Mean (10)	Overall Mean (28)
		MH	MH	MH (3)	GU	GU	GU (2)		A.P.	TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)	PUD		
		KJT	VDG	Mean	VYR	DBH	Mean		MTU	KNM	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	GNV	Mean	KBP		
1001	25546	303	328	288	303	264	283	299	251	345	488	209	348	365	258	312	477	355	466	433	625	384	330
1002	25547	265	397	290	266	218	242	286	291	330	618	157	387	405	344	375	441	335	564	447	650	413	329
1003	25548	250	353	283	271	198	234	268	261	335	503	198	350	505	344	425	459	345	604	469	645	420	345
1004	25549	261	380	298	319	265	292	306	314	325	633	162	397	560	301	431	490	365	510	455	680	434	371
1005	25550	286	392	292	292	234	263	301	281	260	605	119	362	505	301	403	434	375	484	431	640	400	321
1006	25551	331	353	319	249	226	237	290	261	340	683	165	424	415	344	380	490	415	524	476	670	431	353
1007	25552	256	342	289	358	224	291	295	287	265	628	194	411	500	344	422	496	270	565	444	620	417	333
1008	25553	314	375	309	306	255	280	312	288	325	698	188	443	490	301	396	459	425	557	480	590	432	349
1009	25554	283	430	327	357	284	320	338	324	390	535	131	333	425	258	342	453	410	523	462	740	419	358
1010	25555	232	378	281	266	256	261	283	284	370	438	172	305	500	258	379	509	325	463	432	665	398	334
1011	25556	244	338	253	275	260	268	279	261	290	595	163	379	490	258	374	472	375	567	471	655	412	339
1012	25557	279	423	305	259	243	251	301	317	285	555	179	367	465	301	383	415	340	651	469	590	410	329
1013	25558	313	437	328	297	253	275	325	254	295	488	124	306	390	344	367	502	360	533	465	560	385	335
1014	25559	266	357	267	268	253	260	286	301	380	548	134	341	460	344	402	434	390		412	655	405	339
1015	25560	221	342	247	300	238	269	275	274	270	583	139	361	575	387	481	428	350	509	429	705	422	336
1016	25561	210	445	289	257	254	255	291	301	275	538	118	328	570	387	479	478	335	557	456	615	417	340
1017	25562	293	372	277	340	249	294	313	251	290	320	188	254	460	258	359	447	325	454	409	675	367	321
1018	25563	268	360	276	288	262	275	294	238	285	485	206	345	410	344	377	428	360	618	469	775	415	341
1019	25564	319	335	293	267	257	262	294	261	270	543	206	374	410	301	356	484	370	437	430	805	409	335
1020	Gontra Bidhan-3 (NC)	289	343	263	279	256	267	292	307	270	655	179	417	530	344	437	459	345	522	442	640	425	329
1021	25565	277	363	279	300	271	285	303	267	335	535	204	370	375	344	360	471	415	531	472	665	414	349
1022	25566	258	395	300	283	244	263	295	218	345	503	185	344	440	258	349	453	415	418	429	690	392	335
1023	25567	299	403	318	282	242	262	306	360	340	583	174	378	440	258	349	596	380	656	544	730	452	359
1024	25568	280	380	267	264	239	251	291	268	300	600	142	371	420	344	382	484	355	558	465	530	400	320
1025	25569	211	392	273	303	243	273	287	225	385	510	221	365	445	301	373	496	370	486	451	625	406	348
1026	25570	231	397	294	265	246	255	284	324	320	510	187	349	435	258	347	471	430	529	477	588	405	340
1027	25571	232	393	252	316	269	292	302	245	350	470	225	348	530	215	373	558	320	523	467	615	405	341
1028	25572	224	418	285	283	222	252	287	271	335	325	193	259	380	215	298	521	415	580	505	550	378	315
1029	25573	295	420	342	406	265	336	346	254	320	533	211	372	635	258	447	527	375	624	509	875	461	392
1030	25574	266	400	295	240	250	245	289	330	355	385	224	305	835	344	590	422	340	530	430	610	437	349
1031	25575	255	423	318	330	261	296	317	396	305	555	188	372	515	301	408	484	400	568	484	660	437	360
1032	25576	254	420	304	291	237	264	301	314	335	590	133	362	455	387	421	484	380	458	441	685	422	353
1033	25577	253	415	296	301	251	276	305	264	350	565	190	377	480	349	414	453	430	618	500	825	452	375
1034	Anjali (NC)	238	438	295	273	233	253	295	258	285	378	196	287	540	310	425	496	405	594	498	635	410	323
1035	25578	201	427	272	284	253	269	291	297	305	528	246	387	550	387	469	422	375	482	426	600	419	343
1036	25579	334	367	310	412	250	331	340	300	335	478	201	339	445	301	373	378	385	517	427	765	410	352
1037	25580	299	483	340	368	232	300	345	294	355	605	147	376	445	301	373	428	410	466	435	645	410	363
1038	25581	249	393	293	225	278	251	286	575	220	318	195	256	570	258	414	465	375	420	420	610	400	328
1039	25582	287	357	277	374	253	313	317	294	300	543	132	337	510	387	449	391	335	640	455	560	409	344
1040	25583	280	332	268	291	223	257	281	333	305	498	119	308	595	310	453	465	330	575	457	620	415	327
1041	25584	249	403	278	254	247	250	288	255		595	209	402	540	387	464	397	415	661	491	735	466	363
1042	25585	203	427	268	283	251	267	291	327		468	265	366	400	349	374	453	425	542	473	600	425	350
1043	25586	192	363	247	341	272	306	292	261	345	650	198	424	395	349	372	434	370	562	455	700	426	342
1044	25587	316	367	305	385	270	327	334	343	325	533	170	351	550	349	449	471	355	504	443	900	450	373
1045	Zonal Check	291	390	303	280	273	276	308	231	305	610	194	402	495	387	441	434	325	586	448	660	423	359
1046	25588	277	300	277	307	234	270	279	264	300	568	172	370	445	349	397	453	385	470	436	565	397	339
1047	25589	230	330	245	264	262	263	271	320	330	538	176	357	535	310	423	453	450	547	483	795	445	348
1048	25590	222	303	237	305	251	278	270	241	295	465	132	299	440	215	328	397	345	530	424	540	360	302
1049	25591	257	347	266	330	271	300	301	264	330	565	201	383	560	349	454	428	365	470	421	600	413	379
1050	25592	269	378	288	269	234	251	287	314	295	638	248	443	560	349	454	503	305	386	398	645	424	350
1051	25593	415	360	340	283	258	270	329	297	325	613	217	415	510	310	410	440	390	521	450	655	428	347
1052	25594	335	402	317	319	268	293	331	248	315	550	172	361	440	310	375	515	370	576	487	620	411	335
1053	25595	208	373	239	295	223	259	275	221	265	638	254	446	435	349	392	397	370	609	459	595	413	332
1054	25596	286	397	309	290	236	263	302	244	290	603	208	405	420	310	365	440	395	451	429	655	402	332
1055	25597	289	370	304	306	270	288	309	363	325	580	171	376	740	349	544	434	380	667	494	750	476	380
1056	25598	354	447	345	396	295	345	373	337	295	513	152	332	665	349	507	447	370	520	446	785	443	380
1057	Local Check	358	443	352	325	235	280	340	284	390	650	139	395	500	349	424	446	400	503	450	710	437	363
1058	25599	231	483	328	309	269	289	323	251	290	443	224	333	490	310	400	472	410	526	469	585	400	347
1059	25600	423	427	361	349	257	303	364	274	330	550	204	377	605	310	458	503	365	567	478	720	443	378
1060	25601	243	440	282	300	262	281	311	337	275	555	150	353	565	349	457	440	430	494	455	680	427	354
1061	25602	322	393	305	266	243	254	306	324	245	550	259	404	435	387	411	459	400	465	441	640	416	345
1062	25603	312	440	311	350	269	309	343	301	375	623	148	385	595	258	427	502	345	526	458	860	453	377
1063	25604	320	453	324	306	237	271	329	235	270	598	123	360	550	387	469	459	405	398	420	725	415	355
1064	25605	266	397	274	333	275	304	318	248	250	493	181	337	535	315	425	416	355	447	406	585	382	337
	Exp Mean	**275**	**389**	**293**	**302**	**251**	**277**	**304**	**288**	**314**	**543**	**181**	**362**	**498**	**319**	**409**	**461**	**374**	**530**	**455**	**665**	**418**	**346**
	C.D. 5%	22	47	18	88	20	30	26	58	81	136	23	67	212	86	103	112	74	94	53	42	34	18
	C.V.%	4.08	6.03	5.52	14.65	4.08	7.86	8.83	10.06	12.86	12.51	6.47	13.25	21.29	13.48	17.94	12.20	9.92	8.92	10.28	3.16	13.10	14.04

ADVANCE VARIETY TRIAL - 2 - IRRIGATED MID-EARLY AVT-2-IME

Locations : 31 **Entries : 12**

Checks : National: IR 64, Zonal: PR 113 (North Western), Lalat (Eastern), Sasyasree (Western), MTU 1010 (Southern), Hybrid: US 312 and Local **Table : 3.18**

The Advance Variety Trial -2- Irrigated Mid-Early (AVT-2-IME) was constituted with 12 entries including 4 checks, 5 hybrid entries and 3 varietal entries. It was conducted at 31 locations covering 6 zones. Data from Chiplima and Masodha was not received while data from Kaul, Gerua, Waraseoni and Kathalgere was not included in the mean due to low CV% or less yield at those 4 locations. The experimental mean yield ranged from 3417 kg/ha at Navsari to 8930 kg/ha at Kota. The CV% of the test locations ranged from a minimum of 4.24 at Chinsurah to a maximum of 17.18% at Cuttack. Performance of the best entries across 27 locations ranged from 5123 kg/ha (IR 64) to 6477 kg/ha (IET 24122). None of the entries registered the required yield superiority over the best check on overall mean basis. Therefore the performance of the entries in different zones is discussed.

Overall Performance of Promising Entries in Advanced Variety Trial 2-Irrigated Mid Early (AVT 2-IME) Kharif 2015:

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield Adv (%) Over NC/ZC/ LC/HC	% Increase Over the Best Check							
				State				Zone			
				Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
1.	24122 XRA-27936 (Hybrid)	6477 96 MS	26.42 14.03 10.45 2.56	RA-1 GU-3 TEL-1	9918 3995 7880	15.60 10.23 25.13	9.01 25.43 21.04	Z3-3	7131	12.12	5.20
2.	24120 HRI 180 (Hybrid)	6409 96 LS	25.10 12.83 9.29 1.48	RA-2 GU-1 TN-1	9836 4139 6577	14.65 14.21 20.45	8.11 29.95 8.99	Z3-2	7143	12.31	5.37
3.	24103 XRA-27934 (Hybrid)	6341 97 LB	23.75 11.63 8.13 0.41	RA-4 BI-1	9481 10258	10.51 44.07	4.20 10.72	Z3-1	7293	14.66	7.59
IR64 (NC)		5123 90									
Zonal Check (ZC)		5680 95									
Local Check (LC)		5864 97									
Hybrid Check (HC)		6315 96									

Zone II (North Western): This zone was represented by 4 locations namely Pantnagar, Ludhiana, Kaul and Kota. The experimental mean yield ranged from 5776 kg/ha at Pantnagar to 8930 kg/ha at Kota. The CV% ranged from 6.49% at Ludhiana to 15.81% at Pantnagar. The mean yield of entries ranged from 6183 kg/ha (IET 23770) to 7860 kg/ha (IET 24122). The information on mean yield of the entries at location, states, zones, 50% flowering duration, plant height and number of panicles/sq.m are presented in Tables 3.19, 3.20, 3.21 and 3.22.

None of the entries exhibited the required yield advantage in this zone, over the best check.

Zone wise Performance of Promising Entries in Advanced Variety Trial 2-Irrigated Mid Early (AVT 2-IME) Kharif 2015:

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield Adv (%) Over NC/ZC/ LC/HC	% Increase Over the Best Check			
				State			
				Rank	Yield kg/ha	% BVC	% HC
Promising Entries in Zone II :							
1.	24122 XRA-27936 (Hybrid)	7860 105 MS	22.69 9.10 4.02 13.94	RA-1	9918	15.60	9.01
2.	24120 HRI 180 (Hybrid)	7653 107 LS	19.46 6.23 1.28 10.94	RA-2	9836	14.65	8.11
3.	24103 XRA-27954 (Hybrid)	7639 106 LB	19.24 6.03 1.09 10.74				
	National Check (NC)	6406 99					
	Regional Check (RC)	7204 107					
	Local Check (LC)	7556 106					
	Hybrid Check (HC)	6898 103					
Promising Entries in Zone III :							
1.	24103 XRA-27954 (Hybrid)	7293 96 LB	43.76 14.66 22.24 7.59	BI-1	10258	44.07	10.75
2.	24120 HRI 180 (Hybrid)	7143 94 LS	40.80 12.31 19.72 5.38				
3.	24122 XRA-27936 (Hybrid)	7131 95 MS	40.56 12.12 19.52 5.20				
	National Check (NC)	5073 91					
	Regional Check (RC)	6360 95					
	Local Check (LC)	5966 95					
	Hybrid Check (HC)	6778 94					
Promising Entries in Zone VI : (Western)							
1.	24122 XRA-27936 (Hybrid)	4703 95 MS	8.61 37.95 15.15 16.41	GU-1	3995	10.23 (LC)	25.43

Rank	IET No./ Designation/ Cross combination	GY/ FD/ GT	Yield Adv (%) Over NC/ZC/ LC/HC	% Increase Over the Best Check			
				State			
				Rank	Yield kg/ha	% BVC	% HC
2.	24117 NK - 14722 (Hybrid)	4448 95 LB	2.72 30.47 8.91 10.09	MH-1	6525	11.32 (NC)	13.47
3.	23770 CN 2015-5-4 A selection from WERA	4382 93 LS	1.20 28.54 7.29 8.46				
	National Check (NC)	5631 83					
	Regional Check (RC)	6070 92					
	Local Check (LC)	6066 88					
	Hybrid Check (HC)	7085 91					

Zone III (Eastern Zone): This zone was represented by 6 locations Cuttack, Bhubaneshwar, Jeypore, ICAR centre at Patna, Hazaribagh and Chinsurah. The experimental mean of the locations ranged from a minimum of 4488 kg/ha at Bhubaneswar to 8362 kg/ha at Patna (ICAR centre). The CV% of the test locations in this zone ranged from 4.24% at Chinsurah to 17.18% at Cuttack. The yield of the entry ranged from 5073 kg/ha (IR64) to 7293 kg/ha (IET 24103). Three entries registered the required yield superiority over the best check in this zone they are, IETs 24103, 24120 and 24122.

Zone V (Central Zone): This zone was represented by 6 locations; Waraseoni, Jabalpur, Raipur, Ambikapur, Jagadalpur and Bilaspur. The experimental mean ranged from 5853 kg/ha at Ambikapur to 8062 kg/ha at Jabalpur. The CV% of the test locations ranged from 4.56 (Jabalpur) to 14.34 (Ambikapur). The mean grain yield of the entries ranged from 5631 kg/ha (IR64) to 7211 kg/ha (IET 24120). In this zone, 2 entries IET 23216 and IET 23735 registered the required yield advantage over the best check.

Zone VI (Western Zone): This zone was represented by 3 locations namely Karjat, Nawagam and Navsari. The experimental mean yield ranged from 3417 kg/ha at Navsari to 4974 kg/ha at Karjat. The CV of the locations ranged from 6.63% at Karjat to 11.16% at Navsari. The mean grain yield of the entries across the three locations ranged from 3409 kg/ha (Sasyasree-Zonal check) to 4703 kg/ha (IET 24122). None of the test entries has the required yield superiority over the best check in this zone.

Zone VII (Southern): This zone was represented by 11 locations namely MTU, NLR, WGL, RNR, CBT, TRR, MNC, MND, GNU, KTG and KUP. The experimental mean ranged from 4435 kg/ha at Mandya to 7931 kg/ha at Gangavathi. The CV% of the experiments ranged from 4.45 at Gangavathi to 15.26 at Coimbatore. The mean grain yield of the entries ranged from 4751 kg/ha (IR64-National check) to 6158 kg/ha (US 312- Hybrid check). None of the test entries registered the required yield superiority over the best check.

Summarising the three years performance of **IET 24122** (XRA-27936), it was noted that this entry recorded the required yield advantage on overall mean only during 2013. Zone

wise performance revealed that it was significantly superior to both best varietal and hybrid checks in zone II (North Western) during 2013 (8711 kg/ha) with 12.61% and 16.70% yield advantage; in zone III (Eastern) during 2015 it showed 7131 kg/ha with 12.12 and 5.20% yield superiority over the best varietal and hybrid checks, respectively. State wise, it was found consistently superior only for two years in Rajasthan i.e., first (9918 kg/ha) with 15.60 and 9.01% over the best varietal and hybrid checks, respectively during 2015 and fourth (7004 kg/ha) with 18.81 and 50.49% over best varietal and hybrid checks during 2014. Quality wise, it recorded moderate HRR (55.6), medium slender grain and desirable amylose (24.14%) content (Table 3.23). Therefore **it is Promising in the state Rajasthan**.

Three years performance of IET 24120 (HRI-180) revealed that it could not establish the required yield advantage on over the best check. However, it was superior in the zone III (Eastern) during 2013 (5969 kg/ha) with 18.52 and 5.21% and during 2015 it ranked 2nd (7143 kg/ha) with 12.31 and 5.37% yield advantage over the best varietal and hybrid checks respectively. It failed to exhibit the consistent performance in any of the states.

Three years performance of IET **24103** (XRA-27934) a hybrid culture was significantly superior to the best check in the zone III (Eastern) with first rank during 2015 (7293 kg/ha) with 14.66% and 7.59% yield advantage and during 2014 (6267 kg/ha) with 19.64 and 5.48% yield improvement over the best varietal and hybrid checks. It showed consistently superior performance in the state of Bihar with first rank during 2014 (7109 kg/ha) with 28.46% and 9.00%, and during 2015 (1st, 10258 kg/ha) with 44.07% and 10.72% yield advantage over the best varietal and hybrid checks respectively. Quality wise it exhibited good HRR (60.6), LB grain and intermediate AC (23.2%). It may be concluded that **this entry is promising in Bihar**.

Three years performance of the best entries revealed that IETs 24104, 24117 & 23735 failed to exhibit the consistent performance in any of the states during the three years of testing.

IET **23216** showed consistent performance during 2015 (8982 kg/ha) with 26.15% over best check and during 2014 (6164 kg/ha) with 11.38% over the best check in the state of Bihar. Quality wise it recorded good HRR (62.4) MS grain, intermediate and desirable AC (24.05%) and GC (23mm), hence IET 23216 found **promising in the state of Bihar**.

However it may be noted that IET 23770 exhibited significant superior performance over the best check in all the three years of testing in the state of Bihar, hence found to be promising for Bihar Quality wise also it recorded good HRR (64.3%), intermediate AC (22.7%) and medium GC (51mm).

Three Years (Overall) Performance of Promising Entries in AVT 2-IME Kharif 2015

IET No./ Designation/ Cross combination	Year	Over all mean	Yield Adv (%) Over NC/ ZC/LC/HC	State				Zone			
				State Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
IET 24122 XRA-27936 (Hybrid)	2015	6477	26.42 14.03 10.45 2.56	RA-1 GU-3 TEL-1	9918 3995 7880	15.60 10.23 25.13	9.01 25.43 21.04	R3-3	7131	12.12	5.20
	2014	6042	16.50 10.29 8.92 -1.45	RA-4 MP-7	7004 6412	18.81 9.06	50.49 43.44	R2-3	6773	7.42	13.66
	2013	6310	18.09 21.52 16.24 5.35	HA- UT- CH- KA- TN-4	8847 1919 5216 8048 9292	21.09 25.01 18.03 17.02 44.91	7.75 5.78 12.85 13.80 18.03	R2-	8711	12.61	16.70
24120 HRI 180 (Hybrid)	2015	6409	25.10 12.83 9.29 1.48	RA-2 GU-1 TN-1	9836 4139 6577	14.65 14.21 20.45	8.11 29.95 8.99	R3-2	7143	12.31	5.37
	2014	5872	13.22 7.19 5.85 -4.22	HA-1 AP-1	8620 8504	14.91 20.19	20.15 34.81	R2-1	6805	7.93	14.19
	2013	6092	14.01 17.51 12.23 1.71	HA- CH- MP-3	8646 5061 10386	18.34 14.52 32.60	5.31 9.49 26.02	R3-	5969	18.52	5.21
24103 XRA-27934 (Hybrid)	2015	6341	23.75 11.63 8.13 0.41	RA-4 BI-1	9481 10258	10.51 44.07	4.20 10.72	R3-1	7293	14.66	7.59
	2014	6264	20.78 14.34 12.92 2.16	BI-1 WB-3 AP-3 TN-2	7109 6872 8225 6675	28.46 16.89 16.25 16.16	9.00 53.73 30.38 9.96	R3-1	6267	19.64	5.48
	2013	6247	16.91 20.50 15.08 4.30	HA- UT- CH- JH-4 KA- TN-	8747 1929 5409 4600 7690 8624	19.72 25.66 22.40 25.44 11.82 34.49	6.54 6.33 17.02 30.20 8.73 9.55	R2- R5	8515 6943	10.08 21.23	14.08 4.89
24104 XRA- 279315	2015	6168 97 LS	20.39 8.59 5.18 -2.32	RAJ-2 GU-2	9590 4013	11.78 10.73	5.4 25.99				
	2014	6096 99	17.54 11.28 9.89 -0.57	HA-2 TN-4	8238 6545	9.82 13.90	14.83 7.82				
	2013	6400	19.78 23.45 17.90 6.86	CH- KA	5297 8029	19.86 16.75	14.60 13.53	R4 R5	5518 6906	9.31 20.58	18.43 4.33
24117 NK-14722 (Hybrid)	2015	6156 97 LB	20.16 8.38 4.97 -2.57	OD-1 MH-1	6332 6525	9.23 11.32	5.27 13.47				
	2014	6317 99	21.80 15.31 13.88 3.03	RA-1 BI-2 MP-2 TS-1 TN-3	7402 6999 7143 7954 6605	25.56 26.47 21.50 33.36 14.94	59.04 7.31 59.79 11.08 8.81	R2-2 R3-2 R5-1	6776 6095 7028	7.47 16.36 13.53	13.71 2.59 2.35
	2013	6469	21.09 24.78 19.17 8.01	HA- UP-2 MP-2 OD- JH- AP- KA- TN-1	8546 2423 10502 4630 4067 6917 7489 9497	16.97 57.85 33.40 15.57 10.90 23.62 8.89 48.11	4.09 33.57 27.43 13.11 15.11 8.43 5.89 20.64	R3- R5	5986 7227	18.86 33.14	5.51 20.67

IET No./ Designation/ Cross combination	Year	Over all mean	Yield Adv (%) Over NC/ ZC/LC/HC	State				Zone			
				State Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
23735 HKR 09-93 HKR 47/ HKR 99-60	2015	5814 98 LS	13.48 2.35 -085 -7.93	BI-6	8862	24.46		R5-7	6728	10.84	
	2014	5670 100	9.33 3.50 2.21 -7.51	HA-3 MP-1 CH- AP-6	8047 7508 5842 7738	7.27 27.70 11.04 9.55	12.16 67.96 - 22.66	R3-	5537	5.70	
	2013	4892	7.35 -1.33 -6.06	UT- HA-3 RA-2 BI- GU-	4836 6500 6483 5042 6458	8.13 18.18 7.74 5.72 4.48		R3-6	5158	5.24	
23216 TM 07278 WGL32100 / Swarna	2015	5664 96 MS	10.56 -0.28 -3.41 -10.30	UT-6 RA-5 BI-5	5712 9235 8982	4.65 7.64 26.15		R5-8	6607	8.84	
	2014	5676 98	9.44 3.61 2.32 -7.42	OD-1 BI- MP-8 CH- AP-4 TS-	5750 6164 6399 5712 7979 6477	8.49 11.38 8.84 8.57 12.96 8.60	10.57 - 43.15 - 26.49	R3-5	5742	9.62	
	2013	5156	13.14 3.99 -0.99	UT-7 HA-5 JH-6 WB-3 MP-3 CG- MH-	4877 6150 4500 6083 4130 5266 4306	9.05 11.81 7.14 15.86 28.74 13.51 9.59		R4-	4775	6.30	
23770 CN 2015-5-4 A selection WERA	2015	5621 96 LS	9.72 -1.03 -4.14 -10.98	BI-9 TEL-2 KE-6	7902 6663 4908	10.98 5.81 6.34					
	2014	5520 97	6.44 0.76 -0.48 -9.96	BI- MP-9	6028 6209 5629	8.92 5.61 8.16	38.90	R3-7	5641	7.69	
	2013	5146	12.92 3.79 -1.19	UT-9 HA-4 RA-3 BI- WB-5 MP- CG- AP-3	4723 6300 6316 5389 6042 3825 5022 5076	5.61 14.54 4.96 13.00 15.08 20.79 8.25 19.43		R2-	5378	9.73	

Table 3.18: Composition of entries in Advance Variety Trial 2- Irrigated Mid Early (AVT 2-IME) Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
3rd year of testing				
1101	24103	***XRA-27934 (Hybrid)***	-	LB
1102	23770	CN 2015-5-4	A selection from WERA	LS
1103	**IR 64 (NC)**			
1104	24104	***XRA-27935 (Hybrid)***	-	LS
1105	**PR 113 - Northwestern, Lalat - Eastern, Sasyasree - Western, MTU 1010 – Southern-- ZC**			
1106	24120	***HRI 180 (Hybrid)***	-	LS
1107	**US 312 (HC)**			
1108	23216	TM 07278	WGL 32100/ Swarna	MS
1109	23735	HKR 09-93	HKR 47/HKR 99-60	LS
1110	**Local Check**			
1111	24117	***NK-14722 (Hybrid)***	-	LB
1112	24122	***XRA -27936 (Hybrid)***	-	MS

Table No. 3.19 : Grain Yield (kg/ha) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	II												Zone II Mean(3)			
		UT			PUN			HAR			RAJ						
		PNT			LDH			@KUL			KTA						
1101	24103	5789	5	…6%	7646	4 #	_60%	7186	7		9481	4		7639	3	1%	**11%**
1102	23770	5420	8		4986		_4%	6421			8142			6183			
1103	IR 64 (NC)	5215			6161	8 #	_29%	7049	9		7842			6406			
1104	24104	4777			7804	2 #	_63%	7760	4 *		9590	3		7390	5		**7%**
1105	Zonal Check	5458	7		7655	3 #	_60%	6011			8497	9		7204	6		**4%**
1106	24120	6975	1	…28% _3%	6150	9 #	_28%	7951	3 *		9836	2		7653	2	1%	**11%**
1107	US 312 (HC)	6802	2	…25%	4793			8470	1 *		9098	6		6898	8		
1108	23216	5712	6	…5%	4894		_2%	7705	5 *		9235	5		6614			
1109	23735	5106			7143	5 #	_49%	6503			8142			6797	9		
1110	Local Check	5295	9		8793	1 #	_83%	7268	6		8579	8		7556	4		**10%**
1111	24117	6210	4	…14%	6475	7 #	_35%	7158	8		8798	7		7161	7		**4%**
1112	24122	6548	3	…20%	7113	6 #	_48%	8142	2 *		9918	1		7860	1 #	4%	**14%**
	Exp Mean	**5776**			**6634**			**7302**			**8930**			**7113**			
	C.D. 5%	1546			729			359			1511			922			
	C.V.%	15.81			6.49			2.90			9.99			13.79			
	Sowing Date	09-Jun			25-May			04-Jun			22-Jun						
	Planting Date	02-Jul			29-Jun			21-Jul			19-Jul						
	Local ©	Pant Dhan 12			PR 121			HKR 47			RSK-1091-10						

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.19 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	III								Zone III Mean (6)			IV		V						
		BI			JH			W.B					AS		M.P.		M.P.		M.P. (1)		
		PTN-ICAR			HZB			CHN					@GER		@WRS		JBP		Mean		
1101	24103	10258	1 *	#...44% _11%	7998	1 #	...1% _28%	7222	2	7293	1 *	# 15% **8%**	3344	3	12027	1 #	8691	1	8691	1	**2%**
1102	23770	7902	9	...11%	5660			5611	8	5855			2491	9	9355	7	8186	9	8186	9	
1103	IR 64 (NC)	5458			6202			6889	5	5073			2319		11813	2 #	8680	2	8680	2	**2%**
1104	24104	8569	7 *	...20%	6588	7	_5%	5361		6477	6	2%	2760	7	10348	3 #	7870		7870		
1105	Zonal Check	7120			7910	2 #	_27%	7222	3	6360	7		3461	2	8421	8	5619		5619		
1106	24120	9413	2 *	...32% _2%	7207	5	_15%	7778	1 *	# 7143	2 *	12% **5%**	2739	8	10331	4 #	8631	3	8631	3	**1%**
1107	US 312 (HC)	9262	4 *	...30%	6250	9		7111	4	6778	4	7%	3548	1	9597	6	8549	5	8549	5	
1108	23216	8982	5 *	...26%	7555	4	_21%	5389	9	6323	8		2987	5	8229	9	8527	6	8527	6	
1109	23735	8862	6 *	...24%	6805	6	_9%	5222		6115	9		2487		7957		8573	4	8573	4	
1110	Local Check	6596			6552	8	_5%	5083		5966			2868	6	7150		6678		6678		
1111	24117	8533	8 *	...20%	6188			6667	7	6763	5	6%	2258		7766		8464	7	8464	7	
1112	24122	9387	3 *	...32% _1%	7681	3 #	_23%	6722	6	7131	3 *	12% **5%**	3157	4	10263	5 #	8282	8	8282	8	
	Exp Mean	**8362**			**6883**			**6356**		**6440**			**2868**		**9438**		**8062**		**8062**		
	C.D. 5%	820			1421			456		421			916		384		623		206		
	C.V.%	5.79			12.19			4.24		9.93			18.87		2.40		4.56		1.51		
	Sowing Date	13-Jun			04-Jul			06-Jul					23-Jun		23-Jun		13-Jun				
	Planting Date	09-Jul			31-Jul			04-Aug					28-Jul		12-Jul		04-Jul				
	Local ©	Rajendra Sweta			Abhishek			Shatabdi					Naveen		MTU 1010		JR 201				

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.19 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	V																Zone V Mean (5)			VI										Zone VI Mean(3)		
		CG		CG		CG		CG		CG (4)											MH		GU		GU		GU (2)						
		AMB		BSP		RPR		JDP		Mean											KJT		NWG		NVS		Mean						
1101	24103	5882	5	7853	6	5680		6334	7	6437	6	4%	6888	6 *	13%	5472	6		4167	3 #	3288	8	3727	4 *	3% **17%**	4309	5	**7%**					
1102	23770	5564	8	6511	9	5968	8	5295		5835			6305	9	4%	6019	3	...3% _5%	3704	7 #	3425	4	3564	8 *	**12%**	4382	3 #	1% **8%**					
1103	IR 64 (NC)	5796	6	4467		4521		4691		4869			5631			5861	4	_2%	3439		3689	3	3564	7 *	**12%**	4330	4	**7%**					
1104	24104	6752	3	7931	3	6084	7	6912	3	6920	1 *	12% **3%**	7110	2 *	17%	4090	8		4696	1 * #	3330	5	4013	2 *	11% **26%**	4039	9						
1105	Zonal Check	5477		6956	8	6136	6	6164	8	6183	8		6070			3765			3505	9	2957		3231	*	**1%**	3409							
1106	24120	7592	1 *	7867	5	6457	3	5510		6856	2 *	11% **2%**	7211	1 *	19% **2%**	4037	9		4233	2 #	4046	2 #	4139	1 *	14% **30%**	4105	6	**2%**					
1107	US 312 (HC)	6810	2	7356	7	5817	9	6895	4	6720	3	9%	7085	3 *	17%	5750	5		3108		3262		3185	*		4040	8						
1108	23216	6201	4	6444		6196	4	5667	9	6127	9		6607	8 *	9%	3654			3638	8 #	2969		3303	*	**4%**	3420							
1109	23735	5535	9	7956	2	5197		6378	6	6266	7	1%	6728	7 *	11%	3386			3902	5 #	3296	7	3599	6 *	**13%**	3528							
1110	Local Check	5651	7	5089		6460	2	6451	5	5913			6066			5003	7		3968	4 #	3279	9	3624	5 *	**14%**	4084	7	**1%**					
1111	24117	3912		7913	4	7064	1 #	7314	1 *	6551	5	6%	6934	5 *	14%	6525	1 *	#...11% _13%	3505		3313	6	3409	9 *	**7%**	4448	2 #	3% **10%**					
1112	24122	5071		8178	1	6188	5	7095	2 *	6633	4	7%	6963	4 *	15%	6120	2	...4% _6%	3836	6 #	4154	1 #	3995	3 *	10% **25%**	4703	1 * #	9% **16%**					
	Exp Mean	**5853**		**7043**		**5981**		**6226**		**6276**			**6633**			**4974**			**3808**		**3417**		**3613**			**4066**							
	C.D. 5%	1421		1330		929		513		554			460			559			401		646					323							
	C.V.%	14.34		11.15		9.17		4.86		10.89			9.58			6.63			6.22		11.16					8.46							
	Sowing Date			18-Jun		03-Jul		18-Jun									15-Jun		09-Jun		06-Jun												
	Planting Date	15-Jul		09-Jul		20-Jul		15-Jul									09-Jul		16-Jul		04-Jul												
	Local ©	Karma Masuri		MTU 1010		Rajeshwari		MTU 1010									Karjat-5		GR-12		Jaya												

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.19 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	VII			VII						
		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE
		MTU	NLR	Mean	WGL	RNR	Mean	CBT	TRR	Mean	MNC
1101	24103	4286 5 #	6861 4 #	5574 3 # **55%**	3418	7806 4	5612 9	5740 3	6179 7 *	5960 5 9%	5540 5 * ...20%
1102	23770	4239 7 #	5851 8 #	5045 9 # **40%**	4799 7	8528 2 *	6663 2 6% **2%**	4737 9	5029	4883	4908 6 ...6%
1103	IR 64 (NC)	3086	7366 2 #	5226 6 # **45%**	4490 9	5194	4842	4293	4575	4434	3834
1104	24104	5522 1 #	4654	5088 8 # **42%**	4222	7056 7	5639 8	5410 5	6967 1 *#	6188 3 * 13% **3%**	5752 2 * ...25%
1105	Zonal Check	4174 8 #	6185 5 #	5180 7 # **44%**	5983 1	6611 8	6297 4	5075 7	5004	5040	3724
1106	24120	4822 3 #	6131 6 #	5476 4 # **52%**	5785 3	6389 9	6087 6	6533 2	6621 2 *	6577 1 * 20% **9%**	5662 4 * ...23%
1107	US 312 (HC)	3458	3727	3593	5409 4	7611 5	6510 3 3%	5719 4	6350 4 *	6034 4 11%	7434 1 * ...61%
1108	23216	3747 9	5527 9 #	4637 # **29%**	5188 6	7306 6	6247 5	3977	6417 3 *	5197 8	4066
1109	23735	4285 6 #	7265 3 #	5775 2 # **61%**	5280 5	5389	5334	3947	6304 5 *	5126 9	4116 9
1110	Local Check	5103 2 #	7700 1 #	6402 1 # **78%**	4537 8	5444	4991	5278 6	5642 9	5460 7	4615 7
1111	24117	4548 4 #	6022 7 #	5285 5 # **47%**	3864	8194 3	6029 7	4924 8	6271 6 *	5598 6 3%	4433 8
1112	24122	3162	4284	3723 4%	5816 2	9944 1 *#	7880 1 *# 25% **21%**	6624 1 *	5788 8	6206 2 * 14% **3%**	5751 3 * ...25%
	Exp Mean	**4203**	**5964**	**5083**	**4899**	**7123**	**6011**	**5188**	**5929**	**5558**	**4986**
	C.D. 5%	547	1622	824	868	1773	886	1340	463	645	877
	C.V.%	7.68	16.06	13.96	10.46	14.70	12.69	15.26	4.62	10.00	10.39
	Sowing Date	30-Jun	04-Aug		22-Jul	16-Aug		06-Jul	02-Jul		09-Jul
	Planting Date	30-Jul	08-Sep		16-Aug			31-Jul	29-Jul		24-Jul
	Local ©	MTU 1001	NLR 145		Ramappa			CO 47	ADT 39		Uma (MO 16)

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.19 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	KA	KA	KA	KA (2)	PUD	Zone VII Mean (10)	Overall Mean (27)	Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		MND	GNV	@KTG	Mean	KUP					
1101	24103	4729 5	6910	8020 3 #	5820 8	5700 2	5717 6	6341 3 * 8%	97	106	330
1102	23770	3779	6353	6627 9	5066	5200 5	5342 9	5621	96	106	333
1103	IR 64 (NC)	4063 8	5513	8040 2 #	4788	5100 7	4751	5123	90	95	339
1104	24104	5225 2 *	8308 4	6390	6766 4	4733	5785 4 1%	6168 5 * 5%	97	108	326
1105	Zonal Check	3748	7301 7	6510	5525 9	5200 6	5301	5680 9	95	100	328
1106	24120	4421 7	7865 6	8260 1 #	6143 7	4633	5886 3 3%	6409 2 * 9% **1%**	96	108	324
1107	US 312 (HC)	5423 1 *	10519 2 *	7120 6	7971 1 * 14%	5933 1 *	6158 1 * 7%	6315 4 * 8%	96	108	329
1108	23216	3883 9	7090 8	8013 4 #	5487	4667	5187	5664	96	102	339
1109	23735	2958	10724 1 *	7060 7	6841 3	5400 4	5567 8	5814 8	98	101	326
1110	Local Check	4596 6	9442 3	7603 5 #	7019 2	4933 9	5729 5	5864 7	97	102	338
1111	24117	5225 3 *	7090 9	6710 8	6157 6	5567 3	5614 7	6156 6 * 5%	97	107	310
1112	24122	5175 4	8058 5	6440	6616 5	5000 8	5960 2 4%	6477 1 * 10% **3%**	96	108	328
	Exp Mean	**4435**	**7931**	**7233**	**6183**	**5172**	**5583**	**5969**	**96**	**104**	**329**
	C.D. 5%	599	597	272	394	608	314	197	0		9
	C.V.%	7.98	4.45	2.22	5.49	6.94	11.06	10.69	1.67		9.62
	Sowing Date	03-Aug	08-Sep	03-Jul		21-Aug					
	Planting Date	08-Sep		29-Jul		11-Sep					
	Local ©	Thanu		JGL-1798		MTU 1010					

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.20: Days to 50% flowering of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III E							Zone III Mean (6)	IV	V								Zone V Mean (6)
		UT	PUN	HAR	RAJ		OD	OD	OD	OD (3)	BI	JH	W.B		AS	M.P.	M.P.	M.P. (2)	CG	CG	CG	CG	CG (4)	
		PNT	LDH	KUL	KTA		CTK	JYP	BBN	Mean	PTN-ICAR	HZB	CHN		GER	WRS	JBP	Mean	AMB	BSP	RPR	JDP	Mean	
1101	24103	96	111	114	102	106	107	96	95	100	92	101	83	96	147	90	97	94	90	91	87	100	92	93
1102	23770	97	107	113	101	105	107	94	93	98	92	97	84	95	147	86	94	90	87	90	85	96	90	90
1103	IR 64 (NC)	98	101	102	95	99	109	94	85	96	77	102	79	91	140	75	90	83	78	85	78	94	84	83
1104	24104	97	113	113	108	108	107	95	95	99	92	101	73	94	145	87	103	95	89	93	86	98	91	93
1105	Zonal Check	101	108	110	108	107	112	92	92	99	95	97	81	95	142	86	97	92	90	93	87	99	92	92
1106	24120	99	111	114	102	107	106	95	92	98	91	100	79	94	142	88	99	94	88	93	83	98	90	91
1107	US 312 (HC)	96	107	110	101	103	107	96	93	99	90	98	82	94	142	87	97	92	88	91	83	101	91	91
1108	23216	94	107	113	104	104	108	94	92	98	91	102	72	93	147	86	97	92	88	88	86	98	90	90
1109	23735	87	107	111	108	104	106	95	93	98	96	97	72	93	138	91	105	98	97	96	97	105	99	99
1110	Local Check	95	111	113	105	106	105	93	99	99	111	91	71	95	142	81	85	83	98	86	88	92	91	88
1111	24117	100	112	111	102	106	106	92	93	97	93	100	85	95	138	77	98	88	91	94	87	98	92	91
1112	24122	98	110	111	102	105	108	94	92	98	93	97	83	95	129	89	101	95	91	92	87	100	93	93
	Exp Mean	**97**	**109**	**111**	**103**	**105**	**107**	**94**	**93**	**98**	**93**	**99**	**79**	**94**	**142**	**85**	**97**	**91**	**90**	**91**	**86**	**98**	**91**	**91**
	C.D. 5%	5	2	0	6	2	2	3	2	1	3	3	2	1	6	2	1	1	2	0	3	1	1	1
	C.V.%	2.94	0.97	0.00	3.30	2.13	1.10	1.90	0.99	1.17	1.83	1.64	1.62	1.51	2.38	1.21	0.89	0.79	1.23	0.00	2.08	0.77	1.26	1.17

Table No. 3.20 Contd.: Days to 50% flowering of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII												Zone VII Mean (10)	Overall Mean (30)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TN	TN	TN (2)	KE	KA	KA	KA	KA (3)	PUD	
		KJT	NWG	NVS	Mean		MTU	NLR	Mean	WGL	CBT	TRR	Mean	MNC	MND	GNV	KTG	Mean	KUP	
1101	24103	93	104	89	97	95	94	102	98	93	96	91	93	82	94	93	92	93	83	92	97
1102	23770	91	102	85	94	93	93	98	96	92	93	97	95	71	90	100	108	99	80	92	96
1103	IR 64 (NC)	87	92	98	95	92	81	90	86	82	90	80	85	67	88	91	106	95	78	85	90
1104	24104	93	107	93	100	98	97	98	98	92	102	92	97	78	90	93	110	98	80	93	97
1105	Zonal Check	96	112	85	99	98	79	85	82	87	92	82	87	67	88	92	112	97	77	86	95
1106	24120	89	102	91	97	94	92	102	97	93	95	89	92	77	89	93	105	96	80	91	96
1107	US 312 (HC)	94	100	92	96	95	92	103	98	92	94	89	92	78	99	102	101	101	81	93	96
1108	23216	88	102	91	96	94	90	101	95	92	97	91	94	79	95	102	108	102	82	94	96
1109	23735	94	93	91	92	93	89	92	90	93	102	89	96	81	103	105	111	106	80	94	98
1110	Local Check	95	96	90	93	94	104	104	104	96	90	95	93	84	106	100	109	105	71	96	97
1111	24117	93	102	91	97	95	95	99	97	93	94	90	92	85	92	101	111	101	76	93	97
1112	24122	91	103	91	97	95	86	96	91	93	95	89	92	80	100	99	110	103	82	93	96
	Exp Mean	**92**	**101**	**91**	**96**	**95**	**91**	**98**	**94**	**91**	**95**	**89**	**92**	**77**	**95**	**97**	**107**	**100**	**79**	**92**	**96**
	C.D. 5%	2	0	2	1	1	4	0	1	1	1	1	1	1	4	3	5	2	2	1	0
	C.V.%	1.25	0.00	1.12	0.75	0.83	2.35	0.00	1.10	0.88	0.87	0.76	0.78	0.71	2.37	1.66	2.63	2.33	1.61	1.79	1.67

Table No. 3.21: Plant Height (cm) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III E							Zone III Mean (6)	IV	V							Zone V Mean (5)
		UT	PUN	HAR	RAJ		OD	OD	OD	OD (3)	BI	JH	W.B		AS	M.P.	M.P.	M.P. (2)	CG	CG	CG	CG (3)	
		PNT	LDH	KUL	KTA		CTK	JYP	BBN	Mean	PTN-ICAR	HZB	CHN		GER	WRS	JBP	Mean	AMB	RPR	JDP	Mean	
1101	24103	114	114	108	103	110	115	104	102	107	123	108	134	114	90	122	110	116	106	109	101	105	110
1102	23770	102	112	106	113	108	106	106	118	110	115	103	131	113	92	130	111	120	116	118	105	113	116
1103	IR 64 (NC)	114	98	103	96	103	87	88	85	87	103	94	139	99	79	105	101	103	108	107	90	102	102
1104	24104	117	119	110	104	113	110	112	110	111	126	101	132	115	89	123	105	114	111	112	106	110	111
1105	Zonal Check	97	98	87	86	92	107	105	103	105	116	100	128	110	92	130	94	112	108	106	103	106	108
1106	24120	122	118	113	109	116	106	106	98	104	121	102	127	110	92	118	106	112	115	132	104	117	115
1107	US 312 (HC)	122	118	122	110	118	115	104	107	109	125	106	130	115	92	121	108	115	116	111	110	113	113
1108	23216	118	106	110	114	112	108	95	93	99	109	107	128	107	83	110	96	103	106	106	100	104	104
1109	23735	116	110	104	110	110	110	104	90	102	118	94	90	101	84	118	113	115	106	104	106	105	109
1110	Local Check	100	92	102	116	103	120	111	100	110	89	106	125	108	101	108	88	98	91	112	100	101	100
1111	24117	111	114	117	104	111	110	112	95	106	122	110	132	114	91	95	109	102	111	120	105	112	108
1112	24122	118	123	113	103	114	112	109	100	107	123	105	115	110	92	138	102	120	109	115	108	111	114
	Exp Mean	**113**	**110**	**108**	**106**	**109**	**109**	**105**	**100**	**105**	**116**	**103**	**126**	**110**	**90**	**118**	**104**	**111**	**109**	**113**	**103**	**108**	**109**
	C.D. 5%					0				3				3				4				0	0

Table No. 3.21 Contd.: Plant Height (cm) of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII														Zone VII Mean (11)	Overall Mean (30)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KA	KA	KA	KA (3)	PUD		
		KJT	NWG	NVS	Mean		MTU	NLR	Mean	WGL	RNR	Mean	CBT	TRR	Mean	MNC	MND	GNV	KTG	Mean	KUP		
1101	24103	125	114	114	114	118	94	102	98	102	94	98	98	114	106	82	79	95	95	89	119	98	106
1102	23770	122	109	107	108	113	93	85	89	106	103	104	92	114	103	71	82	90	102	91	126	97	106
1103	IR 64 (NC)	97	91	110	100	99	80	73	77	97	102	100	78	86	82	67	77	93	99	90	104	87	95
1104	24104	122	113	113	113	116	97	102	99	109	103	106	106	115	111	78	82	96	97	92	127	101	108
1105	Zonal Check	110	107	115	111	111	79	80	80	105	91	98	86	88	87	67	77	108	107	97	112	91	100
1106	24120	120	128	113	121	120	93	89	91	114	92	103	106	104	105	77	84	101	99	94	122	98	108
1107	US 312 (HC)	124	106	114	110	114	94	99	96	114	96	105	97	104	100	78	84	115	92	97	116	99	108
1108	23216	106	104	119	111	110	90	85	87	106	92	99	92	108	100	79	82	92	93	89	113	94	102
1109	23735	115	109	93	101	106	89	84	87	113	83	98	88	103	96	81	84	112	90	95	115	95	101
1110	Local Check	100	110	102	106	104	104	98	101	121	98	110	84	104	94	84	103	109	91	101	105	100	102
1111	24117	123	103	120	111	115	95	92	93	104	94	99	98	113	106	85	88	102	98	96	128	100	107
1112	24122	128	118	120	119	122	86	88	87	113	85	99	117	107	112	80	86	112	93	97	125	99	108
	Exp Mean	**116**	**109**	**111**	**110**	**112**	**91**	**90**	**91**	**109**	**94**	**102**	**95**	**105**	**100**	**77**	**84**	**102**	**96**	**94**	**118**	**97**	**104**
	C.D. 5%				0				0			0			3					0			

Table No. 3.22: Panicles/ M² of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III							Zone III Mean (5)	IV	V								Zone V Mean (6)
		UT	PUN	HAR	RAJ		OD	OD	OD	OD (3)	BI	JH	W.B		AS	M.P.	M.P.	M.P. (2)	CG	CG	CG	CG	CG (4)	
		PNT	LDH	KUL	KTA		CTK	JYP	BBN	Mean	PTN-ICAR	HZB	@CHN		GER	WRS	JBP	Mean	AMB	BSP	RPR	JDP	Mean	
1101	24103	260	277	325	292	289	260	361	224	281	244	380	10	294	226	363	264	313	183	132	176	245	184	227
1102	23770	285	303	315	280	296	232	358	212	267	265	423	10	298	230	351	273	312	169	122	186	278	189	230
1103	IR 64 (NC)	356	337	365	292	337	213	459	211	295	315	440	10	328	259	362	283	323	170	113	203	301	197	239
1104	24104	321	275	364	280	310	240	387	222	283	225	353	9	285	223	340	213	277	179	137	215	235	192	220
1105	Zonal Check	227	301	301	292	280	222	442	218	294	265	311	9	292	239	351	235	293	188	120	196	279	196	228
1106	24120	329	315	390	350	346	222	369	222	271	254	287	8	271	217	326	273	300	189	136	206	254	196	231
1107	US 312 (HC)	326	304	365	268	316	218	377	214	270	225	345	10	276	225	316	233	275	174	129	170	246	180	211
1108	23216	369	319	377	303	342	222	412	219	285	306	360	11	304	262	346	285	315	183	118	236	280	204	241
1109	23735	326	318	364	280	322	264	310	216	263	269	389	9	290	230	314	285	300	170	122	223	322	209	239
1110	Local Check	304	332	396	303	334	275	344	233	284	322	346	12	304	229	297	314	306	181	117	200	298	199	235
1111	24117	260	275	337	315	297	222	413	205	280	240	337	9	284	198	318	234	276	181	122	173	253	182	213
1112	24122	219	293	395	315	306	260	372	210	281	269	422	9	307	186	245	267	256	177	137	183	257	188	211
	Exp Mean	**299**	**304**	**358**	**298**	**314**	**238**	**384**	**217**	**279**	**266**	**366**	**10**	**294**	**227**	**327**	**263**	**295**	**179**	**125**	**197**	**271**	**193**	**227**
	C.D. 5%	30	52	27	71	23	33	49	9	17	33	61	1	17	32	29	17	16	12	0	19	59	16	12
	C.V.%	5.92	10.18	4.43	14.04	9.09	8.29	7.56	2.46	6.44	7.29	9.79	8.94	8.01	8.43	5.28	3.80	4.56	4.13	0.00	5.79	12.93	10.00	7.77

Table No. 3.22 Contd.: Panicles/ M² of entries in AVT 2-IME Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII															Zone VII Mean (11)	Overall Mean (30)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KE	KA	KA	KA	KA (3)	PUD		
		KJT	NWG	NVS	Mean		MTU	NLR	Mean	WGL	RNR	Mean	CBT	TRR	Mean	MNC	MND	GNV	KTG	Mean	KUP		
1101	24103	183	283	262	272	242	291	422	356	308	638	473	667	389	528	416	323	406	467	399	643	452	330
1102	23770	244	277	370	323	297	323	315	319	352	616	484	590	359	474	401	323	514	424	420	590	437	333
1103	IR 64 (NC)	217	276	333	304	275	268	306	287	363	606	485	510	367	438	387	333	526	441	433	567	425	339
1104	24104	209	283	263	273	252	301	387	344	352	642	497	605	411	508	416	373	340	407	374	567	436	326
1105	Zonal Check	232	276	313	294	274	310	322	316	385	590	488	598	341	470	387	383	451	408	414	647	438	328
1106	24120	194	290	263	277	249	299	378	338	330	552	441	700	372	536	430	313	344	426	361	503	422	324
1107	US 312 (HC)	173	273	259	266	235	271	351	311	363	672	518	682	391	537	459	343	493	355	397	663	459	329
1108	23216	193	278	257	267	243	297	369	333	352	574	463	460	392	426	416	377	545	434	452	640	441	339
1109	23735	206	281	276	278	254	246	380	313	352	460	406	558	389	474	416	403	445	334	394	633	420	326
1110	Local Check	243	271	287	279	267	314	367	341	341	520	431	703	374	539	387	420	424	451	431	553	441	338
1111	24117	172	278	234	256	228	337	351	344	319	460	390	617	352	484	363	327	367	365	353	677	412	310
1112	24122	212	282	275	278	256	240	316	278	330	640	485	680	375	528	416	407	443	355	401	663	442	328
	Exp Mean	**206**	**279**	**283**	**281**	**256**	**291**	**355**	**323**	**346**	**581**	**463**	**614**	**376**	**495**	**408**	**361**	**441**	**406**	**402**	**612**	**436**	**329**
	C.D. 5%	19	7	54	19	19	75	74	41	34	91	44	109	32	42	44	126	49	14	42	47	21	9
	C.V.%	5.32	1.53	11.26	5.78	7.81	15.14	12.32	10.85	5.86	9.26	8.25	10.45	5.00	7.32	6.41	20.66	6.50	2.11	11.03	4.53	9.86	9.62

Table 3.23:Grain quality characteristics of entries in AVT-2-IME Kharif 2015

IIRR													NRRI		
ENTRY NO.	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**GT**	**Grain Chake**	**ASV**	**AC**	**GC**	**ASV**	**AC**	**GC**
1101	24103	80.2	70.5	60.6	6.07	2.05	2.96	LB	VOC	4	23.2	56	4.0	17.32	49
1102	23770	78.8	69.9	64.3	6.19	2.01	3.07	LS	A	6.3	22.7	51	6.0	19.65	58
1103	IR64	76.8	66.1	52.7	6.32	2.09	3.02	LS	VOC	4	21.91	57	4.0	16.65	47
1104	24104	80.7	69.1	59.4	6.39	1.99	3.21	LS	VOC	4	22.93	56	4.0	18.52	52
1105	MTU 1010 ZC	77.8	66.3	46.8	6.19	2.01	3.07	LS	VOC	3	21.67	59	4.0	17.62	51
1106	24120	81.4	69.4	58.6	6.41	2.01	3.18	LS	VOC	4.3	23.78	41	5.0	19.20	56
1107	US312(H)	79.8	68.8	37.2	5.64	2.03	2.77	MS	VOC	5.4	22.44	40	5.6	17.85	54
1108	23216	78	68.1	62.4	5	1.97	2.53	MS	VOC	4	24.05	23	4.0	21.00	49
1109	23735	79.6	70.1	65	6.48	2.15	3.01	LS	VOC	7	21.85	25	7.0	18.75	48
1110	L.C.												6.3	18.45	42
1111	24117	82.1	70.2	61.2	6.11	2.38	2.56	LB	VOC	4	24.64	45	6.0	18.60	40
1112	24122	80.1	67.2	55.6	5.74	2.11	2.72	MS	VOC	5.2	24.14	33			

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

ADVANCE VARIETY TRIAL - 2 - IRRIGATED MEDIUM (AVT-2-IM)

Locations : 30 **Entries : 10**

Checks : National: NDR 359; Zonal: Pantdhan 19 (North Western), NDR 8002 (Eastern), Akshyadhan (Western & Southern); Hybrid: KRH-2 and Local. **Table : 3.24**

Advance Variety Trial - 2 – Irrigated Medium was constituted with 10 entries including four checks viz., NDR 359 (National), Pant Dhan 19 for North Western, NDR 8002 for Eastern, Akshaydhan for Western & Southern zones ; KRH-2 hybrid and local checks. Of the 6 test entries, three were the hybrid entries and the remaining varietal entries. The trial was conducted at 35 locations however the data from 30 locations was received. The data from Ranchi (2096kg/ha), Maruteru (2977 kg/ha) and Kathalgeri (CV 1.71%) centres was not included in the mean due to either very low grain yield or low CV %. The trial was planted either in July or August at most of the centres while at Aduthurai, trial was planted in September. It was observed that the plot size was less at Bhubaneswar, Maruteru, Chinsurah and Mudigere centres. Lodging of several entries was observed at Maruteru.

The experimental mean of grain yield at different locations ranged from 4140 kg/ha at Aduthurai to 7511 kg/ha at Jeypore. The mean grain yield of entries ranged from a minimum of 3807 kg/ha (National check-NDR359) to a maximum of 6312 kg/ha (IET 24146). The CV% of the experiment at different locations varied from a minimum of 4.50 at Masodha to a maximum of 18.10 at Gorakhpur. The mean no. of days to 50% flowering ranged from 85 days (NDR359-national check) to a maximum of 108 days (IETs 23666 and 23272) and the plant height of the entries ranged from 91cm (NDR359) to 124 cm (IET 23666). Among the checks, local check stood 6th rank in the trial with a mean grain yield of 5653 kg/ha. Information pertaining to yield, flowering, plant height, etc, are presented in the tables 3.25, 3.26, 3.27 and 3.28**.** On overall mean basis, two test entries IETs 24146 and 24143 registered the required yield superiority over the best varietal and hybrid checks. They are discussed here under.

IET 24146 (NK-16520) a hybrid entry from syngenta stood first with a mean grain yield of 6312 kg/ha with 102 days to 50 % flowering and long bold grains. It registered 65.79, 18.89, 11.65 and 17.71% yield advantages over national, regional, local and hybrid checks respectively on overall mean basis. This entry stood first (6970 kg/ha) in Eastern zone (Z III) with 23.95 and 24.41% yield advantage over the best varietal & hybrid checks respectively. It was 2nd best (6519 kg/ha) in central (Zone V) zone with 28 & 5% yield advantage over the best varietal & hybrid checks. This entry showed top performance (7264 kg/ha) with first rank in Bihar state and registered 32.82 and 30.06 % yield superiority over the best varietal and hybrid checks respectively. Similarly , IET 24146 was third ranking (7392 kg/ha) entry in Odisha state with 19.81 and 15.08 % yield advantage over the best varietal and hybrid checks respectively. It has high head rice recovery, intermediate ASV (5.3) and AC (23.84%) and soft GC (57mm) indicating acceptable cooking quality (Table 3.29).

IET 24143 (MEPH-114) another hybrid entry from Mahyco seeds ranked 2nd with 6208 kg/ha of grain yield, 101 days to 50 % flowering and long slender grains. It out yielded all the checks with more than required advantage i.e., 63%, 17%, 10%, and 16% over national zonal, local and hybrid checks respectively. IET 24143 recorded first rank (6821

kg/ha) in southern zone (VII) with 12.83 and 36.72% yield superiority; third best entry (6423 kg/ha) in Eastern zone (III) with 14.22% and 14.65%, yield advantage over the best varietal and hybrid checks respectively. It recorded 2nd rank in Odisha (7831 kg/ha) with 26.26 % over best (Local) check and 21.92 % over hybrid check. It was also 2nd best entry in the state Bihar (6591 kg/ha) with 20.51 and 18.01 % yield superiority over the best varietal (Zonal) and hybrid checks respectively. In the state of Gujarat IET 24143 recorded first rank with 6507 kg/ha grain yield with 10% and 19% yield superiority over the best varietal and hybrid checks respectively. It has high HRR (59.1%, long slender grains intermediate ASV (5.7) and Intermediate AC (22.17).

Overall performance of entries in Advance Variety Trial -2 Irrigated Medium (AVT-2 IM) Kharif 2015:

Rank	IET No/ Designation/ Cross combination	Over all mean	Yield Adv (%) Over NC/ZC/ LC/HC	State				Zone			
				Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
1.	24146 NK-16520 (Hybrid)	6312 102 LB	65.79 18.89 11.65 17.71	OD-3 BI-1 CG-2 KA-1	7392 7264 6519 7630	19.00 33.00 28.00 16.00	15.00 30.00 5.00 78.00	Z3-1 Z5-2	6970 6519	24.00 28.00	24.00 5.00
2.	24143 MEPH-114 (Hybrid)	6208 101 LS	63.06 16.93 9.81 15.77	J&K-2 OD-2 BI-2 GU-1 TEL-1	6244 7831 6591 6507 7613	30.08 26.26 20.51 10.00 9.27	13.30 21.92 18.01 18.71 17.64	Z3-3 Z7-1	6423 6821	14.22 12.83	14.65 36.72
3.	24142 KPH-467 (Hybrid)	6012 124 SB	57.91 13.24 6.35 12.12	HA-1 J&K-1 OD-1 UP-2 CG-1	5947 6733 7954 5577 6822	10.66 40.27 28.24 19.78 33.73	9.56 22.17 23.83 12.89 9.51	Z3-2 Z5-1	6533 6822	16.18 33.73	16.61 9.51

Zone wise performance of the best performing entries in the respective zones are discussed here.

Zone III (Eastern): IET 24146 (NK-16520) a hybrid entry from syngenta stood first with a mean grain yield of 6970 kg/ha, 101 days to 50 % flowering and long bold grains. It registered 79.68, 40.10, 23.95, and 24.41 % yield advantages over national, regional, local and hybrid checks respectively on overall mean basis.

The second best entry IET 24142 (KRH-467) with 102 days to 50 % flowering and short bold grains registered a mean grain yield of 6533 kg/ha. This hybrid entry out yielded all the checks viz, national (68.41 %), regional (31.31 %), local (16.18 %) and hybrid check (16.61 %). IET 24142 was the first ranking entry (7954 kg/ha) in Odisha with 28.24 % and 23.83 % yield superiority over the best varietal and hybrid checks respectively. It recorded 2nd rank in UP (5577 kg/ha) with 19.78 % and 12.89 % yield advantages over the best varietal and hybrid checks respectively. It has high head rice recovery (58.9%), Intermediate ASV (4), High AC (26.69%) and hard GC (22mm).

IET 24143 (MEPH-114) another hybrid entry from Mahyco seeds ranked 3rd with 6423 kg/ha of grain yield, 99 days to 50 % flowering and long slender grains. It out yielded all the checks with more than required advantage i.e., 65.58%, 29.10%, 14.22% and 14.65 % respectively over national zonal, local and hybrid checks.

Zone V (Central): IET 24142 (KPH-467) a hybrid entry from Kaveri seeds recorded the first rank with a mean grain yield of 6822 kg/ha, 89 days to 50 % flowering and short bold grains. It out yielded all the checks with superior performance of 80.09%, 33.73%, 37.59% and 9.51 % yield improvement over national, zonal, local and hybrid checks respectively.

Considering the three years performance of IET 24146 (NK 16520) it is observed that it fulfilled the desired yield advantage on overall mean in all the three years of testing over the checks. It exhibited consistent performance in Bihar during 2015 (1st, 7264 kg/ha) with 33 and 30% yield improvement over the best varietal and hybrid checks and during 2014 (3rd , 6397 kg/ha) with 21.59% and 12.58% yield superiority over the best varietal and hybrid checks respectively, it was also significantly superior for two consecutive years in Chhattisgarh during 2015 (2nd, 6519 kg/ha) with 28 and 5% yield superiority over the best varietal and hybrid checks respectively and during 2014 (5th, 6438 kg/ha). But this entry showed 9.0% yield improvement over the best varietal check although registered 18.21% yield advantage over the hybrid check. **Therefore IET 24146 (NK 16520) was found promising in the states of Bihar and Chhattisgarh.**

Summarising the three years performance of IET 24143 (MEPH-114) it is noted this hybrid failed to record significant superiority during 2013 while established the yield superiority over the checks during 2014 and 2015 with 6057 kg/ha and 6208 kg/ha grain yield respectively. However, it may be noted that IET 24143 exhibited consistently superior performance in Bihar state during 2015 (2nd, 6591 kg/ha) with 20.51 and 18.01% over the best varietal & hybrid checks and during 2014 (6th, 6187 kg/ha) with 17.60% and 8.8% over best varietal and hybrid checks respectively. **Thus it found promising in Bihar.**

Three years performance of IET 24142 (KPH-467) revealed that this hybrid entry could not establish desired yield superiority on over all mean in one of the three years of testing. IET 24142 showed consistently superior performance in the state of Chhattisgarh during all the three years of testing with required yield superiority. In Chhattisgarh it was 1st ranking (6822 kg/ha) with 33.73 % & 9.51 % yield advantage during 2015; 1st ranking (6694 kg/ha) with 18.45 % and 22.91 % during 2014 and during 2013 recorded 6872 kg/ha with 17.83 % and 26.27 % yield superiority over the best varietal & hybrid checks. **Hence promising in Chhattisgarh.** Three years performance of remaining 3 entries is summarised below.

Although IET 23272 (MTU 1155) recorded superiority over the best checks in all the three years of testing in region 3. However, it may be noted that this entry was found consistently superior in Odisha state during 2015 and 2014 i.e., during 2015 (4th, 7355 kg/ha) with 18.59% yield advantage; during 2014 (1st, 5659 kg/ha) with 12.54 % yield superiority over the best check. IET 23272 was significantly superior to the best check during all the three years of testing in Chhattisgarh state i.e., during 2013 (1st 6289 kg/ha) with 22.56%; during 2014 (4th, 6456 kg/ha) with 29.04% and during 2015 (6th, 5811 kg/ha) with 13.91% yield superiority over the best checks in the respective years.

Thus based on three years performance IET 23272 was promising in the states of Chhattisgarh and Odisha.

Considering the three years performance of IET 23666 (OR 2542-12). It is observed that it could not establish significant superiority over the best check on overall mean basis,

however showed superior performance in the Eastern region (R3) during 2013 and 2015 while found superior in Western region (R4) during 2013 and 2014 only. It was promising in Bihar during 2015 (3rd, 6330 kg/ha) with 15.74%; during 2014 (4th, 6229 kg/ha). **Hence promising in Bihar.**

IET 23680 (HKR 09-104) did not exhibit consistently superior performance either on overall mean basis or on regional basis or in any of the states during the three years of testing. Thus it is discontinued.

Zonal Performance of Promising Entries in Advance Variety Trial-2 Irrigated Medium (AVT-2-IM) Kharif 2015

Rank	IET No/ Designation/ Cross combination	GY/FD/ GT	Yield Adv(%) over NC/ZC/ LC/HC	% Increase over the best check state			
				Rank	Yield	% BVC	%HC
Promising in Zone III :							
1.	24146 NK-16520 (Hybrid)	6970 101 LB	79.68 40.10 23.95 24.41	BI-1 OD-3	7264 7392	32.82 19.18	30.06 15.08
2.	24142 KPH-467 (Hybrid)	6533 102 SB	68.41 31.31 16.18 16.61	OD-1 UP-2	7954 5577	28.24 19.78	23.83 12.89
3.	24143 MEPH-114 (Hybrid)	6423 99 LS	65.58 29.10 14.22 14.65	OD-2 BI-2	7831 6591	26.26 20.51	21.87 18.01
	National Check (NC)	3879 86					
	Regional Check (RC)	4975 111					
	Local Check	5623 108					
	Hybrid Check	5602 97					
Promising in Zone V :							
1.	24142 KPH-467 (Hybrid)	6822 94 SB	80.09 33.73 37.59 9.51	CG-1	6822	33.73	9.51
2.	24146 NK-16520 (Hybrid)	6519 94 LB	72.09 27.79 31.48 4.65	CG-2	6519	27.79	4.65
	Hybrid Check (HC)KRH-2	6229 84					
	National Check (NC)	3788 74					
	Regional Check (RC)	5101 90					
	Local Check (LC)	4958 93					

Rank	IET No/ Designation/ Cross combination	GY/FD/ GT	Yield Adv(%) over NC/ZC/ LC/HC	% Increase over the best check state			
				Rank	Yield	% BVC	%HC
Promising in Zone VI :							
1.	24143 MEPH-114 (Hybrid)	6295 101 LS	69.99 33.87 5.69 17.90	GU-1	6507	10.00	18.71
	Local Check (LC)	5956 100					
	National Check (NC)	3703 82					
	Regional Check (RC)	4702 100					
	Hybrid Check (HC)	5339 92					
Promising in Zone VII :							
1.	24143 MEPH-114 (Hybrid)	6821 110 LS	72.37 16.12 12.83 36.72	TEL-1	7613	9.27	17.64
2.	24146 NK-16520 (Hybrid)	6519 109 LB	64.74 10.98 7.84 30.66	KA-1	7690	15.53	77.81
	National Check (NC)	3957 90					
	Regional Check (RC)	5874 104					
	Hybrid Check (HC)	4989 96					
	Local Check (LC)	6045 107					

Three Years (Overall) Performance of Promising Entries in AVT 2-IM Kharif 2015

IET No/ Designation/ Cross combination	Year	Over all mean	Yield Adv (%) Over NC/ZC/ LC/HC	State				Region			
				Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
24146 NK-16520 (Hybrid)	2015	6312 102 LB	65.79 18.89 11.65 17.71	OD-3 BI-1 CG-2 KA-1	7392 7264 6519 7630	19.00 33.00 28.00 16.00	15.00 30.00 5.00 78.00	R3-1 R5-2	6970 6519	24.00 28.00	24.00 5.00
	2014	5892	16.53 5.53 10.83 10.79	B1-3 MN-5 MH-9	6397 8836 4182	21.59 17.32 12.38	12.58 28.35 19.69	R3-4	5854	11.48	10.64
	2013	6119	14.84 28.55 11.23 7.06	JH-6 AP-1 KA-5 TN-14	6400 7103 6869 5651	33.33 14.58 11.89 11.52	36.17 7.78 22.81 22.55	R5-	6845	18.91	12.32

IET No/ Designation/ Cross combination	Year	Over all mean	Yield Adv (%) Over NC/ZC/ LC/HC	State				Region			
				Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
24143 MEPH-114 (Hybrid)	2015	6208 101 LS	63.06 16.93 9.81 15.77	J&K-2 OD-2 BI-2 GU-1 TEL-1	6244 7831 6591 6507 7613	30.08 26.26 20.51 10.00 9.27	13.30 21.92 18.01 18.71 17.64	R3-3 R7-1	6423 6821	14.22 12.83	14.65 36.72
	2014	6057	19.79 8.49 13.93 13.89	BI-6 MN-2 MH-6 KA-2 PO-2	6187 11353 4396 7748 6897	17.60 50.75 18.14 15.62 40.81	8.88 64.91 30.09 15.71 32.71	R3-2	5922	12.77	11.92
	2013	6043	13.42 26.95 9.85 5.73	HA- CH- KA- TN-	8646 6650 7040 5897	14.15 14.02 14.67 16.38	5.31 22.19 25.87 27.88	R5-	64.58	12.19	10.76
24142 KPH-467 (Hybrid)	2015	6012 124 SB	57.91 13.24 6.35 12.12	HA-1 J&K-1 OD-1 UP-2 CG-1	5947 6733 7954 5577 6822	10.66 40.27 28.24 19.78 33.73	9.56 22.17 23.83 12.89 9.51	R3-2 R5-1	6533 6822	16.18 33.73	16.61 9.51
	2014	5845	15.60 4.69 9.95 9.90	JH-1 CG-1 MN-3 MH-4	5216 6694 10807 4572	32.95 18.45 43.50 22.87	19.60 22.91 56.98 35.30	R3-1	5964	13.57	12.71
	2013	6134	15.12 28.86 11.50 7.33	CH- TN-	6872 6126	17.83 20.89	26.27 32.85	R1- R2- R5	7113 6153 6634	25.89 8.72 15.25	125.22 4.30 8.86
23272 MTU1155 MTU1001/ Annada	2015	5770 108 MS	51.56 8.68 2.06 7.60	OD-4 UP-1 CG-6	7355 5747 5811	18.59 23.43 13.91	14.51 16.33 -6.71	R3-4 R5-6	6315 5811	12.30 13.91	12.72 -6.71
	2014	5714 114	13.03 2.36 7.50 7.46	OD-1 WB-1 CG-4 MH-1 AP-5	5659 7889 6456 4861 5286	12.54 57.78 29.04 30.63 4.98	19.79 115.13 18.54 43.85 13.16	R3-5 R4-1	5853 4643	11.46 13.65	10.62 37.28
	2013	4769 112	0.52 -2.13 -0.45	WB-1 UP-1 CG-1 MH-2 AP-4 TN-3	6208 5385 6289 4600 4939 6467	11.19 19.16 22.56 9.21 5.62 5.72		R3-6 R4-2	4598 5169	5.87 9.07	
23666 OR 2542-12 Gouri/ IR65629-22-1	2015	5712 108 LB	50.03 7.59 1.04 6.52	OD-5 BI-3 CG-7	6890 6330 5714	11.09 15.74 12.01	7.27 13.33 -8.26	R3-5 R5-7	6034 5714	7.30 12.01	7.71 -8.26
	2014	5078 110	0.43 -9.04 -4.47 -4.51	BI-4 MH-7	6229 4375	18.39 17.57	9.62 29.47	R4-3	4457	9.10	31.78
	2013	5154 110	8.45 5.58 7.38	OD-1 UP-2 MH-5 KE-2 PU-9	5066 5301 4473 6554 6946	17.07 17.30 6.19 8.76 8.04		R3-1 R4-7	4971 4952	14.46 4.49	
23680 HKR 09-104 HKR 47/ HKR99-60	2015	5374 100 LS	41.16 1.22 -4.93 0.22	CG-5 AP-1	5832 7185	14.33 5.19	-6.37 34.90	R5-5	6822	14.33	-6.37

IET No/ Designation/ Cross combination	Year	Over all mean	Yield Adv (%) Over NC/ZC/ LC/HC	State				Region			
				Rank	Yield Kg/ha	% BVC	% HC	Rank	Yield kg/ha	% BVC	% HC
	2014	5348 103	5.77 -4.20 0.60 0.56	OD-3 BI-MH-3 PO-4	5308 5808 4675 5397	5.56 10.39 25.63 10.18	12.36 2.21 38.35 3.84	R4-2	4637	13.51	37.10
	2013	5041 101	6.26 3.44 5.21	UT-3 HAR-3 MAN-1	4411 5450 4219	12.35 21.11 26.96		R2-2 R4-4	5299 5043	8.58 6.41	

Advance Variety Trial - 1 - Irrigated Medium (AVT-1-IM)

Locations : 32 **Entries : 58**

Checks : National: NDR 359 & MTU 1010; Zonal: PR 113 (Northern), Lalat (Eastern and North Eastern), IR 64 (Central), Akshyadhan (Western), Jaya (Southern); Hybrid: HRI 174 & US 312 and Local. **Table : 3.30**

Advance variety Trial-1-Irrigated Medium (AVT-1-IM) was constituted with 58 entries including 6 checks. It was conducted at 32 locations spread over 6 zones covering 18 states. Data from 6 locations (Cuttack, Chiplima, Gorakhpur, Bilaspur, Navsari and Jagityal) was not received. Data from Ranchi, Masodha, Ambikhapur centre was not included in the mean due to either low experimental mean yield and high or low CV. Information pertaining to yield, flowering, plant height, etc, are presented in the tables 3.31, 3.32, 3.33, 3.34 and 3.35**.** Zone wise performance of the entries is discussed here.

Zone II (North Western): This zone was represented by 4 locations. Experimental mean yield of the locations ranged from 4472 kg/ha (Chatha) to 8620 kg/ha at Kaul. The CV of the experiments ranged from 5.12% (Kaul) to 11.73% (Ludhiana). Mean yield of the test entries ranged from 3477 kg/ha (National check-NDR359) to 7863 kg/ha (IET 24817). Days to 50% flowering ranged from 94 days (NDR 359) to 117 days (IET 22919). Among the checks Hybrid and Local checks recorded maximum grain yield of 6910 and 6724 kg/ha respectively. Of the 52 test entries, only 4 entries recorded the desired yield advantage over the best varietal and hybrid checks. They are IETs 24817, 24880, 24260 and 24330. Of these, IETs 24880 and 24330 recorded undesirable quality traits . Therefore these may be discontinued.

Zone III (Eastern): This zone was represented by 12 locations while data was not received from Gorakhpur, Cuttack and chiplima centres and the data from Ranchi and Masodha centres was not included in the mean due to low mean yield. Experimental mean yield of the locations ranged from 4271 kg/ha at Sabour to 7043 kg/ha at ICAR centre-Patna. The CV% of the experimental sites ranged from 4.30% (Chinsurah) to 17.35% (Patna). The mean grain yield of the entries ranged from 3648 kg/ha (NDR 359) to 7424Kg/ha (IET 24879). The promising entries in this zone are IETs 24879, 22919, 24817, 24844, 24354, 24825, 24318, 24306, 24338, 24351, 24331, 24311, 24309 and 24342. Of these entries IET 24354, 24825 and 24342 recorded undesirable quality parameters (high AC and low GC), and IETs 24138, 24306, 24338, 24351 and 24311 due to very low HRR may be dropped. Therefore the following entries qualify for promotion to next year of testing, they are IETs 24879, 22919, 24817, 24844, 24331 and 24309.

Zone IV (North Eastern): This zone was represented by one Location, Titabar in Assam. Zonal check recorded the maximum grain yield of 5448 kg/ha. Since it was a single location, as per the set norms the best performing entries should record more than 10% yield superiority over the best check in zone, thus none of the entries qualified for promotion.

Zone wise performance of promising entries in AVT-1-M, Kharif 2015

IET No	Zone II				Zone III				Zone V			
	Yield	FD	% BVC	% HC	Yield	FD	% BVC	% HC	Yield	FD	% BVC	% HC
24817	7863	105	16.93	13.79	6801	100	21.27	10.81	-	-	-	-
24880	7630	107	13.47	10.41	-	-	-	-	-	-	-	-
24260	7268	105	8.09	5.18	-	-	-	-	-	-	-	-
24330	7227	108	7.48	4.58	-	-	-	-	-	-	-	-
24879	-	-	-	-	7424	108	32.38	7.90	6424	108	33.02	14.10
22919	-	-	-	-	7423	108	32.36	7.89	6238	108	29.17	10.79
24844	-	-	-	-	6713	100	19.78	9.38	6703	100	38.80	11.16
24354	-	-	-	-	6648	108	18.54	-	-	-	-	-
24825	-	-	-	-	6493	99	15.78	5.60	6615	99	36.98	9.70
24318	-	-	-	-	6251	105	11.46	-	-	-	-	-
24306	-	-	-	-	6199	108	10.53	-	-	-	-	-
24338	-	-	-	-	6148	98	9.62	-	5705	98	18.14	--
24351	-	-	-	-	6040	109	7.70	-	-	-	-	-
24331	-	-	-	-	5928	102	5.70	-	-	-	-	-
24311	-	-	-	-	5912	103	5.42	-	-	-	-	-
24309	-	-	-	-	5896	118	5.13	-	-	-	-	-
24342	-	-	-	-	5888	110	4.9	-	-	-	-	-
24844	-	-	-	-	-	-	-	-	6703	100	38.80	11.16
24825	-	-	-	-	-	-	-	-	6615	99	36.98	9.70
24879	-	-	-	-	-	-	-	-	6424	108	33.02	14.10
24846	-	-	-	-	-	-	-	-	6380	102	32.11	13.32
24880	-	-	-	-	-	-	-	-	6314	106	30.75	12.14
22919	-	-	-	-	-	-	-	-	6238	108	29.17	10.79
24306	-	-	-	-	-	-	-	-	5872	108	21.59	4.29
24340	-	-	-	-	-	-	-	-	5758	105	19.23	-
24338	-	-	-	-	-	-	-	-	5705	98	18.14	-
24325	-	-	-	-	-	-	-	-	5645	112	16.89	-
24326	-	-	-	-	-	-	-	-	5554	97	15.01	-
23964	-	-	-	-	-	-	-	-	5517	108	14.24	-
24343	-	-	-	-	-	-	-	-	5509	103	14.08	-
24333	-	-	-	-	-	-	-	-	5330	102	10.37	-
24347	-	-	-	-	-	-	-	-	5300	106	9.75	-
24323	-	-	-	-	-	-	-	-	5144	100	6.52	-
24334	-	-	-	-	-	-	-	-	5126	98	6.15	-
24341	-	-	-	-	-	-	-	-	5091	100	5.42	-
24318	-	-	-	-	-	-	-	-	5071	105	5.01	-
24302	-	-	-	-	-	-	-	-	5057	112	4.72	-
BVC	6724 kg/ha (LC) (FD:106)				5608 kg/ha (LC) (FD: 106)				4829 kg/ha (LC) (FD: 106)			
HC	6910 kg/ha (FD: 110)				6880 kg/ha (FD: 105) 6137 kg/ha (FD: 100)				5630 kg/ha (FD: 105) 6030 kg/ha (FD: 100)			

Zone V (Central): This zone was represented by 3 locations Ambikhapur, Jagdalpur and Sakoli. The experimental mean ranged from 4944 kg/ha (Sakoli) to 5540 kg/ha Ambikhapur. Similarly CV% ranged from 4.05 and Sakoli to 12.77% at Ambikhapur. Mean grain yield of the entries ranged from

2902 kg/ha (NDR 359) to 6703 kg/ha (IET 24844). Local check (4829 kg/ha) and hybrid (US312) check (6030 kg/ha) recorded maximum grain yield among the checks in the trial in this zone. Mean days to 50% flowering of the entries ranged from 88 days (NDR 359) to 130 days (IET 24309). Based on the significant yield superiority over the best varietal and hybrid check, the following entries qualify for promotion to next year of testing IETs 24844, 24825, 24879, 24846, 24880, 24919 (all hybrids), 24306, 24340, 24338, 24325, 24326, 23964, 24343, 24333, 24347, 24323, 24334, 24341, 24318, 24302. Of these, IETs 24846, 24880 and 24333 recorded Low AC while IET 24825 recorded high AC. IETs 24846, 24306, 24340, 24338, 24326, 24343, 24323, 24334, 24341, 24318 and 24302 recorded very low HRR and hence these entries may be dropped. Therefore the following entries IETs 24844, 24879, 24880, 24919, 24325, 23964 and 24347 qualify for next year of testing.

Zone VI (Western): This zone was represented by 3 locations (Karjat, Nawagam, Navsari) while data was not received from Navsari. The experimental mean yield of the locations ranged from 4725 kg/ha (Karjat) to 5155 kg/ha (Nawagam). The CV% ranged from 5.88% (Nawagam) to 7.97% (Karjat). The mean grain yield of the entries ranged from 3054 kg/ha (NDR 359) to 6138 kg/ha(IET 24879). Days to 50% flowering ranged from 86 days (MTU 1010) to 122 days (IET 23656). Among the checks regional check registered maximum grain yield of 5823 kg/ha. None of the entries registered required 5% yield superiority over the best varietal check in this zone.

Zone VII (Southern): This zone was represented by 11 locations while data was not received from Jagtial and Karaikal centres. The experimental mean yield ranged from 4219 kg/ha at Maruteru to 7392 kg/ha at Rajendranagar. The CV ranged from 3.82% (Kathalgere) to 15.56% ((Ragolu). The mean grain yield of the entries ranged from 4093 kg/ha (NDR 359) to 6530 kg/ha (IET 22919). Days to 50% flowering ranged from 89 days (NDR 359) to 107 days (Local Check). Among the checks hybrid & regional check registered maximum grain yield of 6509 & 6083 kg/ha respectively. None of the entries recorded required 5% yield superiority over the best varietal check. Due to delayed harvesting, HRR of majority of entries got affected and hence not considered.

However, ninetenn entries i.e., IETs 24880, 24354, 24825, 24342, 24846, 24326, 24333, 24323, 24318, 24306, 24338, 24351, 24311, 24330, 24340, 24343, 24334, 24341 and 24302 were dropped from further testing due undesirable quality parameters.

INITIAL VARIETY TRIAL-IRRIGATED MEDIUM (IVT-IM)

Location : 28 **Entries: 81**
Checks : National: MTU 1010 & NDR 359, Zonal: PR113-Northern, CR Dhan 201- Eastern, IR 64 – Central, Akshyadhan – Western, Jaya - Southern and Local check **Table:3.36**

Initial Variety Trial - Irrigated Medium was constituted with 81 entries including 4 checks. The experiment was sent to 36 locations spread over 6 zones covering 18 states. However, data from Cuttack, Chiplima, Ambikapur, Bilaspur, Igatpuri, Jagtial and Karaikal was not received. Data from Ranchi and Gorakhpur due to high CV and Masodha due to severe drought were not included in the mean. Mean grain yield of the entries in the trial ranged from 4090 kg/ha (IET 25294) to 6344 kg/ha (IET 25289. Days to 50% flowering ranged from 88 days (IET 25359) to 120 days (IET 25344) Experimental mean at the test locations 3375 kg/ha at Maruteru to 7471 kg/ha at ICAR centre, Patna. Details of plant height, panicles/m^2, and days to 50% flowering and grain yield are presented in the tables3.37, 3.38, 3.39 and 3.40.

On overall mean basis three test entries IETs 25289, 25301 and 25330 registered the required yield advantage over the best check. The details are presented here.

IET 25289 (OR 2573-7) from the cross Birupa/IR 76561-AC-8-8 recorded the first rank (6344 kg/ha) with 104 days to 50% flowering and long slender grains. It out yielded all the 4 checks with required yield advantage. This entry registered 1st rank in zone V (central) with 6673 kg/ha grain yield and 26.02% yield advantage; in zone III (Eastern) with first rank and 6906 kg/ha of grain yield and 10.40% yield advantage; in zone II (North western) (5th 6043 kg/ha) with 8.08% and in the zone IV (North Eastern) recorded 4819 kg/ha of grain yield with 13.68% yield advantage over the best check in the respective zones.

The second best entry IET 25301 (RNR 11718) from the cross MTU 1010/ NLR 34449 recorded 6023 kg/ha grain yield, 107 days to 50% flowering and medium slender grains. It showed significantly superior performance over all the four checks with more than 5% yield superiority. It ranked 5th (6653 kg/ha) in zone III (Eastern) with 6.36% and recorded 4746 kg/ha grain yield with 11.96% yield advantage over the best check in zone IV (North eastern).

IET 25330 (WGL-739) from the cross RP4516-3-6 and Kavya stood third best on overall mean basis with 6021 kg/ha grain yield, 100 days to 50% flowering and long slender grains. It out yielded all the four checks with more than 5% yield superiority. It registered 2nd rank (6359 kg/ha) in zone IV (North eastern) with 50.01% and in zone VI Western (2nd, 5829 kg/ha) with 10.79% yield improvement the best check in respective zones.

Zonal performances of the superior entries are discussed here.

Zone II (North Western): This zone was represented by 4 locations namely Pantnagar, Kaul, Ludhiana, and Chatha. The experimental mean yield ranged from 4331 kg/ha at Chatha to 6107 kg/ha at Pantnagar. The CV of the experimental sites ranged from 8.68% at Kaul 14.63% at Chatha. The mean grain yield of test entries ranged from 3692 kg/ha (IET 25334) to a maximum of 6476 kg/ha (IET 25331). Days to 50% flowering from 87 days (IET 25308 and 25359) to 130 days (IET 25288). National check (MTU 1010) recorded high yield (5591 kg/ha) among checks. Of the total 77 entries tested only 7 test entries registered the required yield advantage of more than 5% over the best check. They are IETs 25331, 25351, 24735, 25355, 25289, 25295 and 25350.

Zone III (Eastern): This zone was represented by 7 locations in the states of Bihar, Ordisha, UP, Jharkhand & West Bengal. Experimental mean yield at the locations ranged from 3915kg/ha at Sabour to 7471 kg/ha at ICAR centre, Patna. The CV% of the experimental sites ranged from 5.48 at Jeypore to 12.73 at Patna Among the entries national check (NDR 359) recorded 6255 kg/ha while IET 25289 recorded the maximum grain yield of 6906 kg/ha. Days to 50% flowering ranged from 87 days (IET 25308) to 121 days (IET 25288). Among the checks national check (NDR 359) recorded the maximum yield 6255 kg/ha. Six entries out yielded the best check with desired yield superiority. They are IETs 25289, 25341,25340,25327,25301 and 25325. However IETs 25341 and 25340 may be shifted to late duration group based on days to 50% flowering.

Performance of promising entries in Initial Variety Trial – Irrigated Medium (IVT-IM) Kharif, 2015

IET No.	Overall			Zone II		Zone III		Zone IV		Zone V		Zone VI		Remarks
	FD	GT	% BVC	% BVC	FD	% BVC	FD	% BVC	FD	% BVC	FD	% BVC	FD	
25289	104	LS	11.9	8.08	113	10.40	107	13.68	104	26.02	101			Promoted
25301	107	MS	5075			6.36	110	11.96	94					Shifted to Late
25330	100	LS	5.72					50.01	100			10.79	97	Promoted
25331	95	MS		15.82	96			37.60	96	7.96	92	5.03	95	Promoted
25351	95	LS		10.14	102			35.48	93					Promoted
24735	101	MS		8.62	109			49.13	96					Promoted
25355	102	LS		8.24	105			48.71	97					Promoted
25295	93	LS		5.81	97			40.17	96					Promoted
25350	95	LS		5.02	103			45.29	94					Promoted
25341	93	LB				9.22	94	30.33	96	14.59	88			Promoted
25340	113	MB				8.28	112							Shifted to Late
25327	106	MS				7.19	105							Promoted
25325	103	MS				4.94	105	13.25	107					Promoted
25358	94	LS						50.43	92	5.45	88			Shifted to Early
25337	106	LS						50.01	96					Promoted
25342	94	LS						40.17	93					Promoted
25310	93	LB						38.90	96					Promoted
25345	93	LS						37.17	92	4.85	88			Shifted to Early
25323	100	LB						35.90	96					Promoted
25352	106	SB						34.63	98	12.18	102			Promoted
25334	108	LS						30.33	98					Promoted
25293	96	LS						26.91	94	6.40	91			Promoted
25318	101	LS						26.06	95					Promoted
25303	106	MS						21.37	104	8.63	106			Promoted
25300	99	MS						20.09	93					Promoted
25316	106	MS						16.67	104					Promoted
25302	93	MS						15.38	93					Promoted
25291	108	MS						13.68	110					Shifted to Late
25336	96	LB								11.40	91			Promoted
25329	112	LB										15.85	115	Shifted to Late
Best check yield (kg/ha)		5538 (NC)		5591 (NC)		6255 (NC)		4239 (RC)		5295 (LC)		5261 (NC)		

Zone IV (North-eastern): This zone was represented by one location, Titabar in Assam. Performance of the entries ranged from 2736 kg/ha (NDR 359-national check) to a maximum of 6377kg/ha (IET 25358). Among the checks, zonal check recorded the maximum grain yield of 4239 kg/ha. As many as 26 entries out yielded the best check with 10% yield superiority over the best check in this zone. However IET 25358 and 25345 may be shifted to the early duration trial due to their flowering duration.

Zone V (Central): This zone was represented by 4 locations; however the data from two locations, Ambikhapur and Bilaspur was not received. IET 25344 recorded 2619 kg/ha of gain yield while IET 25289 recorded the maximum gain yield of 6673 kg/ha. Among the check varieties, local check registered the maximum gain yield of 5295 kg/ha. Days to 50% flowering ranged from 82 days (IET 25296) to 130 days (IET 25344). Nine entries, IETs

25289, 25341, 25352, 25336, 25303, 25331, 25293, 25293, 25358 and 25345 exhibited significantly superior performance over the best check with desired yield improvement. IET 25358, 25345 may be shifted to early duration group trial based on days to 50% flowering.

Zone VI (Western): This zone was represented by 4 locations namely Karjat, Igatpuri, Nawagam and Navsari. However the data from Igatpuri was not received. The experimental mean yield ranged from 3946 kg/ha at Nawagam to 5076 kg/ha at Karjat. The CV of the experimental sites ranged from 8.45% at Karjat to 16.04% at Nawagam. Mean grain yield of the test entries ranged from 3084 kg/ha (IET 25359) to a maximum of 6095 kg/ha. Days to 50% flowering ranged from 88 days (IET 25290 & IET 25359) to 121 days (IET 25288 & 25344). Among the checks National check (NDR359) registered maximum yield of 5261 kg/ha. Of the total 77 entries tested only three entries registered the required yield advantage of more than 5% over the best check. They are IETs 25329, 25330 and 25331. However IET 25329 may be shifted to late duration group based on days to 50% flowering.

Zone VII (Southern): This zone was represented by 11 locations; data from centre was not received (Jagityal). Experimental mean ranged from 3375 kg/ha at Maruteru to a maximum of 6544 kg/ha at Kathalagere. The CV% of the experimental sites ranged from 3.28 at Kathalagere to 15.15 at Warangal. Mean grain yield of the entries across the locations ranged from 3923 kg/ha (IET 25359) to 6409 kg/ha (IET 25289). Among the checks, local check recorded maximum grain yield 6176 kg/ha. Days to 50% flowering of the entries ranged from 87 days (IET 25359) to 119 days (25344). None of the entries recorded superior performance over the best varietal check.

Table 3.24: Composition of entries in Advance Variety Trial 2 – Irrigated Medium (AVT 2-IM), Kharif 2015

Entry No.	IET No.	Designation	Cross combination	Grain type
3rd year of testing				
1201	24146	***NK-16520 (Hybrid)***	-	LB
1202	23680	HKR 09-104	HKR 47/HKR 99-60	LS
1203	24142	***KPH-467(Hybrid)***	-	SB
1204	**NDR359 (NC)**			
1205	**Local Check**			
1206	**Pant Dhan 19-Northwestern, NDR 8002 –Eastern, Akshayadhan –Western & Southern -- (ZC)**			
1207	23272	MTU 1155	MTU 1001/Annada	MS
1208	**KRH-2 (HC)**			
1209	23666	OR 2542-12	Gouri/ IR 65629-22-1	LB
1210	24143	***MEPH-114 (Hybrid)***	-	LS

Table No. 3.25: Grain Yield (kg/ha) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	II														III					
		UT		PUN		HAR		J&K		Zone II Mean (4)				OD		OD		OD (2)			
		PNT		LDN		KUL		CHT						BBN		JYP		Mean			
1201	24146	6899	1 ...17% _7%	2964	8 _13%	5456	3 ...2% _1%	5622	3 *	5235	6	**5%**		5896	4 #	8889	3 *	7392	3 *# 19%	**15%**	
1202	23680	5351	6	6571	2 # _150%	5265	7	4556	7	5436	3	**9%**		4649	8	7000	7	5824	8		
1203	24142	5652	4	3289	7 _25%	5947	1 *#...11% _10%	6733	1 *#	5405	4	**8%**		5896	5 #	10012	1 *#	7954	1 *# 28%	**24%**	
1204	NDR359 (NC)	3453		4241	5 # _62%	2564		3733	9	3498				3175		4649	9	3912			
1205	Local Check	5235	7	7068	1 # _169%	5374	5	4800	5	5619	1 #	**12%**		6349	1 #	6056	8	6202	7		
1206	Zonal Check	5877	3	6207	3 # _137%	5319	6	4622	6	5507	2 #	**10%**		5102	7	3728		4415	9		
1207	23272	4068	9			3792	9			3930	9			6122	3 #	8588	4 *	7355	4 *# 19%	**15%**	
1208	KRH-2 (HC)	6440	2 ...10%	2624	9	5428	4 ...1%	5511	4	5001	7			4535	9	8310	6 *	6423	6 4%		
1209	23666	4789	8	5331	4 # _103%	5101	8	4422	8	4911	8			5215	6	8564	5 *	6890	5 * 11%	**7%**	
1210	24143	5375	5	4074	6 # _55%	5510	2 ...3% _2%	6244	2 *	5301	5	**6%**		6349	2 #	9313	2 *#	7831	2 *# 26%	**22%**	
	Exp Mean	**5314**		**4708**		**4975**		**5138**		**5040**				**5329**		**7511**		**6420**			
	C.D. 5%	1555		856		386		793		465				788		976		485			
	C.V.%	17.06		10.50		4.52		8.91		11.33				8.63		7.58		6.47			
	Sowing Date	01-Jun		27-May		27-May		29-May						10-Jul		19-Jun					
	Planting Date	02-Jul		25-Jun		04-Jul		05-Jul						14-Aug		08-Jul					
	Local ©	Pant Dhan 4		PR 121		HKR 47		SJR-5						Hiranmayee		Pratikshya					

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.25 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	III																				Zone III Mean (8)	
		BI		BI		BI		BI (3)		JH		W.B		U.P.		U.P.		U.P. (2)					
		PTN-ICAR		PTN		SBR		Mean		@CI		CHN		MSD		GRK		Mean					
1201	24146	9676	2 *	6844	1 #	5271	2 #	7264	1 *# 33% **30%**	2667	3	8944	1 # ...5% _68%	4337		5904	1 *	5121	3 10% **4%**	6970	1 *# 24% **24%**		
1202	23680	8604	5 *	3333	9	4701	6 #	5546	7 1%	1622	8	4889	9	5810	2 *#	1828		3819	9	5102	8		
1203	24142	9120	4 *	5400	6	2849		5790	4 6% **4%**	2978	1	7833	3 # _47%	5565	3 #	5590	4 *	5577	2 * 20% **13%**	6533	2 *# 16% **17%**		
1204	NDR359 (NC)	4431	8	3200		4950	4 #	4194		1267		4000		4555	8	2075	9	3315		3879			
1205	Local Check	4258		6289	3 #	4167	8 #	4904	9	1711	7	8556	2 # _60%	5346	5 #	3965	7	4656	6	5623	6		
1206	Zonal Check	4324	9	6778	2 #	5306	1 #	5469	8	2422	4	5389	7 _1%	5401	4 #	3770	8	4585	7	4975	9		
1207	23272	5804	7 *	6067	5 #	5164	3 #	5678	5 4% **2%**	1511	9	7278	4 # _36%	5892	1 *#	5602	3 *	5747	1 *# 23% **16%**	6315	4 *# 12% **13%**		
1208	KRH-2 (HC)	9502	3 *	4156	8	3098	9	5585	6 2%	2822	2	5333	8	4937	6	4943	5	4940	5 6%	5602	7		
1209	23666	8262	6 *	6133	4 #	4594	7 #	6330	3 *# 16% **13%**	1889	6	6889	5 # _29%	4364	9	4246	6	4305	8	6034	5 *# 7% **8%**		
1210	24143	9716	1 *	5178	7	4879	5 #	6591	2 *# 21% **18%**	2067	5	5722	6 _7%	4583	7	5643	2 *	5113	4 10% **3%**	6423	3 *# 14% **15%**		
	Exp Mean	**7370**		**5338**		**4498**		**5735**		**2096**		**6483**		**5079**		**4357**		**4718**		**5746**			
	C.D. 5%	859		1511		1013		618		1007		618		392		1353		639		333			
	C.V.%	6.80		16.51		13.12		11.42		28.02		5.56		4.50		18.10		11.60		10.17			
	Sowing Date	13-Jun		19-Jun		11-Jun				20-Jun		06-Jul		05-Jul		05-Jul							
	Planting Date	09-Jul		14-Jul		06-Jul				06-Aug		04-Aug		04-Aug		25-Jul							
	Local ©	Rajendra Sweta		Rajendra Sweta		Rajendra Sweta				BVD 203		Koushalya		Sarjoo-52		Sarjoo-52							

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.25 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	IV		V														VI								Zone VI Mean(3)	
		AS		CG		CG		CG		CG		CG (4)		Zone V Mean (4)		MH		GU		GU		GU (2)					
		TTB		ABP		BLP		JDP		SKL		Mean				KJT		NWG		NVS		Mean					
1201	24146	5271	2 # _29%	6111	3	7731	3 *	6910	2 #	5322	4 *	6519	2 * 28% **5%**	6519	2 * 28% **5%**	5568	5 _10%	4960	5 #	6207	6	5583	6 **2%**			5578	5 **4%**
1202	23680	4495	7 # _10%	4667	6	7622	4 *	6097	5	4942	5	5832	5 * 14%	5832	5 * 14%	5591	4 _11%	4960	6 #	6352	5	5656	5 **3%**			5635	4 **6%**
1203	24142	4867	5 # _19%	6917	1 *	7933	1 *	7905	1 *#	4532	8	6822	1 * 34% **10%**	6822	1 *# 34% **10%**	4988	7	5225	2 #	6959	2	6092	2 3% **11%**			5724	3 **7%**
1204	NDR359 (NC)	3996	9	4028		4042	9	4075		2807		3738	*	3738		4665	9	2712		3733		3222				3703	
1205	Local Check	5152	4 # _26%	5361	5	5756	8	4591	9	4123	9	4958	9 *	4958	9	6039	1 _20%	5225	3 #	6605	3	5915	3 **8%**			5956	2 # **12%**
1206	Zonal Check	5672	1 # _39%	4194	9			6490	4 #	4620	7	5101	8 *	5101	8	4546		3968	9	5593	8	4780	9			4702	9
1207	23272	4741	6 # _16%	4389	7	7756	2 *	5250	8	5848	2 *	5811	6 * 14%	5811	6 * 14%	5789	3 _15%	5093	4 #	5416	9	5254	8			5432	6 **2%**
1208	KRH-2 (HC)	4091	8	6722	2 *	6911	6 *	5844	6	5439	3 *	6229	3 * 22%	6229	3 * 22%	5054	6	4431	8	6531	4	5481	7			5339	8
1209	23666	5193	3 # _27%	4278	8	6667	7	5683	7	6228	1 *#	5714	7 * 12%	5714	7 * 12%	4875	8	5489	1 #	5842	7	5665	4 **3%**			5402	7 **1%**
1210	24143	3763		5722	4	7289	5 *	6766	3 #	4854	6	6158	4 * 21%	6158	4 * 21%	5872	2 _16%	4960	7 #	8053	1 *#	6507	1 # 10% **19%**			6295	1 # 6% **18%**
	Exp Mean	**4724**		**5239**		**6856**		**5961**		**4871**		**5703**		**5703**		**5299**		**4702**		**6129**		**5416**				**5377**	
	C.D. 5%	368		1061		1082		560		467				317		1081		491		1425		706				556	
	C.V.%	4.54		11.80		9.12		5.47		5.59				6.84		11.89		6.09		13.56		11.16				10.96	
	Sowing Date	15-Jun				12-Jun		18-Jun		15-Jun						07-Jul		09-Jun		12-Jun							
	Planting Date	20-Jul		15-Jul		11-Jul		15-Jul		11-Jul						05-Aug		16-Jul		20-Jul							
	Local ©	TTB404		IGKVR1 (Rajeshwari)		Karmamahsuri		Samleshwari		PDKV KISAN						Karjat 5		GAR-13		GNR-4							

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.25 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	VII																			
		A.P.		A.P.		A.P. (1)		TEL		TEL		TEL (2)		TN		TN		TN (2)			
		@TU		RGL		Mean		WGL		RNR		Mean		CBT		ADT		Mean			
1201	24146	3687	2 #	6437	6	6437	6 # **21%**	6368	5	8153	2 *	7260	2 # 4% **12%**	5885	7 #	3528	8	4707	8 # **17%**		
1202	23680	3624	4	7185	1 #	7185	1 # 5% **35%**	6821	4 #	4484		5653	8	5195	9	3875	7	4535	9 **12%**		
1203	24142	2205	8	2844		2844		4857	9	7846	3 *	6352	6	7236	2 #	5125	2 #	6180	1 # 4% **53%**		
1204	NDR359 (NC)	2181	9	4511	9	4511	9	3369		5069	8	4219		6708	5 #	3125		4916	7 # **22%**		
1205	Local Check	3688	1 #	6830	3 #	6830	3 # **28%**	5648	7	4722	9	5185	9	7295	1 #	4611	3 #	5953	2 # **47%**		
1206	Zonal Check	3169	6	5407	7	5407	7 **2%**	7653	2 #	6281	6	6967	3 **8%**	6752	3 #	3986	6	5369	5 # **33%**		
1207	23272	3666	3 #	6815	4 #	6815	4 # **28%**	6014	6	6558	5	6286	7	6749	4 #	4181	5	5465	4 # **35%**		
1208	KRH-2 (HC)	3171	5	5326	8	5326	8	5370	8	7572	4 *	6471	5	4684		3389	9	4036			
1209	23666	1883		6652	5 #	6652	5 # **25%**	8003	1 #	5819	7	6911	4 **7%**	5454	8	4417	4 #	4935	6 # **22%**		
1210	24143	2500	7	7089	2 #	7089	2 # 4% **33%**	6897	3 #	8330	1 *	7613	1 # 9% **18%**	6555	6 #	5167	1 #	5861	3 # **45%**		
	Exp Mean	**2977**		**5910**		**5910**		**6100**		**6483**		**6292**		**6251**		**4140**		**5196**			
	C.D. 5%	490		1251		809		1124		1038		744		854		878		561			
	C.V.%	9.59		12.34		8.01		10.74		9.33		10.13		7.96		12.36		9.24			
	Sowing Date	30-Jun		07-Jul				01-Jul		20-Jun				10-Jun		08-Aug					
	Planting Date	03-Aug		08-Aug				28-Jul		23-Jul				02-Jul		04-Sep					
	Local ©	MTU 1001		RGL 2538 (Vasundh				WGL-32100		Krishna				CO(R) 50							

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.25 Contd.: Grain Yield (kg/ha) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	VII								Zone VII Mean (7)		Overall Mean (27)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA		KA		KA		KA (2)								
		MND		@TG		MDG		Mean								
1201	24146	6917	1 *#	7740	3 #	8343	1 #	7630	1 *# 16% **78%**	6519	2 *# 8% **31%**	6312	1 *# 12% **18%**	102	116	304
1202	23680	4846	9	7753	2 #	5421	7 #	5134	8 # **20%**	5404	8 # **8%**	5374	7	100	107	293
1203	24142	4994	8	6440	9	6199	5 #	5596	6 # **30%**	5586	7 # **12%**	6012	3 *# 6% **12%**	104	113	309
1204	NDR359 (NC)	3548		6740	7	1370		2459		3957		3807		85	91	300
1205	Local Check	5889	4 #	7260	6	7319	3 #	6604	3 # **54%**	6045	3 # **21%**	5653	6 # **5%**	105	108	317
1206	Zonal Check	5476	5	8117	1 #	5565	6 #	5521	7 # **29%**	5874	6 # **18%**	5309	9	104	110	289
1207	23272	6106	3 #	6510	8	5162	8 #	5634	5 # **31%**	5941	5 # **19%**	5770	4 # 2% **8%**	108	106	295
1208	KRH-2 (HC)	5286	7	7503	5	3296	9	4291	9	4989	9	5362	8	96	119	298
1209	23666	5464	6	6320		6250	4 #	5857	4 # **36%**	6008	4 # **20%**	5712	5 # 1% **7%**	108	124	293
1210	24143	6350	2 #	7580	4	7361	2 #	6856	2 # 4% **60%**	6821	1 *# 13% **37%**	6208	2 *# 10% **16%**	101	115	309
	Exp Mean	**5488**		**7196**		**5629**		**5558**		**5714**		**5551**		**101**	**111**	**301**
	C.D. 5%	538		211		1671		805		383		182		1	3	8
	C.V.%	5.72		1.71		17.31		12.40		11.00		10.60		1.75	0.00	8.81
	Sowing Date	24-Jul		03-Jul		26-Jun										
	Planting Date	24-Aug		30-Jul		17-Jul										
	Local ©	BR-2655		JGL-1798		Tunga										

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.26: Days to 50% Flowering of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III												Zone III Mean (9)	IV	V					Zone V Mean (4)
		UT	PUN	HAR	J&K		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (2)		AS	CG	CG	CG	CG	CG (4)	
		PNT	LDN	KUL	CHT		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	MSD	GRK	Mean		TTB	ABP	BLP	JDP	SKL	Mean	
1201	24146	109	110	110	111	110	99	101	100	96	97	102	99	123	84	102	106	104	101	112	56	99	103	96	89	89
1202	23680	105	105	104	109	106	98	99	98	97	86	99	94	122	77	91	108	100	97	104	72	101	105	100	94	94
1203	24142	116	118	115	118	117	101	100	101	101	94	111	102	127	91	91	102	97	102	109	69	102	104	101	94	94
1204	NDR359 (NC)	86	81	82	88	84	85	82	84	77	75	83	78	100	73	101	99	100	86	97	46	83	85	80	74	74
1205	Local Check	103	110	106	111	107	104	101	103	121	104	111	112	120	95	100	113	106	108	112	62	101	96	112	93	93
1206	Zonal Check	101	98	101	108	102	109	103	106	122	123	136	127	112	92	96	109	102	111	107	65		106	100	90	90
1207	23272	106		107		106	109	110	110	117	122	130	123	124	100	94	104	99	112	110	77	116	115	113	105	105
1208	KRH-2 (HC)	105	107	108	108	107	93	93	93	92	86	98	92	121	82	92	114	103	97	112	57	95	95	90	84	84
1209	23666	116	119	121	120	119	104	111	108	101	95	112	103	126	92	102	118	110	107	108	68	107	115	101	98	98
1210	24143	105	107	109	111	108	98	99	99	94	90	105	97	122	83	92	109	101	99	110	65	99	102	97	91	91
	Exp Mean	**105**	**106**	**106**	**109**	**107**	**100**	**100**	**100**	**102**	**97**	**109**	**103**	**120**	**87**	**96**	**108**	**102**	**102**	**108**	**64**	**100**	**103**	**99**	**91**	**91**
	C.D. 5%	4	2	0	1	1	2	3	2	1	1	2	1	3	2	3	2	2	1	1	2	0	1	1	0	0
	C.V.%	2.04	0.85	0.00	0.64	1.23	1.05	1.75	1.29	0.32	0.57	0.93	0.68	1.33	1.60	1.89	1.06	1.41	1.25	0.51	1.60	0.00	0.56	0.61	0.21	0.64

Contd. Table No. 3.26: Days to 50% flowering of entries in AVT 2-IM Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII													Zone VII Mean (9)	Overall Mean (30)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDG	Mean		
1201	24146	92	105	105	105	101	102	98	100	101	113	107	107	96	102	104	101	112	106	104	102
1202	23680	94	99	108	103	100	92	97	95	95	108	102	100	96	98	106	105	111	107	101	100
1203	24142	99	112	106	109	106	103	102	103	101	112	107	105	95	100	106	106	112	108	105	104
1204	NDR359 (NC)	82	81	84	83	82	82	77	79	108	87	98	83	91	87	80	110	95	95	90	85
1205	Local Check	95	105	99	102	100	106	102	104	104	113	109	110	97	103	106	104	122	111	107	105
1206	Zonal Check	94	107	99	103	100	100	97	99	102	113	107	105	97	101	100	109	112	107	104	104
1207	23272	95	119	95	107	103	111	106	109	108	128	118	108	99	103	102	99	111	104	108	108
1208	KRH-2 (HC)	89	82	106	94	92	94	88	91	102	109	105	98	97	97	87	91	101	93	96	96
1209	23666	98	105	108	106	104	103	99	101	105	126	116	111	98	105	106	108	123	112	109	108
1210	24143	93	104	106	105	101	102	93	98	96	110	103	103	97	100	100	104	110	105	102	101
	Exp Mean	**93**	**102**	**101**	**102**	**99**	**100**	**96**	**98**	**102**	**112**	**107**	**103**	**96**	**100**	**100**	**104**	**111**	**105**	**103**	**101**
	C.D. 5%	3	0	6	3	2	2	1	1	1	2	1	2	4	2	3	11	1	4	1	1
	C.V.%	1.73	0.00	3.23	2.27	2.15	1.10	0.82	0.85	0.62	1.15	0.88	1.00	2.34	2.00	2.01	6.00	0.42	3.76	2.49	1.75

Table No. 3.27: Plant Height (cm) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III											Zone III Mean (9)	IV	V					Zone V Mean (4)
		UT	PUN	HAR	J&K		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (2)		AS	CG	CG	CG	CG	CG (4)	
		PNT	LDN	KUL	CHT		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	MSD	GRK	Mean		TTB	ABP	BLP	JDP	SKL	Mean	
1201	24146	116	139	118	122	124	100	105	103	130	126	119	125	80	136	110	116	113	114	110	117	123	112	113	116	116
1202	23680	104	122	108	99	108	99	101	100	128	108	118	118	65	129	107	109	108	107	120	106	114	107	99	106	106
1203	24142	120	136	117	115	122	105	106	105	135	127	125	129	76	133	101	113	107	113	70	120	124	105	124	118	118
1204	NDR359 (NC)	90	92	94	92	92	85	91	88	97	104	85	95	63	88	106	95	101	90	109	106	101	80	85	93	93
1205	Local Check	104	102	110	124	110	130	95	113	95	99	104	100	70	149	102	104	103	105	118	110	107	92	107	104	104
1206	Zonal Check	105	120	93	99	104	93	77	85	107	97	123	109	79	143	99	109	104	103	110	101		104	117	107	107
1207	23272	98		102		100	100	99	100	116	99	121	112	64	130	95	101	98	103	113	122	113	105	117	114	114
1208	KRH-2 (HC)	124	142	124	112	126	100	106	103	139	125	108	124	85	135	90	111	101	111	118	122	135	110	129	124	124
1209	23666	127	152	122	118	130	125	117	121	145	130	137	137	88	141	96	130	113	123	120	112	139	109	126	122	122
1210	24143	118	132	117	115	121	108	113	110	129	125	118	124	69	135	100	106	103	111	107	105	130	110	126	118	118
	Exp Mean	**111**	**126**	**111**	**111**	**114**	**105**	**101**	**103**	**122**	**114**	**116**	**117**	**74**	**132**	**101**	**109**	**105**	**108**	**110**	**112**	**121**	**104**	**114**	**112**	**112**
	C.D. 5%					0			0				0						0						0	0

Table No. 3.27: Plant Height (cm) of entries in AVT 2-IM 2015 Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII													Zone VII Mean (9)	Overall Mean (30)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDG	Mean		
1201	24146	148	117	137	127	134	128	123	126	123	107	115	107	103	105	91	111	85	96	109	116
1202	23680	115	118	121	120	118	121	125	123	114	94	104	95	102	98	82	114	77	91	103	107
1203	24142	122	116	125	121	121	127	119	123	119	100	109	113	105	109	87	116	78	94	107	113
1204	NDR359 (NC)	95	98	103	101	99	90	80	85	83	95	89	79	92	86	73	105	75	84	86	91
1205	Local Check	121	109	117	113	116	124	111	117	105	100	102	115	108	112	110	113	85	103	108	108
1206	Zonal Check	137	122	147	135	135	131	121	126	133	101	117	109	121	115	102	104	78	94	111	110
1207	23272	120	113	122	118	118	123	115	119	114	100	107	107	110	109	89	89	76	85	103	106
1208	KRH-2 (HC)	142	120	158	139	140	129	121	125	121	111	116	92	109	101	152	105	98	118	115	119
1209	23666	139	135	135	135	136	149	141	145	133	103	118	127	121	124	103	105	97	102	120	124
1210	24143	139	116	138	127	131	121	130	126	126	102	114	108	108	108	96	103	95	98	110	115
	Exp Mean	**128**	**116**	**130**	**123**	**125**	**124**	**119**	**122**	**117**	**101**	**109**	**105**	**108**	**106**	**99**	**107**	**84**	**97**	**107**	**111**
	C.D. 5%				0	0			0			0			4				0		3

Table No. 3.28: Panicles/M² of entries in AVT 2-IM Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III												Zone III Mean (9)	IV NH	V				Zone V Mean (3)
		UT	PUN	HAR	J&K		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (2)		AS	CG	CG	CG	CG (3)	
		PNT	LDN	KUL	CHT		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	MSD	GRK	Mean		TTB	ABP	JDP	SKL	Mean	
1201	24146	248	312	399	284	311	213	331	272	262	373	320	318	280	290	312	298	305	298	303	169	202	200	190	190
1202	23680	271	317	315	282	296	218	233	226	293	292	335	306	177	265	319	299	309	270	289	173	240	259	224	224
1203	24142	353	301	310	297	315	224	294	259	301	338	268	303	317	255	304	313	309	291	277	186	260	203	216	216
1204	NDR359 (NC)	389	330	335	278	333	161	291	226	350	350	305	335	188	279	310	230	270	274	263	176	237	212	208	208
1205	Local Check	316	376	322	293	327	236	307	272	325	327	312	321	281	260	310	299	305	295	363	161	267	231	220	220
1206	Zonal Check	215	264	290	261	257	226	242	234	292	338	255	295	181	323	301	314	308	275	361	171	235	214	207	207
1207	23272	275		300		287	211	307	259	284	362	251	299	205	271	295	312	304	278	347	166	252	233	217	217
1208	KRH-2 (HC)	365	328	297	285	319	205	204	205	300	233	285	273	293	296	310	291	300	269	305	184	210	222	205	205
1209	23666	383	295	260	281	305	221	315	268	247	292	220	253	196	243	292	246	269	252	328	162	224	253	213	213
1210	24143	331	334	306	285	314	244	346	295	273	373	275	307	270	337	310	303	307	304	303	157	219	200	192	192
	Exp Mean	**314**	**318**	**314**	**283**	**307**	**216**	**287**	**252**	**293**	**328**	**283**	**301**	**239**	**282**	**306**	**291**	**298**	**280**	**314**	**170**	**235**	**223**	**209**	**209**
	C.D. 5%	24	63	56	31	22	18	28	16	27	83	73	35	107	31	15	35	18	17	23	22	49	24		17
	C.V.%	4.38	11.55	10.46	6.38	8.70	4.76	5.69	5.53	5.44	14.70	15.06	12.50	26.01	6.40	2.86	7.03	5.20	11.51	4.21	7.68	12.30	6.20		8.56

Contd...Table No. 3.28 : Panicles/ M² of entries in AVT 2-IM Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII												Zone VII Mean (8)	Overall Mean (28)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (2)	
		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	@MDG	KTG	Mean	
1201	24146	264	291	248	269	268	275	339	307	297	435	366	438	341	390	380	7	420	400	366	304
1202	23680	237	288	234	261	253	356	316	336	308	422	365	372	360	366	340	7	385	363	357	293
1203	24142	209	289	268	278	255	286	336	311	341	424	383	540	414	477	393	6	355	374	386	309
1204	NDR359 (NC)	296	271	188	229	252	260	341	300	319	446	382	532	341	436	387	6	334	360	370	300
1205	Local Check	240	277	263	270	260	275	403	339	341	413	377	527	371	449	377	7	392	384	387	317
1206	Zonal Check	241	281	301	291	274	253	296	274	297	405	351	458	355	407	333	7	398	366	349	289
1207	23272	229	289	247	268	255	266	289	278	319	407	363	485	355	420	347	6	362	354	354	295
1208	KRH-2 (HC)	226	285	224	254	245	295	368	332	297	438	368	430	397	413	400	6	384	392	376	298
1209	23666	233	296	271	283	266	275	322	299	308	440	374	470	378	424	373	6	383	378	369	293
1210	24143	235	292	318	305	282	268	303	286	308	424	366	472	352	412	397	7	425	411	369	309
	Exp Mean	**241**	**286**	**256**	**271**	**261**	**281**	**331**	**306**	**314**	**426**	**370**	**472**	**366**	**419**	**373**	**6**	**384**	**378**	**368**	**301**
	C.D. 5%	50	4	48	22	21	30	50	28	28	28	20	39	39	23	51	1	17	13	13	8
	C.V.%	12.08	0.80	11.01	7.09	8.46	6.22	8.72	7.84	5.24	3.82	4.68	4.87	6.28	4.79	8.02	8.48	2.57	2.90	6.29	8.81

Table 3.29: Grain quality characteristics of entries in AVT-2-IM Kharif 2015

		IIRR											NRRI		
Entry NO.	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**GT**	**Grain Chake**	**ASV**	**AC**	**GC**	**ASV**	**AC**	**GC**
1201	24146	81.9	70.7	60.8	6.09	2.34	2.6	LB	VOC	5.3	23.84	57	5.0	17.40	51
1202	23680	78.9	69.2	62.5	6.28	2.05	3.06	LS	A	7	21.91	46	7.0	18.45	52
1203	24142	80.3	68.7	58.9	5.53	2.33	2.37	SB	VOC	4	26.69	22	5.0	21.37	50
1204	NDR 359	80.2	67.3	31	6.09	2.24	2.71	LB	VOC	4	22.7	54	7.0	22.87	34
1205	L.C.	79.8	69.9	65.7	5.43	1.87	2.9	MS	A	7	26.25	40	7.0	19.87	67
1206	Akshayadhan (ZC)	79.6	68.9	61.1	6.15	2.27	2.7	LB	VOC	4	24.43	80	5.0	22.80	34
1207	23272	79.8	72.1	69.7	5.65	2.07	2.72	MS	A	5	22.93	22	5.5	19.72	62
1208	KRH-2	81.4	72.8	61.8	6.07	2.08	2.92	LB	VOC	5.4	23.05	66	6.0	18.90	48
1209	23666	79.9	72.9	70	6.41	2.2	2.91	LB	VOC	4	25.63	60	5.6	20.10	39
1210	24143	78.8	69.5	59.1	6.28	2.06	3.04	LS	VOC	5.7	22.17	43	4.8	20.55	37

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent

Trial 13: Composition of entries in Advance Variety Trial 1 – Irrigated Medium (AVT 1-IM), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
2nd year of testing				
1301	24266	UPR-3843-3-1-1	PD 18/ IR 72158-116-6	LB
1302	24326	UPR 3831-10-1-1	Pant Dhan 10/ VL Dhan 85	SB
1303	24353	TRC 2014-3/IR 83377-B-B-123-2	IR 71700-247-1-1-2/Sambha Mahsuri	LB
1304	24260	HKR 09124	HKR 47/HKR 99-60	LS
1305	24817	***Bio-650 (Hybrid)***	-	LB
1306	24268	HKR 10-34	IR 64/HKR 99-60	LS
1307	24331	RP 5586-92-28-15-3-2-2-1	IR 64*3/O.glaberrima (TOG 5674)	LS
1308	24816	***RH – 12N0148 (Hybrid)***	-	LB
1309	24359	Pusa 2004-09-80-315-483	NDR 359/ MTU 1010	MS
1310	24276	CR 2647-5-2	Swarna / Vikramarya	SB
1311	24262	PAU 4320-21-1-3-1	PAU 3410-104-1/PAU 3418-11-10-2	LS
1312	22919	***Bio-453 (Hybrid)***	-	LB
1313	24309	BRR 2005	IET 8585/Sugandha//Rajshree	LS
1314	24844	***PR-14101 (Hybrid)***	-	LB
1315	24299	CR 3861-34-4-2	Sambha Mahsuri/ Phalguna	MS
1316	24332	RP 5445-102-23-3-2	RP Bio 226/ CR 15 MR 1523	SB
1317	24814	***RH – 12N0083 (Hybrid)***	-	LB
1318	24823	***MEPH-121 (Hybrid)***	-	LS
1319	24325	TM 12522	CB 05501/BPT 5204	SB
1320	24846	***PR-14104 (Hybrid)***	-	LB
1321	**NDR359 (NC)**			
1322	**Local Check**			
1323	24301	CR 3624-1 (IR 72158-154-3-2-1 CR 3624-1-1)	BG 90-2/IR 67962-84-2-2-2	MS
1324	24333	PAU - 2K10-23-451-2-164-127-0-0	PAU 201/PAU 3699-13-2-3-1//PAU 201	LB
1325	24343	OR 2512-2	Kharavela / IR 62037-93	MS
1326	24330	MTU 1175 (MTU 2203-15-1-2)	MTU1081/BM 71//MTU 1081	MS
1327	24327	BRR 2013	Sujatha/Sita//Mahsuri	MS
1328	24855	***RRX-012 (Hybrid)***	-	LS
1329	24334	CRR 484-2-1-1-1-1	RR 165-1160/Krishna bhog	SB
1330	24347	CR 3549-6-1-1-3-1-1	ADT 43/ Annapurna	SB
1331	24342	NP-9807	IET 22218/IET 22238	SB
1332	24335	MTU 1173 (MTU 2044-5-1-2-3)	NLR 34449/ MTU 1061	MS
1333	24354	MTU 1176 (MTU II 365-34-1-1)	MTU 1075/IR 64	MS
1334	24323	R 1702-3677-1-4734-1	Poornima/ Chandrahasini	LS
1335	24824	***KPH- 468 (Hybrid)***	-	LB
1336	24355	NDR 2111-13-1	IR 36/Ratna	MS
1337	24318	NDR 2110-7-1	Pantdhan 4/Kasturi	SB
1338	24341	AAGP 9772	PRN-6/PRN-9	LB
1339	24825	***KPH-473 (Hybrid)***	-	LB
1340	**MTU 1010 (NC)**			
1341	23964	WGL-505	BPT 5204/RYP-1	SB
1342	24340	PAU 5185	PAU 201/MAS-ARB-946	MS

Entry No.	IET No.	Designation	Cross Combination	Grain type
1343	24305	JNPT-81	NPT-89/IR 64	LS
1344	24302	AD 08138	Paiyur 1/Ajaya	MS
1345	24311	HKR 09-189	HKR 99-60/HKR 95-75	MS
1346	**HRI 174 (HC)**			
1347	24306	RCPR-10-IR83383-B-B-129-4	IR 72022-46-2-3-3-2/IR 57514-PMI5-B-1-2	LS
1348	24338	YNP-9761	NPR-9/NPR-4	SB
1349	24815	***RH – 12N0112 (Hybrid)***	-	LS
1350	24310	GNV-12-10 (BP 10620F-BB4-12-B-B8-30)	CIHERANG/IRBB 64	LS
1351	24884	***RRX-016 (Hybrid)***	-	LS
1352	24351	NLR 3241	NLR 145/NLR 34449	LB
1353	24307	RP 5879-HUANGHUAZHAN	Huangxinzhan/Fenghuazhan	LS
1354	24879	***PR-14105 (Hybrid)***	-	LB
1355	23656	***NK-9315 (Hybrid)***	-	MS
1356	**PR 113 (Northern), Lalat (Eastern & North Eastern)), IR 64 (Central), Akshayadhan (Western), Jaya (Southern)-- ZC**			
1357	24880	***PR-14107 (Hybrid)***	-	LB
1358	**US 312 (HC)**			

Table No. 3.31: Grain Yield (kg/ha) of entries in AVT1-IM Zone 2 Kharif 2015

Entry No.	IET No.	II								Zone II Mean (4)		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		UT		PUN		HAR		J&K								
		PNT		LDN		KUL		CHT								
1304	24260	6582		7855	7 _13%	9767	4 # …5% _6%	4867	8	7268	6 * 8% **5%**	7268	6 * 8% **5%**	105	112	328
1305	24817	7544	5 …8% _4%	8172	3 …4% _18%	10000	3 # …8% _9%	5733	1 *#	7863	1 *# 17% **14%**	7863	1 *# 17% **14%**	105	116	284
1309	24359	6169		5828		7600		4933	5	6132		6132		97	105	334
1311	24262	6531		7314	_5%	5833		4267		5986		5986		111	101	284
1312	22919	6238		8628	1 #…10% _24%	9400	6 …1% _2%	4956	4	7305	4 * 9% **6%**	7305	4 *# 9% **6%**	117	116	298
1314	24844	7595	3 …9% _5%	8226	2 …4% _19%	9267	9 _1%	4089		7294	5 * 8% **6%**	7294	5 *# 8% **6%**	102	109	306
1317	24814	7566	4 …9% _4%	6251		9667	5 …4% _5%	4911	6	7099	8 6% **3%**	7099	8 * 6% **3%**	102	114	280
1320	24846	7606	2 …9% _5%	7321	9 _6%	9233		5067	2	7307	3 * 9% **6%**	7307	3 *# 9% **6%**	105	122	274
1321	NDR359 (NC)	2974		3736		3533		3667		3477		3477		94	94	309
1322	Local Check	5718		7298	_5%	8967		4911	7	6724		6724		106	106	316
1326	24330	6916	9	7980	4 …1% _15%	9367	7 …1% _2%	4644	9	7227	7 7% **5%**	7227	7 * 7% **5%**	108	113	310
1335	24824	6283		7108	_2%	8333		5067	3	6698		6698		100	113	325
1339	24825	7473	6 …7% _3%	6237		8933		4378		6755		6755		95	105	285
1340	MTU 1010 (NC)	6457		5621		9300	8 _1%	3244		6156		6156		98	101	326
1345	24311	6833		7777	8 _12%	9000		3000		6653		6653		106	106	298
1346	HRI 174 (HC)	7258	7 …4%	6939		9000		4444		6910	3%	6910	3%	110	110	312
1351	24884	6191		6971		10200	2 *#…10% _11%	4400		6941	9 3%	6941	9 3%	108	112	322
1356	Zonal Check	6966	8	7875	5 _13%	5533		4244		6154		6154		104	95	315
1357	24880	8039	1 * …15% _11%	7860	6 _13%	10267	1 *#…10% _12%	4356		7630	2 *# 13% **10%**	7630	2 *# 13% **10%**	107	121	287
1358	US 312 (HC)	6286		5238		9200		4267		6248		6248		102	114	290
	Exp Mean	**6661**		**7012**		**8620**		**4472**		**6691**		**6691**		**104**	**109**	**304**
	C.D. 5%	1059		1360		729		670		522		359		2	0	24
	C.V.%	9.62		11.73		5.12		9.06		9.67		6.65		1.93	0.00	9.72
	Sowing Date	02-Jun		02-Jun		01-Jun		03-Jun								
	Planting Date	26-Jul		04-Jul		27-Jul		07-Jul								
	Local ©	Pant Dhan 4		PR 121		HKR 47		SJR-5								

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.31 : Grain Yield (kg/ha) entries in AVT1-IM Zone 3,4 & 5 Kharif 2015

Entry No.	IET No.	III																										Zone III Mean (7)	
		OD		OD		OD (2)			BI		BI		BI		BI (3)			JH		W.B			U.P.		U.P.		U.P. (1)			
		BBN		JYP		Mean			PTN-ICAR		PTN		SBR		Mean			@RCI		CHN			@MSD		VRN		Mean			
1302	24326	3968		5908		4938			6100		4556		3771		4809			300		6417	*	...30%	5260	9 *	6960		6960			5383	
1303	24353	4321		3957		4139			3520		5289		3959		4256			450		5056		...2%	4616	*	6117		6117			4603	
1305	24817	5996	2 *	7913	8	6955	4 *	10%	8333	9	5533		4412		6093		4%	1050	1	6722	9 *	...36%	4294		8700	1 *	8700	1 *	13%	6801	6 * 11%
1307	24331	4850		6173		5512			7947		6000		4600		6182		5%	450		5389	*	...9%	5582	3 *	6533		6533			5928	
1309	24359	4145		4499		4322			8370	8	4667		3394		5477			250		3667			5287	8 *	5267		5267			4858	
1312	22919	6437	1 *	8076	6	7257	2 *	14%	9280	5	7911	1 *	4110		7100	2 *	21%	450		7500	2 *	...52%	4294		8650	2 *	8650	2 *	12%	7423	2 * 21%
1313	24309	3527		8889	2	6208			7333		7111	4 *	4977	6	6474	9	10%	250		5167		...4%	4428		4270		4270			5896	
1314	24844	5908	4 *	7751	9	6829	6	8%	7333		6356	*	5090	5	6260		7%	250		6722	*	...36%	4240		7833	4	7833	4	1%	6713	8 * 9%
1316	24332	4850		5528		5189			5600		5644		3997		5080			350		3556			4402		5833		5833			5001	
1317	24814	5820	5 *	6829		6325		9	9590	3	6956	5 *	4035		6860	4 *	17%	200		7056	4 *	...43%	5341	6 *	7800	5	7800	5	1%	6869	5 * 12%
1319	24325	5379	*	6829		6104			6837		5978		5204	3 *	6006		2%	100		5167		...4%	5797	1 *	4500		4500			5699	
1320	24846	5644	8 *	6504		6074			7967		6822	8 *	5166	4 *	6652	6 *	13%	850	3	7778	1 *	...57%	5019	*	7533		7533			6773	7 * 10%
1321	NDR359 (NC)	2646		3599		3122			5117		3822		3544		4161			150		4000			4563	*	2810		2810			3648	
1322	Local Check	5556	9 *	6829		6192			5297		4911		4563		4923			800	4	5500	*	...11%	5260	*	6600		6600			5608	
1324	24333	4145		6667		5406			6980		4422		3808		5070			200		3889			4563	*	7557		7557			5353	
1325	24343	4321		6233		5277			7400		4911		3620		5310			100		3806			5529	4 *	6407		6407			5242	
1326	24330	3880		6070		4975			7193		6222	*	4223		5880			300		5833	*	...18%	5448	5 *	7400		7400			5832	
1329	24334	4586		7100		5843			6493		5289		4148		5310			400		5611	*	...13%	4831	*	7437		7437			5809	
1330	24347	3351		7100		5226			5890		6333	*	4977	7	5734			650	6	6611	*	...34%	4509		6533		6533			5828	
1331	24342	3792		6721		5256			8113		5644		4336		6031		3%	150		6722	*	...36%	4589	*						5888	
1333	24354	5115		6938		6026			9410	4	6600	*	4827		6946	3 *	18%	200		5778	*	...17%	5636	2 *	7867	3	7867	3	2%	6648	9 * 8%
1334	24323	3704		5908		4806			6980		4933		3167		5027			600	7	3611			5341	7 *	3467		3467			4539	
1335	24824	5115		7100		6107			5020		6733	*	4299		5351			200		6444	*	...30%	4428		5207		5207			5703	
1337	24318	4409		8022	7	6215			5180		7200	3 *	4940	8	5773			400		6500	*	...31%	4187		7503		7503			6251	2%
1338	24341	4497		5908		5203			5510		6000		4336		5282			300		7444	3 *	...51%	4375		5067		5067			5538	
1339	24825	5467	*	7696		6582	7	4%	6253		6822	9 *	4789		5955		1%	600	8	6944	6 *	...40%	4375		7477		7477			6493	6%
1340	MTU 1010 (NC)	2646		4878		3762			5413		4422		3220		4352			250		4000			4911	*	7533		7533			4588	
1341	23964	5115		6179		5647			6267		5000		3846		5038			150		5056		...2%	4187		4417		4417			5126	
1342	24340	3704		6179		4941			6373		3956		4487		4939			150		5500	*	...11%	4831	*	6127		6127			5189	
1343	24305	3351		4173		3762			5613		5156		3620		4796			300		5222		...6%	4428		6033		6033			4738	
1344	24302	5115		5908		5511			6927		6600	*	4751		6093		4%	250		5806	*	...17%	4133		5880		5880			5855	
1345	24311	5026		6721		5874			7460		6956	6 *	4412		6276		7%	400		5611	*	...13%	4536		5200		5200			5912	
1346	HRI 174 (HC)	5379	*	8455	4	6917	5 *	9%	7970		7556	2 *	4864	9	6797	5 *	16%	300		6778	7 *	...37%	4455		7160		7160			6880	4 * 12%
1347	24306	4674		6206		5440			9750	2	5889		4186		6608	7	13%	600	9	5056		...2%	4160		7633	9	7633	9		6199	1%
1348	24338	5732	6 *	6829		6281			6550		5378		4487		5472			300		6722	*	...36%	4455		7340		7340			6148	
1350	24310	4497		6070		5284			6340		5289		3582		5070			300		6111	*	...24%	3623		7640	8	7640	8		5647	
1352	24351	4409		6558		5484			8800	6	4956		4563		6106		4%	350		7000	5 *	...42%	3435		5997		5997			6040	
1353	24307	2646		5501		4073			4787		4089		2195		3690			350		3556			3516		4110		4110			3840	
1354	24879	5996	3 *	9106	1 *	7551	1 *	19%	10707	1 *	6467	*	5505	1 *	7560	1 *	29%	150		6722	*	...36%	3435		7467		7467			7424	1 * 21%
1356	Zonal Check	4233		4390		4312			7890		6467	*	3658		6005		2%	800	5	4222			3865		6367		6367			5318	
1357	24880	5732	7 *	8650	3	7191	3 *	13%	7183		6844	7 *	5430	2 *	6486	8	11%	200		6778	8 *	...37%	4294		7700	7	7700	7		6903	3 * 12%
1358	US 312 (HC)	4497		8184	5	6341		8	8747	7	4556		4299		5867			1000	2	4944			4214		7733	6	7733	6		6137	
	Exp Mean	**4623**		**6541**		**5582**			**7043**		**5768**		**4271**		**5694**			**377**		**5666**			**4587**		**6480**		**6480**			**5768**	
	C.D. 5%	707		853		556			1193		1626		855		781			279		396			342		774		664			393	
	C.V.%	9.42		8.03		8.74			10.43		17.35		12.33		14.76			45.53		4.30			4.59		7.35		6.31			11.24	
	Sowing Date	10-Jul		22-Jun					13-Jun		27-Jun		19-Jun					19-Jun		30-Jun			30-Jun		03-Jun						
	Planting Date	12-Aug		13-Jul					08-Jul		22-Jul		11-Jul					22-Aug		13-Aug			01-Aug		26-Jun						
	Local ©	Hiranmayee		Pratikshya					Rajendra Sweta		Rajendra Sweta		Rajendra Sweta					BVD-203		Koushalya			Sarjoo-52								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.31 Contd.: Grain Yield (kg/ha) of entries in AVT1-IM Zone 3,4 & 5 Kharif 2015

Entry No.	IET No.	IV		V														Zone V Mean (3)		Overall Mean (11)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		AS		CG		CG		CG		CG (3)														
		TTB		ABP		JDP		SKL		Mean														
1302	24326	4367		5958		5470		5234		5554	*							5554		5337		97	128	229
1303	24353	4375		4792		4864		4444		4700	*							4700		4608		101	109	261
1305	24817	5062	* ...13%	6667	4	5109		6199	6 *	5991	8 *							5991	8	6422	9 * 8%	100	114	264
1307	24331	4221		5833		4450		4444		4909	*							4909		5495		102	98	258
1309	24359	4066		5667		4518		3509		4565	*							4565		4706		96	100	272
1312	22919	5880	3 * ...31%	6333	8	6153	9	6228	4 *	6238	6 * 3%							6238	6 * 3%	6960	2 * 17%	108	118	269
1313	24309	4190		3250		5880		5673	*	4934	*							4934		5479		118	124	264
1314	24844	5664	8 * ...26%	7084	2	7616	1 *	5409	*	6703	1 * 11%							6703	1 * 11%	6615	4 * 11%	100	112	250
1316	24332	4298		5375		4715		4649		4913	*							4913		4913		110	95	271
1317	24814	5667	7 * ...26%	6375	7	6262	7	4912		5850	*							5850		6482	5 * 9%	103	115	245
1319	24325	4205		4708		6437	6	5789	*	5645	*							5645		5548		112	111	264
1320	24846	4568	...2%	6167		6627	4	6345	2 *	6380	4 * 6%							6380	4 * 6%	6465	6 * 9%	102	117	238
1321	NDR359 (NC)	4120		3792		3014		1901		2902	*							2902		3488		87	100	284
1322	Local Check	4637	...3%	5422		4242		4825		4829	*							4829		5307		106	105	299
1324	24333	4622	...3%	5584		5523		4883		5330	*							5330		5280		102	105	238
1325	24343	4549	...1%	5833		5781		4912		5509	*							5509		5252		103	111	278
1326	24330	4568	...2%	5250		4855		4795		4967	*							4967		5481		104	112	267
1329	24334	4468		5959		4799		4620		5126	*							5126		5501		98	114	234
1330	24347	4390		6167		4236		5497	*	5300	*							5300		5553		106	118	248
1331	24342	4140		5834		5622		3480		4978	*							4978		5440		103	101	234
1333	24354	5903	2 * ...32%	4625		4577		5556	*	4919	*							4919		6109	3%	108	108	252
1334	24323	4514	...1%	6500	6	4224		4708		5144	*							5144		4701		100	103	260
1335	24824	5656	9 * ...26%	4708		6471	5	6023	9 *	5734	*							5734		5707		99	108	263
1337	24318	4244		6292	9	5208		3713		5071	*							5071		5746		105	109	264
1338	24341	4136		3958		5174		6140	7 *	5091	*							5091		5288		100	111	272
1339	24825	5752	4 * ...28%	7584	1	6121		6140	8 *	6615	2 * 10%							6615	2 * 10%	6459	7 * 8%	99	109	245
1340	MTU 1010 (NC)	4221		4583		4370		4064		4339	*							4339		4486		96	98	254
1341	23964	4159		4625		5698		6228	5 *	5517	*							5517		5144		108	113	258
1342	24340	4279		5959		5673		5643	*	5758	*							5758		5262		105	100	257
1343	24305	4074		5125		3882		4006		4338	*							4338		4569		102	92	265
1344	24302	4163		5292		5287		4591		5057	*							5057		5483		112	103	289
1345	24311	4367		4708		5394		4211		4771	*							4771		5461		103	108	281
1346	HRI 174 (HC)	5710	5 * ...27%	6125		6114		4649		5630	*							5630		6433	8 * 8%	105	116	247
1347	24306	4375		6250		5634		5731	*	5872	9 *							5872	9	5944		108	111	262
1348	24338	5509	* ...23%	6542	5	5572		5000		5705	*							5705		5969		98	103	235
1350	24310	4336		5042		5371		3713		4709	*							4709		5272		105	105	277
1352	24351	5556	* ...24%	4042		5152		4942		4712	*							4712		5634		109	107	238
1353	24307	5216	* ...16%	4834		3894		3480		4069	*							4069		4028		95	97	275
1354	24879	5687	6 * ...27%	5958		6999	2 *	6316	3 *	6424	3 * 7%							6424	3 * 7%	6994	1 * 17%	108	125	270
1356	Zonal Check	5448	* ...22%	5042		3765		3626		4144	*							4144		5010		99	107	269
1357	24880	5910	1 * ...32%	5875		6634	3	6433	1 *	6314	5 * 5%							6314	5 * 5%	6652	3 * 12%	106	119	259
1358	US 312 (HC)	4483		6959	3	6161	8	4971		6030	7 *							6030	7	5958		100	109	252
	Exp Mean	**4756**		**5540**		**5323**		**4944**		**5269**								**5269**		**5539**		**103**	**109**	**260**
	C.D. 5%	395		1149		602		325										137		284		1	14	14
	C.V.%	5.11		12.77		6.96		4.05										2.81		10.61		1.70	0.00	11.38
	Sowing Date	14-Jul				18-Jun		15-Jun																
	Planting Date	12-Aug		17-Jul		15-Jul		21-Jul																
	Local ©	TTB 404		IGKVR1 (Rajeshwari)		Samleshwari		PDKV KISAN																

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.31: Grain Yield (kg/ha) entries in AVT1-IM Kharif Zone 6 2015

Entry No.	IET No.	VI				Zone VI Mean (2)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		MH		GU								
		KJT		NWG								
1301	24266	5498	6	4894		5196		5196		94	114	260
1305	24817	4023		5622	7	4822		4822		94	116	246
1306	24268	4953		4894		4924		4924		98	114	255
1310	24276	4204		4762		4483		4483		98	127	250
1312	22919	4899		6614	3	5756	5	5756	5	102	125	245
1314	24844	4272		5357		4815		4815		97	118	233
1315	24299	3768		3307		3538		3538		101	118	238
1317	24814	5328	8	5225		5277		5277		97	120	253
1318	24823	5315	9	4464		4890		4890		93	109	267
1320	24846	4491		5556	8	5023		5023		97	116	237
1321	NDR359 (NC)	3131		2976		3054		3054		93	99	247
1322	Local Check	5052		5357		5205		5205		100	119	260
1323	24301	4368		3770		4069		4069		100	113	243
1326	24330	4428		5225		4826		4826		100	118	243
1327	24327	5044		4233		4638		4638		102	133	260
1330	24347	5367	7	4696		5031		5031		106	127	251
1332	24335	5008		5093		5050		5050		105	105	264
1333	24354	5192		5291		5241		5241		103	113	255
1335	24824	5635	4	5489		5562	8	5562	8	89	118	259
1336	24355	3396		4696		4046		4046		87	123	252
1339	24825	4962		6217	5	5589	7	5589	7	92	113	249
1340	MTU 1010 (NC)	2313		5159		3736		3736		86	108	247
1344	24302	3998		3902		3950		3950		101	102	271
1345	24311	5701	3	5556	9	5628	6	5628	6	102	115	251
1346	HRI 174 (HC)	5816	1 …1%	5820	6	5818	4	5818	4	99	124	273
1354	24879	5531	5	6746	1	6138	1 5%	6138	1 5%	103	127	260
1355	23656	3963		5489		4726		4726		122	136	265
1356	Zonal Check	5230		6415	4	5823	3	5823	3	101	135	256
1357	24880	5093		6746	2	5920	2 2%	5920	2 2%	100	127	254
1358	US 312 (HC)	5785	2	5093		5439	9	5439	9	96	118	260
	Exp Mean	**4725**		**5155**		**4940**		**4940**		**98**	**118**	**253**
	C.D. 5%	616		495		427		327		1		18
	C.V.%	7.97		5.88		7.57		5.79		0.75		6.14
	Sowing Date	15-Jun		09-Jun								
	Planting Date	09-Jul		16-Jul								
	Local ©	Karjat 5		GAR 13								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.31 : Grain Yield (kg/ha) of entries in AVT1-IM Zone 7 Kharif 2015

Entry No.	IET No.	VII																	
		A.P.		A.P.		A.P. (2)		TEL		TEL		TEL (2)		TN		TN		TN (2)	
		MTU		RGL		Mean		WGL		RNR		Mean		CBT		ADT		Mean	
1305	24817	4282		5967		5124		7287	7	9048	1 *	8167	2 # 6% **6%**	4864		4167		4515	
1308	24816	4895	6 #	5936		5415	8	6264		7579		6922		5312		4181		4746	
1312	22919	4720	7 #	6790	3	5755	5 **1%**	6868	9	8260	6	7564	7	6324	6	4250		5287	9
1314	24844	5760	2 *#	6204	8	5982	2 **5%**	8443	2 #	7602		8023	3 4% **4%**	5859		4194		5027	
1317	24814	4607	8 #	5689		5148		7540	4 #	7971	8	7755	5 1% **1%**	6381	5	4639	7	5510	7
1320	24846	5852	1 *#	5720		5786	4 **2%**	7336	6	7375		7356		7266	1 #	4722	6	5994	3
1321	NDR359 (NC)	1375		4877		3126				4427		4427		4091		3306		3698	
1322	Local Check	5046	4 #	6996	2	6021	1 **6%**	5840		4841		5340		6861	4	5611	2	6236	1 **2%**
1328	24855	4273		6502	5	5387	9	6577		8288	4	7433		5689		4042		4865	
1335	24824	4999	5 #	6471	6	5735	6 **1%**	7810	3 #	8209	7	8010	4 4% **4%**	4009		4542	8	4275	
1339	24825	4295		6091		5193		8502	1 #	8294	3	8398	1 *# 9% **9%**	5593		4764	5	5178	
1340	MTU 1010 (NC)	2134		3889		3011		3472		7851		5662		4488		3944		4216	
1345	24311	5048	3 #	6698	4	5873	3 **3%**	6616		5658		6137		6279	8	4931	3	5605	6
1346	HRI 174 (HC)	3817		7541	1	5679	7	6327		8571	2	7449	9	6281	7	5889	1	6085	2
1347	24306	4571	9 #	5154		4863		7151	8	6202		6676		7144	2	4778	4	5961	4
1349	24815	4223		4059		4141		6776		8282	5	7529	8	6898	3	4431	9	5664	5
1356	Zonal Check	2459		6379	7	4419		5673		6718		6195		6241	9	4431		5336	8
1358	US 312 (HC)	3593		6101	9	4847		7523	5 #	7880	9	7702	6	5366		3806		4586	
	Exp Mean	**4219**		**5948**		**5084**		**6824**		**7392**		**7116**		**5830**		**4479**		**5155**	
	C.D. 5%	587		1536		804		1124		826		628		966		962		227	
	C.V.%	8.38		15.56		13.74		9.90		6.73		7.66		9.98		12.94		3.82	
	Sowing Date	30-Jun		07-Jul				01-Jul		20-Jun				10-Jun		07-Aug			
	Planting Date	01-Aug		07-Aug				28-Jul		22-Jul				01-Jul		04-Sep			
	Local ©	MTU 1001		RGL 2538 (Vasundhara)				WGL-32100		Krishna				CO(R) 50		ADT(R) 46			

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.31 Contd..: Grain Yield (kg/ha) of entries in AVT1-IM Zone 7 Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (9)			Overall Mean (9)			Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA		KA		KA		KA (3)												
		MND		KTG		MDI		Mean												
1305	24817	5513		7797	2 #	8333	2	7214	2 *#	8%	**7%**	6362	6	5%	6362	6	5%	92	105	311
1308	24816	6424	5 #	7697	4	7690	4	7270	1 *#	9%	**8%**	6220	8	2%	6220	8	2%	99	108	310
1312	22919	4752		8053	1 #	8750	1 *#	7185	3 *#	7%	**7%**	6530	1 *	7%	6530	1 *	7%	98	108	333
1314	24844	6905	3 #	6177		6407		6496				6395	4	5%	6395	4	5%	101	104	317
1317	24814	6400	7 #	6827		8194	3	7140	4	7%	**6%**	6472	3 *	6%	6472	3 *	6%	100	106	316
1320	24846	6421	6 #	6050		5032		5835				6197	9	2%	6197	9	2%	99	109	326
1321	NDR359 (NC)	3569		6797		4306		4890				4093			4093			89	84	335
1322	Local Check	5190		7057		7306	5	6517				6083			6083			107	108	345
1328	24855	5892		7547	5	6866	8	6768	6	1%	**1%**	6186		2%	6186		2%	99	101	327
1335	24824	7197	1 *#	7370	7	6477	9	7015	5	5%	**4%**	6343	7	4%	6343	7	4%	98	100	300
1339	24825	6833	4 #	6050		7083	7	6655		9		6389	5	5%	6389	5	5%	96	100	326
1340	MTU 1010 (NC)	4818		7213		4306		5446				4679			4679			94	94	350
1345	24311	4666		7063		5495		5742				5828			5828			102	100	344
1346	HRI 174 (HC)	5697		7260	9	7194	6	6717		7		6509	2 *	7%	6509	2 *	7%	102	103	320
1347	24306	6907	2 #	7547	6	4148		6201				5956			5956			101	105	324
1349	24815	5255		7277	8	5139		5890				5815			5815			102	99	333
1356	Zonal Check	6267	9	7020		4537		5941				5525			5525			102	104	323
1358	US 312 (HC)	6383	8 #	7763	3 #	5931		6692		8		6038			6038			100	106	321
	Exp Mean	**5838**		**7142**		**6289**		**6423**				**5991**			**5991**			**99**	**103**	**325**
	C.D. 5%	625		453		1240		460				348			347			1	7	15
	C.V.%	6.45		3.82		11.88		7.66				10.85			10.82			2.36	0.00	8.52
	Sowing Date	24-Jul		03-Jul		26-Jun														
	Planting Date	24-Aug		29-Jul		17-Jul														
	Local ©	BR-2655		JGL-1798		Tunga														

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.32: Days to 50% flowering of entries in AVT1-IM Zone 2 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	Overall Mean (4)
		UT	PUN	HAR	J&K		
		PNT	LDN	KUL	CHT		
1304	24260	97	107	108	109	105	105
1305	24817	101	110	108	102	105	105
1309	24359	91	98	102	97	97	97
1311	24262	108	116	112	110	111	111
1312	22919	115	121	114	117	117	117
1314	24844	94	106	104	103	102	102
1317	24814	94	104	106	104	102	102
1320	24846	98	109	106	105	105	105
1321	NDR359 (NC)	83	86	89	117	94	94
1322	Local Check	100	111	104	107	106	106
1326	24330	90	115	114	112	108	108
1335	24824	110	97	93	99	100	100
1339	24825	91	98	93	99	95	95
1340	MTU 1010 (NC)	92	100	101	98	98	98
1345	24311	98	109	106	109	106	106
1346	HRI 174 (HC)	108	113	110	109	110	110
1351	24884	101	112	109	110	108	108
1356	Zonal Check	102	106	100	109	104	104
1357	24880	102	111	108	107	107	107
1358	US 312 (HC)	99	104	104	102	102	102
	Exp Mean	**99**	**107**	**105**	**106**	**104**	**104**
	C.D. 5%	7	1	0	2	2	2
	C.V.%	4.03	0.83	0.20	0.88	1.99	1.93

Table No. 3.33: Plant Height (cm) of entries in AVT1-IM Zone 2 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	Overall Mean (4)
		UT	PUN	HAR	J&K		
		PNT	LDN	KUL	CHT		
1304	24260	126	112	103	105	112	112
1305	24817	121	117	109	116	116	116
1309	24359	112	106	105	98	105	105
1311	24262	120	104	91	91	101	101
1312	22919	130	122	106	107	116	116
1314	24844	125	112	98	100	109	109
1317	24814	122	115	106	115	114	114
1320	24846	134	123	110	122	122	122
1321	NDR359 (NC)	101	102	80	92	94	94
1322	Local Check	108	95	103	120	106	106
1326	24330	117	111	107	117	113	113
1335	24824	131	109	104	107	113	113
1339	24825	114	107	102	98	105	105
1340	MTU 1010 (NC)	105	93	107	98	101	101
1345	24311	118	110	100	95	106	106
1346	HRI 174 (HC)	125	111	105	97	110	110
1351	24884	126	112	103	106	112	112
1356	Zonal Check	106	91	83	99	95	95
1357	24880	135	124	108	116	121	121
1358	US 312 (HC)	116	114	106	119	114	114
	Exp Mean	**120**	**109**	**102**	**106**	**109**	**109**

Table No. 3.32 : Days to 50% flowering of entries in AVT1-IM Zone 3,4 & 5 Kharif 2015

Entry No.	IET No.	III												Zone III Mean (8)	IV	V				Zone V Mean (2)	Overall Mean (11)
		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (1)		AS	CG	CG	CG	CG (2)		
		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	@MSD	VRN	Mean		TTB	@ABP	JDP	SKL	Mean		
1302	24326	91	86	89	84	81	90	85	129	125	96	85	85	96	102	49	95	97	96	96	97
1303	24353	95	87	91	93	85	101	93	128	131	91	91	91	101	103	56	100	99	99	99	101
1305	24817	92	91	92	91	82	95	90	134	130	90	88	88	101	93	57	99	101	100	100	100
1307	24331	95	95	95	92	82	98	90	134	136	95	85	85	102	97	58	107	100	104	104	102
1309	24359	89	87	88	77	75	85	79	129	128	95	102	102	97	89	53	99	96	97	97	96
1312	22919	98	98	98	100	89	105	98	137	138	97	102	102	108	106	68	109	112	111	111	108
1313	24309	113	113	113	127	87	98	104	139	124	95	120	120	115	121	83	130	129	130	130	118
1314	24844	95	97	96	91	86	92	90	139	101	90	91	91	99	92	67	108	105	106	106	100
1316	24332	103	107	105	104	105	107	106	139	105	87			110	104	61	109	114	111	111	110
1317	24814	93	96	95	90	95	95	93	140	101	82	120	120	104	95	63	103	105	104	104	103
1319	24325	112	104	108	112	87	97	99	140	122	90	90	90	108	121	81	123	125	124	124	112
1320	24846	92	96	94	92	88	96	92	138	102	92	116	116	103	99	66	105	101	103	103	102
1321	NDR359 (NC)	81	79	80	77	75	82	78	117	92	92	90	90	86	87	48	93	83	88	88	87
1322	Local Check	103	100	102	119	106	113	113	133	118	100	71	71	108	96	61	101	112	106	106	106
1324	24333	96	97	97	94	86	95	91	138	101	88	107	107	102	95	67	108	101	105	105	102
1325	24343	99	99	99	92	87	95	91	136	109	82	95	95	102	102	67	109	104	107	107	103
1326	24330	96	97	97	97	87	102	95	138	105	84	96	96	102	107	63	113	107	110	110	104
1329	24334	91	91	91	90	85	95	90	135	100	84	98	98	98	99	64	99	99	99	99	98
1330	24347	97	91	94	104	85	105	98	134	138	82	92	92	106	99	58	109	108	108	108	106
1331	24342	95	98	96	97	86	96	93	135	133	81	86	86	103	93	69	106	106	106	106	103
1333	24354	97	93	95	97	85	105	96	135	134	102	100	100	106	108	73	118	112	115	115	108
1334	24323	90	91	91	93	82	96	90	136	129	94	90	90	101	91	81	101	100	100	100	100
1335	24824	89	93	91	84	82	91	86	138	132	96	83	83	99	93	59	100	100	100	100	99
1337	24318	91	90	90	96	83	105	95	129	131	90	114	114	105	97	58	108	108	108	108	105
1338	24341	91	93	92	94	86	94	91	134	128	89	93	93	101	92	72	101	97	99	99	100
1339	24825	92	93	93	83	81	92	85	138	133	89	82	82	99	94	61	103	102	102	102	99
1340	MTU 1010 (NC)	87	86	87	82	82	87	83	135	125	93	81	81	96	95	54	99	95	97	97	96
1341	23964	96	97	97	99	86	106	97	139	135	94	97	97	107	108	67	114	111	112	112	108
1342	24340	98	100	99	90	85	95	90	140	135	93	92	92	104	104	61	115	106	110	110	105
1343	24305	95	96	96	90	82	97	90	138	131	94	93	93	103	91	61	109	100	105	105	102
1344	24302	105	96	101	110	82	114	102	137	131	90	116	116	111	115	64	113	113	113	113	112
1345	24311	96	98	97	93	83	97	91	135	131	100	96	96	104	87	69	114	107	110	110	103
1346	HRI 174 (HC)	97	89	93	92	83	104	93	139	133	96	93	93	104	105	67	108	108	108	108	105
1347	24306	96	95	96	102	87	106	98	138	137	96	111	111	109	103	66	108	108	108	108	108
1348	24338	89	92	91	87	82	92	87	135	131	96	85	85	99	92	61	100	99	100	100	98
1350	24310	98	97	97	93	87	98	93	138	139	93	90	90	105	104	61	108	107	107	107	105
1352	24351	101	96	99	99	86	107	97	134	137	90	100	100	108	102	63	118	113	116	116	109
1353	24307	87	85	86	81	78	88	82	136	126	91	83	83	95	88	53	99	92	96	96	95
1354	24879	100	96	98	99	87	107	97	137	136	90	100	100	108	105	67	109	111	110	110	108
1356	Zonal Check	92	93	92	94	81	91	89	132	131	94	99	99	102	92	53	99	90	95	95	99
1357	24880	98	96	97	93	89	102	95	137	135	93	92	92	105	104	62	114	110	112	112	106
1358	US 312 (HC)	93	96	95	87	88	94	90	134	127	90	89	89	101	93	61	103	101	102	102	100
	Exp Mean	**95**	**95**	**95**	**94**	**85**	**98**	**93**	**135**	**125**	**92**	**95**	**95**	**103**	**99**	**63**	**107**	**104**	**106**	**106**	**103**
	C.D. 5%	2	3	2	7	3	1	3	2	2	3	0		1	2	2	1	1		0	1
	C.V.%	1.33	2.04	1.71	4.86	2.02	0.80	3.07	0.88	0.88	1.98	0.21		1.95	1.00	1.56	0.44	0.39		0.35	1.70

Table No. 3.32: Days to 50% flowering entries in AVT1-IM Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		KJT	NWG		
1301	24266	85	102	94	94
1305	24817	86	101	94	94
1306	24268	97	99	98	98
1310	24276	94	102	98	98
1312	22919	92	112	102	102
1314	24844	93	101	97	97
1315	24299	94	107	101	101
1317	24814	93	101	97	97
1318	24823	87	98	93	93
1320	24846	90	103	97	97
1321	NDR359 (NC)	104	81	93	93
1322	Local Check	94	105	100	100
1323	24301	94	106	100	100
1326	24330	93	108	100	100
1327	24327	96	107	102	102
1330	24347	97	114	106	106
1332	24335	95	114	105	105
1333	24354	95	112	103	103
1335	24824	85	92	89	89
1336	24355	97	76	87	87
1339	24825	90	94	92	92
1340	MTU 1010 (NC)	81	92	86	86
1344	24302	92	109	101	101
1345	24311	100	103	102	102
1346	HRI 174 (HC)	93	105	99	99
1354	24879	95	111	103	103
1355	23656	116	128	122	122
1356	Zonal Check	94	108	101	101
1357	24880	91	109	100	100
1358	US 312 (HC)	89	103	96	96
	Exp Mean	**93**	**103**	**98**	**98**
	C.D. 5%	2	0	1	1
	C.V.%	1.54	0.00	1.23	0.75

Table No. 3.33: Plant Height (cm) entries in AVT1-IM Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		KJT	NWG		
1301	24266	120	108	114	114
1305	24817	113	118	116	116
1306	24268	116	113	114	114
1310	24276	129	125	127	127
1312	22919	127	124	125	125
1314	24844	117	119	118	118
1315	24299	117	119	118	118
1317	24814	128	112	120	120
1318	24823	117	101	109	109
1320	24846	120	113	116	116
1321	NDR359 (NC)	90	109	99	99
1322	Local Check	117	120	119	119
1323	24301	113	113	113	113
1326	24330	115	121	118	118
1327	24327	137	130	133	133
1330	24347	137	117	127	127
1332	24335	107	104	105	105
1333	24354	113	113	113	113
1335	24824	118	119	118	118
1336	24355	121	125	123	123
1339	24825	117	109	113	113
1340	MTU 1010 (NC)	110	106	108	108
1344	24302	108	97	102	102
1345	24311	117	112	115	115
1346	HRI 174 (HC)	126	122	124	124
1354	24879	129	124	127	127
1355	23656	143	130	136	136
1356	Zonal Check	138	132	135	135
1357	24880	129	124	127	127
1358	US 312 (HC)	122	113	118	118
	Exp Mean	**120**	**116**	**118**	**118**

Table No. 3.32: Days to 50% flowering of entries in AVT1-IM Zone 7 Kharif 2015

Entry No.	IET No.	VII													Zone VII Mean (9)	Overall Mean (9)
		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDI	Mean		
1305	24817	89	86	87	93	101	97	90	82	86	87	98	102	95	92	92
1308	24816	89	88	89	93	104	99	99	96	97	100	110	112	107	99	99
1312	22919	101	94	98	102	111	107	94	86	90	90	97	109	99	98	98
1314	24844	91	91	91	95	109	102	100	100	100	105	100	121	109	101	101
1317	24814	91	92	92	94	105	100	101	101	101	102	106	112	107	100	100
1320	24846	92	92	92	95	101	98	100	88	94	102	111	109	107	99	99
1321	NDR359 (NC)	80	73	77		89	89	83	79	81	84	99	127	103	89	89
1322	Local Check	103	87	95	104	112	108	109	104	107	105	112	125	114	107	107
1328	24855	87	87	87	96	100	98	97	102	100	102	112	105	106	99	99
1335	24824	90	88	89	93	98	96	95	95	95	103	111	111	108	98	98
1339	24825	85	81	83	94	97	95	94	98	96	103	106	109	106	96	96
1340	MTU 1010 (NC)	88	94	91	86	98	92	87	79	83	87	110	120	106	94	94
1345	24311	92	96	94	102	108	105	102	97	100	101	104	113	106	102	102
1346	HRI 174 (HC)	101	88	94	98	108	103	102	101	101	104	103	112	106	102	102
1347	24306	102	94	98	97	105	101	101	102	102	104	94	112	103	101	101
1349	24815	92	95	93	94	105	100	101	100	101	109	102	121	111	102	102
1356	Zonal Check	93	89	91	100	101	101	104	108	106	101	110	111	107	102	102
1358	US 312 (HC)	91	102	97	93	104	99	97	99	98	99	106	111	105	100	100
	Exp Mean	**92**	**90**	**91**	**96**	**103**	**100**	**98**	**95**	**96**	**99**	**105**	**113**	**106**	**99**	**99**
	C.D. 5%	2	2	1	1	1	1	2	2	1	4	10	0	4	1	1
	C.V.%	1.30	1.51	1.40	0.85	0.72	0.52	0.99	1.21	1.09	2.37	5.95	0.21	3.59	2.38	2.36

Table No. 3.33: Plant Height (cm) entries in AVT1-IM Zone 3,4 & 5 Kharif 2015

Entry No.	IET No.	III												Zone III Mean (8)	IV	V				Zone V Mean (2)	Overall Mean (11)
		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (1)		AS	CG	CG	CG	CG (2)		
		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	@MSD	VRN	Mean		TTB	@ABP	JDP	SKL	Mean		
1302	24326	102	134	118	146	129	124	133	67	135	106	137	137	130	120	127	125	127	126	126	128
1303	24353	105	104	104	126	93	110	110	57	126	103	109	109	110	105	110	101	111	107	107	109
1305	24817	102	106	104	134	99	117	117	65	120	100	107	107	112	120	116	107	123	115	115	114
1307	24331	96	95	96	112	98	98	103	51	107	99	94	94	100	84	107	93	96	99	99	98
1309	24359	81	105	93	114	95	92	100	54	105	98	99	99	99	96	103	96	110	103	103	100
1312	22919	93	114	103	134	117	116	122	63	127	100	137	137	120	124	118	104	109	111	111	118
1313	24309	120	120	120	127	121	128	125	64	130	97	118	118	123	115	117	127	138	127	127	124
1314	24844	100	103	101	122	114	108	115	52	122	96	117	117	112	110	108	111	119	113	113	112
1316	24332	90	88	89	101	92	95	96	42	114	95			97	98	95	86	93	91	91	95
1317	24814	108	102	105	135	116	117	123	52	124	100	117	117	117	115	109	111	115	112	112	115
1319	24325	100	103	102	120	109	110	113	55	123	101	122	122	112	124	93	107	115	105	105	111
1320	24846	117	99	108	135	125	117	126	54	136	99	112	112	120	116	111	108	112	110	110	117
1321	NDR359 (NC)	87	91	89	104	102	85	97	55	132	103	132	132	105	92	99	85	90	91	91	100
1322	Local Check	112	99	106	100	99	98	99	54	115	106	89	89	102	122	108	101	113	108	108	105
1324	24333	91	100	95	117	105	103	108	51	112	90	114	114	106	110	108	102	96	102	102	105
1325	24343	101	105	103	118	118	107	114	41	121	92	115	115	112	112	110	98	110	106	106	111
1326	24330	103	104	103	126	108	108	114	56	130	97	116	116	114	112	115	96	115	109	109	112
1329	24334	95	106	100	128	105	112	115	61	125	99	127	127	114	120	111	108	117	112	112	114
1330	24347	116	106	111	126	115	114	118	50	121	94	125	125	118	124	116	109	126	117	117	118
1331	24342	84	100	92	121	87	95	101	47	112	93	125	125	104	97	103	93	99	98	98	101
1333	24354	95	102	98	118	100	112	110	59	110	90	123	123	108	114	91	112	110	104	104	108
1334	24323	87	100	93	114	98	100	104	47	132	96	96	96	104	98	106	98	104	103	103	103
1335	24824	102	111	106	117	104	114	112	52	114	102	110	110	110	110	100	98	109	103	103	108
1337	24318	92	110	101	120	118	105	114	52	115	101	113	113	111	97	113	105	110	109	109	109
1338	24341	106	102	104	128	113	114	118	50	112	99	126	126	114	100	98	99	121	106	106	111
1339	24825	100	105	102	116	111	108	112	49	113	95	116	116	110	108	110	102	113	108	108	109
1340	MTU 1010 (NC)	95	99	97	119	101	95	105	43	86	98	105	105	100	88	109	89	98	99	99	98
1341	23964	90	95	92	191	106	102	133	45	112	100	119	119	116	110	104	103	115	107	107	113
1342	24340	90	95	92	112	99	95	102	46	105	103	102	102	100	100	104	102	98	101	101	100
1343	24305	83	90	86	101	104	89	98	40	86	95	95	95	92	95	92	80	93	88	88	92
1344	24302	98	91	94	117	118	103	113	45	112	92	109	109	107	98	89	95	98	94	94	103
1345	24311	101	98	100	116	118	108	114	47	109	95	119	119	110	106	100	104	112	106	106	108
1346	HRI 174 (HC)	109	110	109	132	129	118	126	58	117	99	131	131	121	112	109	101	109	106	106	116
1347	24306	101	112	106	124	110	112	115	45	112	89	113	113	112	112	112	103	114	110	110	111
1348	24338	98	100	99	113	99	110	107	52	112	95	95	95	104	94	106	99	107	104	104	103
1350	24310	93	98	95	117	115	103	112	50	108	90	105	105	106	110	102	100	108	104	104	105
1352	24351	90	99	94	121	117	102	113	60	114	96	126	126	110	104	96	97	108	100	100	107
1353	24307	80	100	90	107	99	90	99	51	95	90	106	106	97	109	100	83	93	92	92	97
1354	24879	110	112	111	128	135	126	130	51	140	91	139	139	127	124	121	124	115	120	120	125
1356	Zonal Check	100	99	99	123	111	108	114	61	115	95	125	125	112	108	101	81	103	95	95	107
1357	24880	112	110	111	126	123	128	126	52	125	97	127	127	121	123	113	113	111	112	112	119
1358	US 312 (HC)	100	103	101	135	100	117	117	62	110	89	107	107	110	94	118	106	111	111	111	109
	Exp Mean	**98**	**103**	**101**	**122**	**109**	**107**	**113**	**53**	**116**	**97**	**115**	**115**	**110**	**108**	**107**	**101**	**109**	**106**	**106**	**109**
	C.D. 5%			0									0						0	0	14

Table No. 3.33: Plant Height (cm) of entries in AVT1-IM Zone 7 Kharif 2015

Entry No.	IET No.	VII													Zone VII Mean (9)	Overall Mean (9)
		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDI	Mean		
1305	24817	125	110	117	125	105	115	97	102	99	82	99	97	93	105	105
1308	24816	134	109	121	127	105	116	107	110	109	91	101	88	93	108	108
1312	22919	133	114	124	131	107	119	123	111	117	79	92	81	84	108	108
1314	24844	121	108	114	120	105	112	114	106	110	87	103	75	88	104	104
1317	24814	129	109	119	122	105	113	113	103	108	92	102	75	90	106	106
1320	24846	135	108	122	122	96	109	117	106	111	94	120	86	100	109	109
1321	NDR359 (NC)	91	64	77		93	93	93	84	88	76	103	65	81	84	84
1322	Local Check	119	125	122	107	91	99	121	112	117	101	98	95	98	108	108
1328	24855	117	111	114	118	101	109	101	93	97	84	94	85	88	101	101
1335	24824	111	108	109	118	104	111	103	84	93	86	101	89	92	100	100
1339	24825	106	106	106	118	102	110	103	104	104	87	93	85	88	100	100
1340	MTU 1010 (NC)	96	97	97	105	98	101	98	93	95	77	95	85	86	94	94
1345	24311	123	116	120	111	101	106	108	95	101	81	91	74	82	100	100
1346	HRI 174 (HC)	120	110	115	120	104	112	113	92	103	84	103	83	90	103	103
1347	24306	137	110	123	131	99	115	117	93	105	87	100	76	87	105	105
1349	24815	121	96	109	121	100	111	98	102	100	81	91	76	83	99	99
1356	Zonal Check	111	119	115	114	104	109	109	115	112	92	99	75	89	104	104
1358	US 312 (HC)	126	112	119	125	106	115	105	103	104	91	97	85	91	106	106
	Exp Mean	**120**	**107**	**114**	**120**	**101**	**110**	**108**	**100**	**104**	**86**	**99**	**82**	**89**	**103**	**103**
	C.D. 5%			4										0	7	7

Table No. 3.34: Panicles/ M² of entries in AVT1-IM Zone 2 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	Overall Mean (4)
		UT	PUN	HAR	J&K		
		PNT	LDN	KUL	CHT		
1304	24260	339	303	390	278	328	328
1305	24817	247	246	371	270	284	284
1309	24359	370	323	365	277	334	334
1311	24262	240	281	353	261	284	284
1312	22919	258	270	375	290	298	298
1314	24844	296	262	387	280	306	306
1317	24814	268	220	366	265	280	280
1320	24846	261	226	329	281	274	274
1321	NDR359 (NC)	304	319	355	259	309	309
1322	Local Check	272	354	349	288	316	316
1326	24330	299	328	332	282	310	310
1335	24824	342	301	370	286	325	325
1339	24825	289	268	305	279	285	285
1340	MTU 1010 (NC)	361	320	358	265	326	326
1345	24311	328	266	361	239	298	298
1346	HRI 174 (HC)	288	332	356	272	312	312
1351	24884	311	340	364	271	322	322
1356	Zonal Check	287	350	361	261	315	315
1357	24880	246	308	318	275	287	287
1358	US 312 (HC)	269	288	336	266	290	290
	Exp Mean	**294**	**295**	**355**	**272**	**304**	**304**
	C.D. 5%	63	57	47	34	25	24
	C.V.%	13.05	11.63	8.08	7.46	10.18	9.72

Table No. 3.34: Panicles/ M² entries in AVT1-IM Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		KJT	NWG		
1301	24266	233	287	260	260
1305	24817	200	292	246	246
1306	24268	223	287	255	255
1310	24276	214	286	250	250
1312	22919	193	297	245	245
1314	24844	176	291	233	233
1315	24299	202	274	238	238
1317	24814	216	290	253	253
1318	24823	251	284	267	267
1320	24846	183	292	237	237
1321	NDR359 (NC)	215	279	247	247
1322	Local Check	235	286	260	260
1323	24301	209	278	243	243
1326	24330	196	290	243	243
1327	24327	238	282	260	260
1330	24347	217	286	251	251
1332	24335	239	288	264	264
1333	24354	220	291	255	255
1335	24824	225	292	259	259
1336	24355	218	286	252	252
1339	24825	200	298	249	249
1340	MTU 1010 (NC)	206	289	247	247
1344	24302	263	280	271	271
1345	24311	209	294	251	251
1346	HRI 174 (HC)	253	294	273	273
1354	24879	225	295	260	260
1355	23656	238	292	265	265
1356	Zonal Check	216	297	256	256
1357	24880	210	298	254	254
1358	US 312 (HC)	231	289	260	260
	Exp Mean	**218**	**288**	**253**	**253**
	C.D. 5%	40	3	21	18
	C.V.%	11.12	0.56	7.17	6.14

Table No. 3.34 : Panicles/ M² entries in AVT1-IM Zone 3,4 & 5 Kharif 2015

Entry No.	IET No.	III												Zone III Mean (7)	IV	V				Zone V Mean (3)	Overall Mean (11)
		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P. (1)		AS	CG	CG	CG	CG (3)		
		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	@RCI	CHN	@MSD	VRN	Mean		TTB	ABP	JDP	SKL	Mean		
1302	24326	194	247	221	253	338	228	273	83	253	304	200	200	245	252	151	198	206	185	185	229
1303	24353	229	291	260	269	292	241	267	93	241	302	318	318	269	285	220	269	216	235	235	261
1305	24817	225	331	278	308	280	272	287	79	310	307	247	247	282	323	160	234	219	204	204	264
1307	24331	208	316	262	337	222	250	270	103	275	307	315	315	275	252	184	232	248	221	221	258
1309	24359	202	419	310	272	257	269	266	99	275	310	316	316	287	291	192	271	235	232	232	272
1312	22919	233	422	328	246	292	250	262	98	264	306	334	334	292	315	171	219	214	201	201	269
1313	24309	193	297	245	261	373	318	318	93	308	282	234	234	283	252	184	284	197	222	222	264
1314	24844	213	398	305	233	222	252	236	95	319	308	260	260	271	330	170	195	163	176	176	250
1316	24332	213	272	243	335	350	285	323	108	319	307			296	294	179	237	226	214	214	271
1317	24814	222	288	255	227	362	251	280	80	253	317	220	220	260	256	172	232	207	204	204	245
1319	24325	214	276	245	229	397	237	288	88	275	333	348	348	282	288	184	226	235	215	215	264
1320	24846	219	248	234	227	240	220	229	103	264	321	248	248	238	299	194	250	210	218	218	238
1321	NDR359 (NC)	135	337	236	380	607	281	422	82	297	323	204	204	320	245	209	233	196	213	213	284
1322	Local Check	220	352	286	360	420	290	357	100	330	325	360	360	333	279	205	225	246	225	225	299
1324	24333	198	264	231	242	257	239	246	86	275	340	277	277	250	235	193	255	183	210	210	238
1325	24343	244	350	297	233	338	284	285	88	308	336	251	251	287	307	211	276	252	246	246	278
1326	24330	211	361	286	238	303	279	273	108	341	339	261	261	285	296	236	233	176	215	215	267
1329	24334	182	212	197	275	327	287	296	85	198	314	273	273	251	227	178	209	209	199	199	234
1330	24347	224	263	244	263	327	273	287	92	308	310	230	230	270	236	164	206	232	200	200	248
1331	24342	166	247	206	273	175	270	239	98	319	314	252	252	243	278	203	220	176	200	200	234
1333	24354	226	333	279	275	198	247	240	96	363	346	232	232	268	283	185	234	191	204	204	252
1334	24323	225	323	274	287	233	298	273	100	363	305	242	242	282	283	163	221	219	201	201	260
1335	24824	219	338	279	289	268	220	259	82	363	302	281	281	283	314	180	207	209	199	199	263
1337	24318	232	309	271	272	245	303	273	82	297	297	221	221	268	307	191	295	234	240	240	264
1338	24341	216	329	273	250	338	245	278	88	319	315	337	337	291	276	225	212	246	228	228	272
1339	24825	227	244	236	267	268	208	248	107	374	314	227	227	259	303	183	229	165	192	192	245
1340	MTU 1010 (NC)	173	364	269	295	245	239	260	95	297	318	207	207	260	272	198	271	231	233	233	254
1341	23964	238	266	252	311	292	240	281	88	319	320	311	311	282	234	185	215	227	209	209	258
1342	24340	195	248	222	251	362	276	296	90	429	317	252	252	287	234	151	246	189	195	195	257
1343	24305	213	336	275	328	268	255	284	107	385	308	242	242	290	219	207	232	225	221	221	265
1344	24302	237	299	268	277	362	347	328	99	319	312	302	302	306	284	207	276	270	251	251	289
1345	24311	237	369	303	281	338	262	294	98	319	335	306	306	302	287	219	247	226	231	231	281
1346	HRI 174 (HC)	233	270	251	266	280	247	264	109	308	308	218	218	260	319	169	206	203	193	193	247
1347	24306	226	307	266	265	292	246	268	90	396	333	244	244	282	221	176	257	256	230	230	262
1348	24338	217	215	216	278	257	253	263	83	341	324	244	244	258	254	144	210	172	175	175	235
1350	24310	223	292	258	340	350	225	305	88	341	318	269	269	291	311	207	265	221	231	231	277
1352	24351	217	294	256	254	315	222	264	95	220	313	266	266	255	221	152	258	198	203	203	238
1353	24307	213	353	283	333	338	227	300	100	341	285	257	257	295	316	193	245	209	216	216	275
1354	24879	225	235	230	272	560	259	364	107	341	293	243	243	305	251	185	222	179	196	196	270
1356	Zonal Check	242	344	293	273	420	303	332	109	297	304	222	222	300	238	203	234	187	208	208	269
1357	24880	220	367	293	254	362	222	279	89	253	314	243	243	274	329	195	216	190	200	200	259
1358	US 312 (HC)	233	300	267	245	420	239	301	92	275	319	224	224	277	221	177	231	207	205	205	252
	Exp Mean	**215**	**308**	**261**	**277**	**319**	**259**	**285**	**94**	**309**	**314**	**262**	**262**	**278**	**274**	**187**	**237**	**212**	**212**	**212**	**260**
	C.D. 5%	18	33	19	46	91	55	39	3	49	12	32	34	20	29	37	42	17		17	14
	C.V.%	5.20	6.58	6.23	10.34	17.57	13.01	14.68	2.04	9.72	2.31	7.48	7.95	11.97	6.59	12.32	11.01	4.81		8.57	11.38

Table No. 3.34: Panicles/ M² of entries in AVT1-IM Zone 7 Kharif 2015

Entry No.	IET No.	VII													Zone VII Mean (9)	Overall Mean (9)
		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDI	Mean		
1305	24817	266	321	294	286	456	371	388	385	387	323	362	7	231	311	311
1308	24816	273	306	289	297	453	375	378	406	392	287	385	7	226	310	310
1312	22919	295	295	295	308	454	381	402	476	439	343	415	7	255	333	333
1314	24844	260	360	310	297	475	386	327	448	387	327	356	6	230	317	317
1317	24814	273	327	300	308	433	371	397	413	405	330	354	6	230	316	316
1320	24846	275	364	320	308	453	380	465	383	424	317	363	6	229	326	326
1321	NDR359 (NC)	308	429	369		475	475	363	406	385	353	335	6	231	335	335
1322	Local Check	266	423	344	341	453	397	522	362	442	327	407	7	247	345	345
1328	24855	277	355	316	319	450	384	410	390	400	340	393	7	247	327	327
1335	24824	284	295	289	297	430	364	363	341	352	323	364	6	231	300	300
1339	24825	244	344	294	297	447	372	380	520	450	330	363	6	233	326	326
1340	MTU 1010 (NC)	295	345	320	352	463	408	437	464	451	370	414	7	264	350	350
1345	24311	312	412	362	308	457	383	497	397	447	337	372	6	238	344	344
1346	HRI 174 (HC)	281	373	327	286	475	381	407	352	380	327	372	6	235	320	320
1347	24306	279	328	304	275	462	368	500	362	431	310	393	6	237	324	324
1349	24815	249	442	346	286	456	371	412	380	396	343	422	7	257	333	333
1356	Zonal Check	275	370	323	308	469	389	398	408	403	303	367	6	225	323	323
1358	US 312 (HC)	284	396	340	286	429	357	405	392	399	313	382	6	234	321	321
	Exp Mean	**278**	**360**	**319**	**303**	**455**	**381**	**414**	**405**	**409**	**328**	**379**	**6**	**238**	**325**	**325**
	C.D. 5%	24	81	42	30	20	23	34	58	32	63	15	1	20	15	15
	C.V.%	5.19	13.47	11.32	5.91	2.64	5.17	5.00	8.57	6.69	11.65	2.32	10.20	8.89	8.52	8.52

Table 3.35 : Grain Quality Characteristics of entries in AVT 1-IM, Kharif 2015

		IIRR											NRRI		
ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC	ASV	AC	GC
1301	24266	80.5	66.2	36.7	6.38	2.36	2.70	LB	VOC	4.0	27.57	47	4.0	28.05	31
1302	24326	79.6	65.6	22.6	5.63	2.28	2.46	SB	VOC	7.0	26.86	22	7.0	24.97	42
1303	24353	79.8	66.7	44.8	6.05	2.19	2.76	LB	VOC	4.0	24.37	57	3.0	22.95	48
1304	24260	77.6	68.3	54.9	6.31	2.08	3.03	LS	A	7.0	24.03	42	7.0	22.27	39
1305	24817	81.2	67.2	55.3	6.54	2.37	2.75	LB	VOC	4.2	24.43	57	6.2	24.15	42
1306	24268	79.6	68.2	50.3	6.42	2.09	3.07	LS	VOC	7.0	24.81	48	7.0	23.02	36
1307	24331	78.8	69.0	57.0	6.18	2.01	3.07	LS	A	4.0	25.28	22	3.0	23.55	34
1308	24816	80.5	55.7	44.5	6.06	2.28	2.65	LB	VOC	5.3	24.40	63	5.3	20.85	49
1309	24359	78.5	62.8	28.5	5.77	2.00	2.88	MS	A	4.0	24.14	92	2.0	21.90	50
1310	24276	78.4	67.4	38.8	5.22	2.50	2.08	SB	VOC	7.0	25.49	45	7.0	24.30	46
1311	24262	79.6	70.0	59.3	6.48	2.05	3.16	LS	A	7.0	26.37	35	7.0	22.72	42
1312	22919	78.5	67.6	51.6	6.34	2.28	2.78	LB	VOC	5.5	24.31	60	5.7	21.52	32
1313	24309	78.6	69.7	62.1	6.85	2.13	3.21	LS	A	4.0	27.01	43	4.0	22.05	35
1314	24844	80.7	68.7	54.6	6.36	2.41	2.63	LB	VOC	4.3	22.20	78	3.0	17.92	58
1315	24299	79.9	69.7	45.8	5.27	1.96	2.68	MS	VOC	4.0	27.48	22	3.0	20.02	46
1316	24332	78.5	68.1	49.7	4.81	1.99	2.41	SB	A	4.0	23.93	22	3.0	21.30	39
1317	24814	79.0	66.1	41.2	6.08	2.25	2.70	LB	VOC	5.0	21.12	45	6.0	16.35	51
1318	24823	80.6	67.9	27.2	6.41	2.07	3.09	LS	VOC	7.0	22.29	51	6.0	19.87	47
1319	24325	82.5	72.9	56.3	4.45	1.95	2.28	SB	A	5.0	24.52	22	6.0	20.25	36
1320	24846	80.4	68.0	34.2	6.09	2.27	2.68	LB	VOC	5.0	18.50	61	5.0	14.70	61
1321	NDR 359 (NC)	79.6	67.6	30.5	6.09	2.22	2.74	LB	VOC	7.0	26.40	22	7.0	22.57	38
1322	LC	80.3	68.8	62.2	5.48	1.86	2.94	MS	A	7.0	27.72	23	6.0	21.75	61
1323	24301	78.5	67.6	45.2	5.74	2.14	2.64	MS	VOC	4.0	22.82	61	5.0	19.20	65
1324	24333	79.8	66.3	46.7	6.35	2.17	2.92	LB	A	6.0	19.38	65	6.0	14.70	54
1325	24343	79.6	69.5	38.5	5.7	2.08	2.74	MS	VOC	4.0	22.90	38	5.0	19.35	40
1326	24330	70.5	61.6	36.5	5.07	1.83	2.77	MS	A	4.0	24.46	22	5.3	20.40	39
1327	24327	77.4	67.2	32.7	5.85	2.08	2.81	MS	VOC	5.3	25.60	30	6.0	20.62	34
1328	24855	79.1	63.1	35.7	6.24	2.06	3.02	LS	VOC	7.0	21.03	23	6.5	16.95	65
1329	24334	76.0	65.6	19.5	5.33	2.26	2.35	SB	VOC	3.0	21.35	56	3.0	16.05	68
1330	24347	79.1	67.6	44.5	4.79	2.51	1.90	SB	VOC	4.0	25.13	22	3.0	20.47	45
1331	24342	79.8	64.5	22.0	5.62	2.52	2.23	SB	VOC	7.0	17.39	70	6.0	15.67	62
1332	24335	76.1	66.5	42.8	5.1	2.02	2.52	MS	VOC	4.0	26..84	30	4.0	24.00	33
1333	24354	79.2	68.7	48.6	5.56	1.99	2.79	MS	A	5.0	27.16	22	5.0	25.35	35
1334	24323	79.1	63.2	21.2	6.16	1.87	3.29	LS	VOC	7.0	26.28	23	7.0	24.07	31
1335	24824	79.8	64.8	40.7	6.84	2.3	2.97	LB	OC	7.0	26.63	22	6.0	24.60	36
1336	24355	73.0	62.5	43.4	5.79	2.09	2.77	MS	A	5.0	25.43	22	5.0	23.02	32
1337	24318	74.9	63.2	26.6	5.04	2.21	2.28	SB	VOC	7.0	26.37	43	7.0	24.15	30
1338	24341	79.0	61.9	23.0	6.07	2.38	2.55	LB	VOC	4.0	27.72	39	5.0	24.45	30
1339	24825	80.4	66.3	46.1	6.61	2.22	2.97	LB	OC	5.1	27.51	22	5.0	23.40	40
1340	MTU 1010 (NC)	76.8	65.0	36.0	6.44	1.91	3.37	LS	A	3.0	22.23	60	3.0	21.22	73
1341	23964	78.8	69.1	44.7	4.55	1.85	2.45	SB	A	4.0	23.76	22	5.0	23.40	33
1342	24340	79.6	68.1	33.9	5.83	2.31	2.52	MS	VOC	7.0	24.46	54	6.0	23.25	30
1343	24305	78.7	70.2	60.2	6.14	2.03	3.02	LS	VOC	4.0	27.63	23	5.0	19.65	42
1344	24302	77.5	67.3	35.7	5.33	1.97	2.70	MS	VOC	4.0	24.69	23	5.0	19.50	43
1345	24311	77.3	66.4	36.4	5.97	2.13	2.80	MS	VOC	7.0	24.20	45	6.0	19.42	58
1346	HRI 174 (HC)	79.7	67.2	41.4	5.8	2.19	2.64	MS	VOC	4.3	21.32	61	5.0	18.30	48
1347	24306	75.8	62.6	19.0	6.16	1.93	3.19	LS	VOC	7.0	24.17	40	6.0	23.17	64
1348	24338	76.5	63.0	33.6	5.08	2.08	2.44	SB	VOC	4.0	23.78	23	5.0	25.12	36
1349	24815	78.1	67.2	35.3	6.42	1.92	3.34	LS	VOC	7.0	24.93	22	6.3	21.30	42
1350	24310	79.8	69.4	29.0	6.95	2.05	3.39	LS	VOC	7.0	24.96	22	7.0	21.00	40
1351	24884	79.3	70.2	60.5	6.09	1.87	3.25	LS	VOC	4.0	23.02	22	5.7	22.12	40
1352	24351	78.4	68.8	41.5	5.85	2.2	2.65	LB	VOC	4.0	24.55	25	5.0	22.42	39
1353	24307	79.3	64.5	36.3	6.19	2.05	3.01	LS	VOC	4.0	20.24	91	4.0	20.02	45
1354	24879	80.3	67.1	52.1	6.19	2.23	2.79	LB	VOC	3.5	23.70	70	6.0	15.90	51
1355	23656	80.2	69.6	57.5	5.72	2.26	2.53	MS	VOC	4.0	21.32	25	4.3	17.25	49
1356	Jaya (ZC)	78.6	67.5	31.6	4.48	2.4	2.28	SB	VOC	7.0	25.63	22	6.3	22.12	33
1357	24880	80.5	69.0	45.0	6.07	2.32	2.61	LB	VOC	3.0	17.98	53	4.0	16.12	65
1358	US 312 (HC)	79.9	67.4	44.4	6.10	2.24	2.72	LB	VOC	6.0	20.44	22	5.7	16.72	62

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent

Table 3.36: Composition of entries in Initial Variety Trial – Irrigated Medium (IVT –IM), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing:				
1401	25288	BPT 2571	CR1009/NLR33057	MS
1402	25289	OR2573-7	Birupa/IR76561-AC-8-8	LS
1403	25290	CB 12 662	CB 04 110/CB05 501	MS
1404	25291	CR3819-8-1-1-3-1	Dandi/NLR33892	MS
1405	24720	BRR 0015 (BP 10620F-BB4-2-BB4)	CIHERANG/IRBB 64	LB
1406	25292	AD 12139	ADT 43/WGL 32100	MS
1407	24709	BRR 0016	IR 00A117/IR 73707-45-3-2-3	LS
1408	25293	RP 5480 Bulk- 6-5-3	Swarna/IRGC 48960//RP Bio 226	LS
1409	25294	JR-205	NPT-100/HMT	MS
1410	25295	ORJ-1161(IR84678-25-5-B)	IR 825865/IR82861-B	LS
1411	25296	KNM-604	MTU 1010/JGL 11727	LS
1412	25297	HKR 11-55	(Govind/IR 72870-120-1-2)/HKR 99-60	LS
1413	25298	NDR 3120-10-5	Jaya/Sarjoo-52	LB
1414	25299	UPR 3871-8-1-2-2	UPR 3777/pantdhan 12	LS
1415	25300	NP-9109	NP-91/IET22110	MS
1416	25301	RNR 11718	MTU 1010/NLR 34449	MS
1417	25302	PRNP-4027	NP-9108/NP 9103	MS
1418	25303	WGL -676	MTU 1001/NDLR8	MS
1419	25304	BNKR 111	SPS from WAB450-11-1-P28-1-HB	LS
1420	25305	MTU 1210 (MTU 2274-3-2-2)	MTU 1001/KMP 150	MS
1421	25306	KMP-221	BPT 5204/KMP148	MS
1422	25307	SKL-03-6-19-25-40-25-2	SYE-2001/DUBRAJ	MS
1423	25308	RP Bio 4918-B-B-B-B-14(NPP-14)	Swarna*2/O.nivara	MS
1424	**MTU 1010 (NC)**			
1425	25309	RP 5504 Bulk-1-2-4	Swarna/ IRGC 19922// MTU 1081	LS
1426	25310	JGL 24423	MTU 1010/NLR 34449/MTU 1010	LB
1427	25311	PAU 4042-13-1-2-2-3	TDCD3815//PR116/PAU 3043-30-2-1-1	LS
1428	25312	NWGR-10156	GR-4/SYE/4-2-1-1-1	LS
1429	25313	CR 3722-7-1-1-1-1	Pooja/Pratikshya	MS
1430	25314	CSAR 2012-10-3	IR 63868-68-2-3-2-3-2/IR 65610-38-2-4-2-6-3	MS
1431	25315	RP 5364 Bulk -3-2-5	RP Bio 226/ IRGC39050// MTU 1081	LS
1432	25316	AD 12173	Improve White Ponni/Kalajoha	MS
1433	25317	CN 1740-550-11-15-MLD 11-3-1	IR 42/PROGOL//CN 540///IR 65600-96-1-2	MS
1434	25318	CR 3939-18	MTU1001/Pusa 44	LS
1435	25319	AAGP-10051	NP-9953/IET 22218	LS
1436	24717	CURE 103	Selection for F_2 population of Rice Hybrid Hera collected from North Bengal-Bangladesh border	LB
1437	25320	RP 5441-101-34-4-3	IR 64/ PTB 33	LB
1438	25321	HKR 11-79	Mahamaya/HKR 47	LS
1439	25322	PNP-9108	NP 9047/IET-18299	MS
1440	**NDR 359 (NC)**			
1441	25323	YNP-9183	NP-45/PUSA-44	LB
1442	25324	SKL-3-36-14-15-20	CMR-1523/CHINOOR	LS
1443	25325	NLR 3302	NLR 34449/NLR33671 //NLR145 /NLR34449	MS
1444	25326	R 2032-448-447-1	R979-1528-2-1 / BPH12	LS
1445	25327	OR 2546-9	OR2006-23/PSBRC68	MS
1446	24731	ACM 07001	ASD 16/Pusa Sugandh 2	SB
1447	25328	CR 3941-4	Samba Mahsuri/Wita 12	MS

Entry No.	IET No.	Designation	Cross Combination	Grain type
1448	**PR 113 (Northern), CR Dhan 201 (Eastern), IR 64 (Central) Akshayadhan (Western), Jaya (Southern)—ZC**			
1449	25329	MTU 1209 (MTU 2223-4-1-2)	IR 64/PLA 99-1-3-1-3	LB
1450	25330	WGL-739	RP 4516-3-6/KAVYA	LS
1451	25331	RNR 19399	IR 64/Erramallelu	MS
1452	25332	"ARUNDHATI-2012-1"	"NEDA" (Sangtaron/Amol 3//Hassan Sarae) (Entries from IIRON-2011)	MS
1453	25333	CR 3623-2 (IR 77700-84-2-2-2 CR 3623-2-2-1)	IR 68427-15-2-3-1/IR 68268-99-1-3-3-3//IR-43	MS
1454	25334	CN-1477-5-6-13	Swarna/Bhasamanik	LS
1455	24735	CR 3541-1-2-5-4-1	Pooja/Lalat	MS
1456	25335	RNSK-1100	Selection from IR09N516	LB
1457	25336	NVSR 6121	Bhura-rata/NAUR-1	LB
1458	25337	TTB-404-2(Numoli)	APMS 6B/Piolee	LS
1459	25338	R 1659-450-1-231-1	R1004-2553-1-1 /Phalguna	MS
1460	25339	CB 12 570	CB 04 110/ADT 39	MS
1461	25340	KAU PTB 615-20-2	Pranava/ Chettadi	MB
1462	25341	NVSR 2086	IR 65912-90-1-6-3-2R/Gurjari	LB
1463	25342	BRR 0043-IR 83383-B-B-141-2	IR 72022-46-2-3-3-2/IR57514-PMI 5-B-1-2	LS
1464	25343	KAU PTB 614-10	Pranava/ Vellari	MB
1465	25344	BPT 2660	BPT 1768/NLR145	MS
1466	25345	IR 95797-CR3847-2-1-1-1-1	IR 84852-B-12-2/ IR79643-39-2-2	LS
1467	25346	PAU 2K 10-23-54-4-76-40-0-0	PAU 201/PAU3699-13-2-3-1//PAU 201	LS
1468	25347	JR-207	WGL 32100/IR 64	LS
1469	**Local Check**			
1470	25348	KMP-149	BPT 5204/KMP 150	LS
1471	25349	MTU 1208 (MTU 2091-1-1-1-1)	MTU 2077/IET 8585	SB
1472	25350	RP 5939-234-6-5-1-1	Swarna/MTU 1064	LS
1473	25351	CR 3962-4(IR 72158-148-4-2 -6 CR 3962-4-1)	BG 90-2/IR 67962-84-2-2-2	LS
1474	25352	RP 5933-1-19-R-2	Swarna*1/IBL57(samba Mahsuri/SC5 126-3-2-4)	SB
1475	25353	CR 2875-11-1	Naveen/Kalakeri	MB
1476	25354	NDR 2113-24-1	NDR 25-/SAKET 4	LB
1477	25355	TRC-2015-7	Pyzum/Sambha Mahsuri	LS
1478	25356	RP 5440-471-7-3-5	IR 64/IR 155-179313-11-3-9	LS
1479	25357	NWGR-10004	GR-3/NWGR-97011/5-3-1-1	LS
1480	25358	RCPR 32-HHZ5-DT 20-DT 3-Y2	HUANG-HUA-ZHAN*2/OM 1723	LS
1481	25359	SJR-41-1-3-1	R 1124-91-2-7-3-1/HRI 148	LB

Table No. 3.37: Grain Yield (kg/ha) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	II								Zone II Mean (4)		III													
		UT		PUN		HAR		J&K				OD		OD		OD (2)		BI		BI		BI		BI (3)	
		PNT		LDN		KUL		CHT				BBN		JYP		Mean		PTN-ICAR		PTN		SBR		Mean	
1401	25288	5158								5158		3860		3229		3544		6696		6000		3454		5383	
1402	25289	6987		5543		5600				6043	5 8%	5965	1	6108	*	6036	8 * 11%	9366		8000		4940	2	7435	6 3%
1403	25290	6098		5223		5600		4750		5418		2632		3191		2911		6500		3400		3728		4543	
1404	25291	5777		4997		4600				5125		4561		7595	5 *	6078	5 * 11%	7875		6550		4550		6325	
1405	24720	5990		6584	8	6350	8	3750		5669	1%	4035		5833		4934		6527		4150		4063		4913	
1406	25292	6088		4979		4200				5089		4386		4877		4631		8339		6800		4496		6545	
1407	24709	5503		5266		5450		5000	7	5305		3860		5682		4771		8750		6900		3295		6315	
1408	25293	5202		4802		6050	9	4600		5163		3509		6913	8 *	5211		4964		6350		3673		4996	
1409	25294	4802		3565		4650				4339		3333		3125		3229		4170		6850		3388		4803	
1410	25295	5103		6860	4	6750	3	4950		5916	6 6%	2807		3314		3061		8768		7150		4057		6658	
1411	25296	6500		6419		5700		4250		5717	2%	3158		6563	*	4860		5830		5300		3235		4788	
1412	25297	6457		6216		4950		5500	1	5781	8 3%	4035		4091		4063		8330		7750		4112		6731	
1413	25298	5953		5983		3850		4500		5071		3158		3144		3151		6313		8000		2357		5557	
1414	25299	5593		4925		4700		4300		4880		2807		3902		3354		7616		7200		3289		6035	
1415	25300	5630		6139		3900		4800		5117		3860		3816		3838		7071		7400		3618		6030	
1416	25301	6437		5846		4600				5628	1%	5263	7	6828	9 *	6045	7 * 11%	9714	6	7000		5099	1	7271	7 1%
1417	25302	6683		4296		4600		4500		5020		2982		3920		3451		6554		5300		2856		4903	
1418	25303	5617		4173		5700				5163		5263	8	5360		5312		8955		7150		4167		6757	
1419	25304	5338		4624		5100		4250		4828		3333		3153		3243		6223		4150		3761		4711	
1420	25305	5993		4581						5287		5263	9	8636	1 *	6950	1 * 27%	7580		7150		4660	9	6463	
1421	25306	5655		5690		4250		3750		4836		3158		3049		3104		5920		6700		3947		5522	
1422	25307	6838		5412		4700		4000		5238		3684		3788		3736		8830		6100		4331		6420	
1423	25308	5992		5968		4850		4200		5252		2982		3087		3035		6545		6000		3125		5223	
1424	MTU 1010 (NC)	6270		4844		7250	2	4000		5591		3333		3494		3414		5464		6000		2522		4662	
1425	25309	6232		6724	6	5800		4250		5752	9 3%	4912		3097		4004		5393		8550		3893		5945	
1426	25310	5230		6430		6400	6	4000		5515		4737		3182		3959		8000		8550		3838		6796	
1427	25311	7330	8 ...1%	4927		5700		4300		5564		4386		3078		3732		8027		8050		4293		6790	
1428	25312	6473		6976	3	5050		4500		5750	3%	3333		6771	*	5052		3866		7500		3673		5013	
1429	25313	6985		4868		3700		4100		4913		3158		4716		3937		5384		4900		3229		4504	
1430	25314	6200		5668		3850		3700		4854		3684		3428		3556		8393		6050		3564		6002	
1431	25315	6615		6725	5	4900		4250		5623	1%	3509		4924		4217		6000		5300		4068		5123	
1432	25316	6547		4790		3500		4000		4709		5789	2	6316	*	6053	6 * 11%	7482		8100		3898		6493	
1433	25317	5118		5640						5379		5088		3693		4390		9250		7750		4167		7056	
1434	25318	6343		5092		4200		4100		4934		4386		3494		3940		7214		8450		3975		6546	
1435	25319	7628	6 ...5%	5847		5300		3000		5444		3860		3362		3611		7634		4150		3838		5207	
1436	24717	5685		6149		6650	4	3100		5396		3509		3438		3473		7402		7400		3410		6071	
1437	25320	5857		6411		4900				5723	2%	4561		6117	*	5339		7143		7150		4221		6171	
1438	25321	6178		4086		4550		3000		4454		4737		5871		5304		7179		8650	6	3969		6599	
1439	25322	6652		5393		3250		4000		4824		4035		3239		3637		8188		8200		3728		6705	
1440	NDR 359 (NC)	7250	9	7106	1	3500		4000		5464		4737		5360		5048		9054		8400		4221		7225	8
1441	25323	7702	4 ...6%	6228		4550		4000		5620	1%	5439	5	4953		5196		8214		8550		4841	4	7202	
1442	25324	7805	2 ...8%	6479		3750		4250		5571		4912		5019		4966		7589		8500		4112		6734	
1443	25325	6253		6704	7			4000		5653	1%	5088		6165	*	5626	3%	8446		8400		4825	5	7224	9
1444	25326	6638		5430		3350		3800		4805		4035		5739		4887		8286		6100		4287		6224	
1445	25327	4550		5990		2950		3500		4247		5439	6	7055	6 *	6247	3 * 15%	9420	8	8500		4441		7453	5 3%
1446	24731	6793		5406		4700		5250	3	5537		4386		5909	*	5148		6875		7350		4183		6136	
1447	25328	6790		5810		3750		4250		5150		2982		4479		3731		8464		6450		3300		6072	
1448	Zonal Check	7175		4952		4400		5000	8	5382		4211		3191		3701		8455		8050		4512		7006	
1449	25329	4637		4678		3100				4138		5614	4	3248		4431		8107		8100		4221		6810	
1450	25330	6093		5772		4850		4500		5304		5263		3769		4516		7902		8600	8	4720	8	7074	
1451	25331	7682	5 ...6%	7023	2	6400	7	4800		6476	1 * 16%	4912		3438		4175		9384	9	6850		4386		6873	
1452	25332	6332		5093		4950		4750		5281		3333		4309		3821		3920		7350		3070		4780	
1453	25333	5533		5911		4550		3500		4874		4211		4924		4567		5304		8100		4726	7	6043	
1454	25334	3692								3692		5088		5303		5195		9161		7600		3728		6830	
1455	24735	7760	3 ...7%	6333		5200		5000	9	6073	3 9%	3158		7813	3 *	5485	1%	6348		8700	4	4534		6527	
1456	25335	6476		5274		5400		4750		5475		3509		3201		3355		6143		5650		2823		4872	
1457	25336	8010	1 ...10%	4578		4200		4900		5422		4211		5464		4837		7027		8100		3344		6157	
1458	25337	5148		2997		3600				3915		4386		6108	*	5247		7134		6900		4879	3	6304	
1459	25338	5868		6001		4300		4750		5230		3333		4555		3944		6089		8550		3607		6082	
1460	25339	4850		4981		5350		5200	5	5095		2456		3059		2757		7455		4800		2906		5054	
1461	25340	3577		4181						3879		5088		7860	2 *	6474	2 * 19%	10821	1 *	8200		4161		7728	3 7%
1462	25341	6332		5842		3700		5250	4	5281		4561		6496	*	5529	1%	10393	2 *	8800	1	4243		7812	1 8%
1463	25342	7105		5893		4500		4500		5499		3509		5900	*	4704		7875		8100		3569		6515	
1464	25343	4633		3428						4030		4912		6563	*	5737	5%	8920		8750	3	3646		7105	
1465	25344	5600								5600		4211		4574		4392		9839	5	6100		3838		6592	
1466	25345	6240		5873		5200		4700		5503		3509		3116		3312		7795		8200		3673		6556	
1467	25346	7023		6558	9	3850		4250		5420		4035		4593		4314		10000	3	8800	2	4271		7690	4 6%
1468	25347	6100		6029		4900		4400		5357		3333		6373	*	4853		6196		8700	5	3947		6281	
1469	Local Check	5457		5260		5400		4200		5079		5789	3	5114		5452		7545		8450		3454		6483	
1470	25348	5785		5917		5200		4600		5375		4211		4867		4539		9643	7	7750		4112		7168	
1471	25349	5559		5661		5750		3600		5143		4561		7794	4 *	6177	4 * 13%	7661		3750		4359		5256	
1472	25350	5757		4881		7550	1 ...4%	5300	2	5872	7 5%	3860		5208		4534		7473		7450		4211		6378	
1473	25351	7597	7 ...5%	6336		5600		5100	6	6158	2 10%	3333		5492		4413		3795		8150		3618		5188	
1474	25352	6043		3118		4650		4400		4553		5088		6970	7 *	6029	9 * 11%	5330		4150		4825	6	4768	
1475	25353	5677		6438		5250		3800		5291		4211		4593		4402		8223		8450		4167		6947	
1476	25354	5283		3290						4287		3333		5028		4181		8063		8650	7	3838		6850	
1477	25355	6458		6200		6550	5	5000		6052	4 8%	4737		5956	*	5347		9991	4	8600	9	4605		7732	2 7%
1478	25356	6667		5973		3450		4000		5023		3158		5199		4178		6929		7400		3618		5982	
1479	25357	6568		4627		5500		4250		5236		3509		3201		3355		7089		4500		4232		5274	
1480	25358	5718		6460		5350		4250		5445		4561		4564		4563		7563		7200		3575		6112	
1481	25359	5735		4589		3350		4000		4418		2632		3229		2930		5786		7850		3015		5550	
	Exp Mean	**6107**		**5487**		**4858**		**4331**		**5253**		**4096**		**4854**		**4475**		**7471**		**7157**		**3915**		**6181**	
	C.D. 5%	1147		1474		841		1266		623		908		529		516		950		1812		817		735	
	C.V.%	9.44		13.49		8.68		14.63		12.06		11.14		5.48		8.27		6.39		12.73		10.49		10.46	
	Sowing Date	29-Jun		23-Jun		01-Jun		23-Jun				10-Jul		23-Jun				30-Jun		26-Jun		29-Jun			
	Planting Date	23-Jul		22-Jul		27-Jul		22-Jul				13-Aug		18-Jul				24-Jul		24-Jul		25-Jul			
	Local ©	Pant Dhan 4		PR 121		HKR 47		SJR 5				Hiranmayee		Pratikshya				R.Bhagwati		Rajendra Sweta		R. Sweta			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.37 Contd.: Grain Yield (kg/ha) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	III												Zone III Mean (7)		IV		V						Zone V Mean (2)	
		JH		W.B		U.P.		U.P.		U.P.		U.P. (1)				AS		CG		CG		CG (2)			
		@RCI		CHN		@MSD		VRN		@GRK		Mean				TTB		JDP		SKL		Mean			
1401	25288	450		4250		4540		3950		5269	4	3950		4491		3080		3951		2500		3226	*	3226	
1402	25289	2400	3	6417	6 * ...13%	5115	5	7550	4	3006		7550	4 * 10%	6906	1 * 10%	4819	...14%	6859	2	6486	2 *	6673	1 * 26%	6673	1 * 26%
1403	25290	1100		4333		4604		6425		4408		6425		4316		3333		3358		4054		3706	*	3706	
1404	25291	1900		6667	4 * ...18%	4668		4900		1772		4900		6100		4819	...14%	4890		5304	*	5097	*	5097	
1405	24720	1250		5167		4923		5450		1424		5450		5032		4312	...2%	4946		4831		4889	*	4889	
1406	25292	1400		3500		4028		5650		4443		5650		5435		3261		4660		3986		4323	*	4323	
1407	24709	2050		3333		4092		7150		3813		7150	4%	5567		3804		5533		3986		4759	*	4759	
1408	25293	2250	8	3333		4604		6700		2896		6700		5063		5380	* ...27%	6403	3	4865		5634	7 * 6%	5634	7 6%
1409	25294	900		4917		4604		4050		2889		4050		4262		3315		4415		2973		3694	*	3694	
1410	25295	1500		6000	...6%	4284		6850		4519		6850		5564		5942	7 * ...40%	4471		5203	*	4837	*	4837	
1411	25296	2000		4333		4540		5950		4215		5950		4910		4004		4614		4662		4638	*	4638	
1412	25297	1800		4417		4923		7375	6	1468		7375	6 8%	5730		3460		5456		5068		5262	*	5262	
1413	25298	1450		3250		3900		6650		4009		6650		4696		3786		5223		5845	3 *	5534	* 5%	5534	5%
1414	25299	2700	1	3667		4540		6650		1446		6650		5019		3967		4503		3919		4211	*	4211	
1415	25300	1350		3667		4412		6650		4381		6650		5155		5091	* ...20%	3993		4932		4462	*	4462	
1416	25301	1550		6417	7 * ...13%	3964		6250		5057	7	6250		6653	5 * 6%	4746	...12%	4935		5135		5035	*	5035	
1417	25302	1650		3583		3900		6350		3304		6350		4507		4891	...15%	5169		3446		4307	*	4307	
1418	25303	1700		6083	8 ...7%	4731		5300		3206		5300		6040		5145	* ...21%	6166	9	5338	*	5752	5 * 9%	5752	5 9%
1419	25304	1650		4000		4476		4250		2709		4250		4124		3333		4433		3716		4074	*	4074	
1420	25305	1250		5167		4284		5700		4038		5700		6308	1%	3243		4890		5608	7 *	5249	*	5249	
1421	25306	1000		4167		4156		5150		4665		5150		4584		3714		4420		3986		4203	*	4203	
1422	25307	1300		3583		4987	7	5800		4453		5800		5160		3424		5199		3851		4525	*	4525	
1423	25308	1400		3167		4348		6000		2934		6000		4415		3605		3824		4730		4277	*	4277	
1424	MTU 1010 (NC)	650		3250		4412		5100		3320		5100		4166		3261		5326		4662		4994	*	4994	
1425	25309	2150		4000		4604		6850		2652		6850		5242		3732		3540		4797		4169	*	4169	
1426	25310	1400		5167		4604		7100		5259	5	7100	4%	5796		5888	9 * ...39%	3894		5000		4447	*	4447	
1427	25311	1650		3583		4092		7050		1386		7050	3%	5495		3551		4581		4459		4520	*	4520	
1428	25312	1500		4333		4156		6350		1918		6350		5118		4185		4754		4459		4607	*	4607	
1429	25313	1500		4250		4220		5000		4487		5000		4377		3641		4379		3243		3811	*	3811	
1430	25314	1550		3333		3900		5250		3278		5250		4815		3406		4890		4257		4573	*	4573	
1431	25315	1450		4083		4156		6050		4573		6050		4848		4330	...2%	5045		4527		4786	*	4786	
1432	25316	1700		4708		5051	6	5150		2968		5150		5921		4946	...17%	5606		3716		4661	*	4661	
1433	25317	1250		4833		4987	8	6300		3699		6300		5869		3478		5139		4122		4630	*	4630	
1434	25318	1600		3417		3900		7350	7	962		7350	7 7%	5469		5344	* ...26%	4750		3514		4132	*	4132	
1435	25319	1750		3667		4859		7335	8	4478		7335	8 7%	4835		3678		4324		3716		4020	*	4020	
1436	24717	1900		4000		4220		6050		4663		6050		5030		3460		5238		5473	9 *	5355	* 1%	5355	1%
1437	25320	1750		4500		4220		6000		4684		6000		5670		3388		5194		5541	8 *	5367	* 1%	5367	1%
1438	25321	1500		4167		3964		6000		2650		6000		5796		3895		5250		5068		5159	*	5159	
1439	25322	2350	6	3500		4156		5950		1592		5950		5263		4330	...2%	4691		4122		4406	*	4406	
1440	NDR 359 (NC)	1850		5167		3964		6850		2747		6850		6255		2736		6276	5	3784		5030	*	5030	
1441	25323	1450		5750	...1%	3964		7650	3	1310		7650	3 * 12%	6485	8 4%	5761	* ...36%	6188	8	3581		4884	*	4884	
1442	25324	1750		3583		3900		6650		1225		6650		5767		3569		4875		5405	*	5140	*	5140	
1443	25325	1250		6875	1 * ...21%	4028		6150		3489		6150		6564	6 5%	4801	...13%	5318		4730		5024	*	5024	
1444	25326	1400		4417		4859		5580		2172		5580		5492		3931		4385		4730		4557	*	4557	
1445	25327	1650		6833	2 * ...21%	4156		5250		2297		5250		6705	4 * 7%	4275	...1%	5685		4054		4870	*	4870	
1446	24731	2100		4000		3964		6750		2532		6750		5636		4330	...2%	5014		4595		4804	*	4804	
1447	25328	2400	4	4333		4220		6025		2301		6025		5148		3351		4481		3041		3761	*	3761	
1448	Zonal Check	1400		5667		4092		6150		3354		6150		5748		4239		4469		4189		4329	*	4329	
1449	25329	1750		6000	...6%	4412		4750		4903	8	4750		5720		3605		5368		5270	*	5319	*	5319	
1450	25330	1400		6583	5 * ...16%	4604		6350		2807		6350		6170		6359	2 * ...50%	5238		5743	5 *	5490	* 4%	5490	4%
1451	25331	1850		5583		4795		7400	5	2405		7400	5 8%	5993		5833	* ...38%	5623		5811	4 *	5717	6 * 8%	5717	6 8%
1452	25332	2200	9	3583		3964		6650		4237		6650		4602		3949		4396		4932		4664	*	4664	
1453	25333	1650		4000		4476		6550		5193	6	6550		5402		3931		5130		4527		4829	*	4829	
1454	25334	1100		3417		4284		3650		3465		3650		5421		5525	* ...30%	4630		3378		4004	*	4004	
1455	24735	1950		4000		3964		6200		2146		6200		5822		6322	4 * ...49%	5755		5034		5394	* 2%	5394	2%
1456	25335	2000		3750		3964		7200	9	1601		7200	9 5%	4611		3895		4891		4662		4777	*	4777	
1457	25336	2150		4750		5371	1 *	6150		3101		6150		5578		4004		6933	1	4865		5899	4 * 11%	5899	4 * 11%
1458	25337	1050		5167		4987	9	4950		5443	3	4950		5646		6359	3 * ...50%	5128		5203	*	5165	*	5165	
1459	25338	1400		3417		4476		5300		3623		5300		4979		4275	...1%	4456		4122		4289	*	4289	
1460	25339	2050		3500		4092		5550		4589		5550		4247		4094		3878		2905		3391	*	3391	
1461	25340	1200		6083	9 ...7%	5243	4 *	5200		5456	2	5200		6773	3 * 8%	4058		4970		4932		4951	*	4951	
1462	25341	2400	5	5583		3964		7750	2 *	6206	1 *	7750	2 * 13%	6832	2 * 9%	5525	* ...30%	5178		6959	1 *	6068	2 * 15%	6068	2 * 15%
1463	25342	2200		5667		5307	3 *	6700		4883	9	6700		5903		5942	8 * ...40%	4238		4257		4247	*	4247	
1464	25343	1750		6083	...7%	5371	2 *	6100				6100		6425	9 3%	3442		6374	4	4392		5383	* 2%	5383	2%
1465	25344			4167		4220				954				5455		4293	...1%	3888		1351		2619	*	2619	
1466	25345	2200		4917		4092		7100		1434		7100	4%	5473		5815	* ...37%	6239	6	4865		5552	9 * 5%	5552	9 5%
1467	25346	2100		4083		4731		7050		3104		7050	3%	6119		4167		5574		4527		5050	*	5050	
1468	25347	2150		3417		4092		6300		1576		6300		5467		3822		4520		4797		4659	*	4659	
1469	Local Check	2350	7	5667		4604		6400		1329		6400		6060		3551		5995		4595		5295	*	5295	
1470	25348	1050		5167		4348		5200		3491		5200		5850		4457	...5%	4471		3784		4128	*	4128	
1471	25349	1300		6000	...6%	4731		6350		3184		6350		5782		4475	...6%	5116		5000		5058	*	5058	
1472	25350	2000		6750	3 * ...19%	4412		5400		2997		5400		5765		6159	6 * ...45%	4683		4730		4706	*	4706	
1473	25351	1700		4833		4156		6450		956		6450		5096		5743	* ...35%	4553		3851		4202	*	4202	
1474	25352	1450		5333		4795		5800		3804		5800		5357		5707	* ...35%	6136		5743	6 *	5940	3 * 12%	5940	3 * 12%
1475	25353	1450		3667		4156		6300		1672		6300		5659		4420	...4%	5490		4459		4975	*	4975	
1476	25354	2150		4000		4284		4250		3468		4250		5309		4094		4548		4122		4335	*	4335	
1477	25355	1900		4667		4284		7045		3093		7045	3%	6514	7 4%	6304	5 * ...49%	5238		4527		4882	*	4882	
1478	25356	1400		3583		4795		6800		1823		6800		5241		3587		3951		3581		3766	*	3766	
1479	25357	1850		3500		4348		6550		2766		6550		4654		4384	...3%	5668		4257		4962	*	4962	
1480	25358	2500	2	5167		4284		8000	1 *	2070		8000	1 * 17%	5804		6377	1 * ...50%	6235	7	4932		5584	8 * 5%	5584	8 5%
1481	25359	1450		4417		4604		6950		3759		6950	1%	4840		3841		3479		3108		3293	*	3293	
	Exp Mean	**1675**		**4584**		**4413**		**6139**		**3198**		**6139**		**5458**		**4374**		**4982**		**4474**		**4728**		**4728**	
	C.D. 5%	1221		636		609		832		2123		600		382		718		1054		525				563	
	C.V.%	36.63		6.97		6.93		6.81		33.35		4.91		9.42		8.25		10.63		5.89				8.53	
	Sowing Date	27-Jun		03-Jul		30-Jun		23-Jun		23-Jun						25-Jul		26-Jun		26-Jun					
	Planting Date	10-Aug		12-Aug		01-Aug		15-Jul								20-Aug		19-Jul		24-Jul					
	Local ©	BVD-203		Koushalya		Sarjoo-52				Sarjoo-52						TTB 404		Samaleshwari		PDKV KISAN					

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.37 Contd.: Grain Yield (kg/ha) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	VI								Zone VI Mean (3)		VII									
		MH		GU		GU		GU (2)				A.P.		A.P.		A.P. (2)		TEL		TEL		TEL (2)	
		KJT		NWG		NVS		Mean				MTU		RGL		Mean		WGL		RNR		Mean	
1401	25288	3589		4095		3601		3848		3762		3794		5456		4625		5754		3036		4395	
1402	25289	5263		5238	7	5789	9	5513	5 7%	5430	5 3%	5236	4	7748		6492	4 * 23%	8466	3	8679	2	8572	1 * 27%
1403	25290	4673		3333		5138		4235		4381		3345		5050		4197		4679		6286		5482	
1404	25291	6419	3 ...13%	5143	9	4606		4874		5389	6 2%	5391	3	7212		6302	8 * 19%	6116		6440		6278	
1405	24720	6156	7 ...8%	3810		5588		4699		5185		2829		5526		4178		7108		6333		6721	
1406	25292	5598		4190		4695		4443		4828		3362		6627		4995		4070		6786		5428	
1407	24709	6404	4 ...13%	3238		5082		4160		4908		3363		6538		4950		5910		6881		6395	
1408	25293	4801		3333		4926		4129		4353		879		5823		3351		4691		7048		5869	
1409	25294	3868		3524		3311		3417		3567		1354		4792		3073		5022		4321		4672	
1410	25295	5048		2857		5796	8	4327		4567		2900		5188		4044		6173		7488		6831	1%
1411	25296	3732		4190		4851		4521		4258		2071		4821		3446		7344		8488	3	7916	3 * 17%
1412	25297	5813	...2%	2476		5100		3788		4463		3542		6875		5208		7850		7488		7669	5 14%
1413	25298	4537		3619		4036		3828		4064		2683		6756		4719		6346		5357		5851	
1414	25299	4745		2571		4516		3544		3944		2287		5387		3837		3354		6179		4766	
1415	25300	5750	...1%	3143		4970		4057		4621		3175		4137		3656		3738		7202		5470	
1416	25301	4777		4762		5867	7	5314	6 3%	5135		5036	8	8323	3 *	6680	1 * 26%	7511		6619		7065	5%
1417	25302	4226		2952		4182		3567		3787		2303		5000		3651		3970		6714		5342	
1418	25303	4904		5429	6	5729		5579	4 8%	5354	7 2%	3819		7361		5590	6%	9045	1	6274		7660	6 13%
1419	25304	5383		2857		3780		3318		4007		2338		5000		3669		5362		7655	9	6508	
1420	25305	4155		4095		6414	1 *	5254	7 2%	4888		4702		7897	7	6300	9 * 19%	6038		5893		5966	
1421	25306	4011		3619		5908	6	4763		4513		3154		4345		3750		5412		5488		5450	
1422	25307	5391		4095		5759		4927		5082		2764		4673		3718		5496		6071		5783	
1423	25308	4593		3429		5000		4214		4341		1154		5397		3275		3321		6714		5018	
1424	MTU 1010 (NC)	5287		3619		4189		3904		4365		3234		5397		4315		4106		8738	1	6422	
1425	25309	5008		3333		4092		3713		4145		2973		5546		4259		5786		7274		6530	
1426	25310	5199		4286		5521		4903		5002		5013	9	3968		4491		6031		7595		6813	1%
1427	25311	5319		4095		4561		4328		4658		2880		6994		4937		4440		6071		5256	
1428	25312	4785		4667		4777		4722		4743		1963		6577		4270		6120		6131		6126	
1429	25313	3868		3714		4576		4145		4053		1982		4851		3417		5934		4143		5038	
1430	25314	4083		3333		3780		3557		3732		3303		4950		4126		5057		5036		5046	
1431	25315	3868		3905		3765		3835		3846		2389		7292		4840		5109		6881		5995	
1432	25316	4872		3333		4762		4048		4323		6167	1 *	6151		6159	17%	5776		7440		6608	
1433	25317	4801		3810		4829		4319		4480		5808	2	7232		6520	3 * 23%	5686		4071		4879	
1434	25318	4936		2571		4501		3536		4003		2922		5218		4070		4788		6012		5400	
1435	25319	4027		2667		4271		3469		3655		3501		5546		4523		4676		6071		5374	
1436	24717	5303		4190		5015		4603		4836		4202		6359		5281		5283		6679		5981	
1437	25320	6348	6 ...12%	3714		4926		4320		4996		4616		7431		6023	14%	5892		5393		5643	
1438	25321	5391		4190		5327		4759		4970		4962		7748		6355	7 * 20%	7824		6488		7156	6%
1439	25322	4569		4000		3832		3916		4134		3191		6478		4835		3861		6500		5180	
1440	NDR 359 (NC)	5470		5810	3	4501		5156		5261	9	3540		5159		4349		6740		6762		6751	
1441	25323	5351		4095		6347	2 *	5221	8 1%	5264	8	2677		5556		4116		6037		6119		6078	
1442	25324	4617		4381		5975	5	5178		4991		3118		6696		4907		8929	2	6667		7798	4 16%
1443	25325	5287		4476		5112		4794		4958		3234		6488		4861		7923		6000		6962	3%
1444	25326	4872		4286		4598		4442		4585		4617		6548		5582	6%	5004		6310		5657	
1445	25327	5255		4857		4472		4664		4861		2293		7212		4752		5278		7464		6371	
1446	24731	5933	9 ...4%	4952		5476		5214	9 1%	5454	4 4%	4049		6448		5249		6608		6964		6786	1%
1447	25328	3453		3524		4382		3953		3786		2339		4067		3203		4505		4690		4598	
1448	Zonal Check	5303		4762		5246		5004		5103		3955		6607		5281		4654		6286		5470	
1449	25329	6483	2 ...14%	5619	5	6183	3 *	5901	1 14%	6095	1 * 16%	4586		8244	5 *	6415	5 * 21%	8277	4	4750		6514	
1450	25330	5726	...1%	6286	2	5476		5881	2 14%	5829	2 11%	4886		8353	2 *	6620	2 * 25%	8194	5	6631		7413	10%
1451	25331	5263		5143		6172	4 *	5657	3 10%	5526	3 5%	3334		6478		4906		6980		7107		7044	4%
1452	25332	4896		3619		4572		4096		4363		3765		4315		4040		5812		7869	7	6840	1%
1453	25333	6124	8 ...8%	2952		5156		4054		4744		2959		6071		4515		5527		6464		5996	
1454	25334	4625		4286		3676		3981		4196		3534		5853		4693		5540		4190		4865	
1455	24735	4617		2857		3575		3216		3683		3100		6786		4943		8122	7	6631		7377	9%
1456	25335	5431		3333		4010		3672		4258		2530		4524		3527		5755		6083		5919	
1457	25336	4936		4095		4959		4527		4664		2705		5248		3977		4132		6786		5459	
1458	25337	5614		4381		4509		4445		4835		3229		7391		5310	1%	5400		6738		6069	
1459	25338	4817		4190		4241		4216		4416		3329		4583		3956		3881		6143		5012	
1460	25339	4713		3238		3772		3505		3908		1586		5238		3412		3648		5536		4592	
1461	25340	5343		5714	4	4606		5160		5221		3610		8383	1 *	5997	14%	6927		5905		6416	
1462	25341	6364	5 ...12%	3143		5216		4179		4907		2086		5813		3950		6456		5798		6127	
1463	25342	6539	1 * ...15%	3238		4286		3762		4688		1910		6548		4229		6294		7690	8	6992	4%
1464	25343	5415		4762		4777		4769		4984		4073		7877	8	5975	13%	7032		6619		6826	1%
1465	25344	5199		2952		2329		2641		3494		3032		7778	9	5405	2%	3280				3280	
1466	25345	4841		3429		4234		3831		4168		4387		5556		4971		7389		7238		7313	8%
1467	25346	5789	...2%	3810		3586		3698		4395		3833		4980		4407		5775		5869		5822	
1468	25347	4633		3048		3438		3243		3706		5188	6	6458		5823	10%	8094	8	6881		7488	8 11%
1469	Local Check	5686		6476	1	3460		4968		5207		5227	5	5238		5233		8126	6	5357		6741	
1470	25348	4713		4381		3371		3876		4155		4457		6478		5468	4%	4279		5548		4913	
1471	25349	5774	...2%	5238	8	3408		4323		4806		4435		8313	4 *	6374	6 * 21%	8054		7143		7599	7 13%
1472	25350	4960		4476		3906		4191		4448		2665		5754		4209		5146		7012		6079	
1473	25351	4745		2857		2240		2548		3281		2436		6210		4323		6698		8167	6	7432	9 10%
1474	25352	5175		4190		2902		3546		4089		2100		5218		3659		7098		6583		6841	1%
1475	25353	5486		3238		3199		3219		3975		3362		5129		4246		6470		5917		6193	
1476	25354	5431		3524		3661		3592		4205		3549		5546		4547		3715		6583		5149	
1477	25355	4729		4476		3757		4117		4321		4092		8145	6 *	6119	16%	5881		6405		6143	
1478	25356	5072		3238		2493		2865		3601		3502		5129		4315		4258		4738		4498	
1479	25357	5263		3524		3013		3269		3933		5130	7	4643		4886		4953		8202	5	6578	
1480	25358	5104		4952		4330		4641		4795		2864		4673		3768		8081	9	8286	4	8183	2 * 21%
1481	25359	4593		2381		2277		2329		3084		1452		5298		3375		3259		5512		4386	
	Exp Mean	**5076**		**3946**		**4497**		**4221**		**4506**		**3375**		**6058**		**4716**		**5844**		**6420**		**6130**	
	C.D. 5%	853		1259		863		752		626		868		1472		944		1762		1574		1117	
	C.V.%	8.45		16.04		9.64		12.75		12.21		12.92		12.21		14.34		15.15		12.32		13.05	
	Sowing Date	27-Jun		23-Jun		01-Jul						30-Jun		07-Jul				01-Jul		19-Jun			
	Planting Date	20-Jul		03-Aug		08-Aug						03-Aug		09-Aug				06-Aug		22-Jul			
	Local ©	Karjat 5		GAR-13		GNR-4						MTU 1001		RGL 2538				WGL-32100		Krishna			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.37 Contd.: Grain Yield (kg/ha) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	VII																						Zone VII Mean (9)		Overall Mean (26)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		TN		TN		TN (2)			KA		KA		KA		KA (2)			PUD													
		CBT		ADT		Mean			MND		KTG		@MDG		Mean			KRK													
1401	25288	2816		5667	3	4241			4513		6410		3750		5461			3056						4500		4257		119	104	286
1402	25289	7667	1	4125		5896	5		6453	7	5420		5270		5937			3889						6409	1 4%	6344	1 * 11%	104	111	283
1403	25290	4931		3292		4111			3403		6785		3688		5094			3194						4552		4490		90	98	283
1404	25291	6200		3250		4725			5056		6365		4875		5711			2639						5408		5517		108	105	280
1405	24720	3645		2875		3260			5494		6470		7578	7	5982			3889						4908		5066		97	98	273
1406	25292	5963		3792		4877			5181		5520		4891		5351			5833	1					5237		5074		111	102	281
1407	24709	4835		4375		4605			5956		6900		7984	3	6428			4167						5436		5275		97	103	287
1408	25293	4627		3292		3959			6422	9	5940		6625		6181			3333						4673		4918		96	98	287
1409	25294	4720		3083		3902			4350		6110		6375		5230			4236						4221		4090		105	88	289
1410	25295	5915		4208		5062			5222		5815		7609	6	5518			3569						5164		5323		93	99	257
1411	25296	6837		3292		5064			5344		6775		5813		6059			2944						5324		5046		89	108	276
1412	25297	6827		3625		5226			6316		5855		5469		6085			4444						5869	6	5516		100	101	286
1413	25298	3982		3208		3595			5838		5700		4531		5769			3833						4856		4766		99	93	277
1414	25299	3635		3292		3463			4766		6565		4125		5665			4417						4431		4567		94	90	261
1415	25300	4845		3083		3964			5006		6250		6078		5628			5694	2					4792		4906		99	97	285
1416	25301	7432	4	5875	2	6653	2 7%		6425	8	6185		4250		6305			3500						6323	3 2%	6023	2 * 6%	107	102	288
1417	25302	4099		4083		4091			3831		6695		2438		5263			3486						4465		4487		93	92	280
1418	25303	5883		4625		5254			4134		6020		6641		5077			4403						5729		5682	8	106	110	284
1419	25304	5384		3125		4254			4031		6700		4953		5366			2917						4724		4392		91	99	303
1420	25305	3945		4458		4202			6269		6250		5438		6259			2556						5334		5464		112	110	269
1421	25306	5689		2958		4323			3906		6185		5766		5046			2500						4404		4490		101	90	287
1422	25307	5604		3167		4385			4794		6375		5078		5584			3889						4759		4908		104	97	288
1423	25308	4275		3458		3866			4672		6390		4125		5531			2083						4163		4406		89	93	295
1424	MTU 1010 (NC)	5277		3542		4409			5980		6020		3156		6000			4028						5147		4777		91	96	287
1425	25309	6360		3292		4826			6331		5955		7188		6143			4167						5298		5073		96	100	294
1426	25310	5797		3208		4503			5106		6400		3531		5753			2639						5084		5315		93	94	268
1427	25311	6356		4458		5407			4953		6945		4656		5949			2083						5020		5095		102	97	286
1428	25312	6388		3208		4798			5084		6035		7750	5	5560			4083						5066		5079		100	108	288
1429	25313	4743		2875		3809			4466		5560		5609		5013			5000	8					4395		4356		96	101	294
1430	25314	4760		3625		4193			5134		5260		5984		5197			3958						4565		4537		93	102	275
1431	25315	5296		2542		3919			5628		6020		6453		5824			3194						4928		4854		95	98	295
1432	25316	5342		5542	4	5442			5981		6220		6563		6101			2778						5711		5343		106	105	310
1433	25317	7654	2	6208	1 *	6931	1 * 11%		3813		5700		5516		4756			3194						5485		5308		111	90	280
1434	25318	5338		2875		4107			5375		6760		5656		6068			3472						4751		4861		101	112	261
1435	25319	4269		3208		3739			5716		6485		4047		6100			3889						4818		4679		95	99	270
1436	24717	6138		3042		4590			5869		6925		8109	2	6397			3556						5339		5136		96	95	282
1437	25320	5979		3292		4635			4503		5940		7953	4	5222			3889						5215		5316		107	94	298
1438	25321	4948		3958		4453			5103		5110		5672		5107			3875						5557		5289		100	108	281
1439	25322	6336		3083		4710			4400		6815		7328		5608			3819						4943		4852		99	94	289
1440	NDR 359 (NC)	6883		4625		5754	7		6531	3	5850		6891		6191			3681						5530		5538		101	98	273
1441	25323	6319		4625		5472			5416		6725		7281		6070			3194						5185		5610		100	96	284
1442	25324	4752		3125		3939			3328		7710		6125		5519			2778						5234		5330		98	106	307
1443	25325	6504		4875	8	5690	8		5550		4855		5953		5203			5208	6					5626		5731	6 1%	103	98	286
1444	25326	5166		4292		4729			4750		4185		3750		4468			3917						4976		4971		97	101	286
1445	25327	4526		4125		4325			4850		5695		9219	1	5273			5528	3					5219		5365		106	102	294
1446	24731	5818		5458	5	5638			4444		8350	1 *	3578		6397			3681						5758	8	5528		96	101	313
1447	25328	4775		3875		4325			4797		7760		6359		6278			4431						4582		4619		102	85	311
1448	Zonal Check	6221		3625		4923			4097		6560		6578		5328			3333						5038		5204		100	99	299
1449	25329	5708		3875		4791			6375		7485		6109		6930	3 1%		2569						5763	7	5474		112	106	297
1450	25330	7474	3	4208		5841	6		6456	6	7925	6	5844		7191	1 * 5%		3194						6369	2 3%	6021	3 * 6%	100	103	298
1451	25331	6895	8	3208		5052			6497	5	5400		6500		5948			4083						5554		5834	4 2%	95	106	294
1452	25332	4804		3417		4110			4313		7850		2844		6081			3514						5073		4822		91	100	282
1453	25333	6446		3375		4911			5369		6390		6500		5879			3403						5112		5044		99	104	288
1454	25334	5259		3292		4275			4453		6410		5172		5432			2486						4557		4729		108	113	284
1455	24735	5470		2875		4172			4172		7020		5250		5596			3833						5334		5431		114	114	283
1456	25335	5343		3708		4525			4997		7855	8	3859		6426			5528	4					5147		4874		92	101	293
1457	25336	7194	7	4125		5660	9		5413		7565		5094		6489	9		3833						5222		5289		96	116	277
1458	25337	6533		3625		5079			4097		8255	2 *	5469		6176			2597						5318		5213		106	112	296
1459	25338	5836		3042		4439			4469		5420		6203		4944			4389						4566		4729		97	105	294
1460	25339	5023		2958		3991			3341		7710		3031		5525			4861	9					4434		4331		90	99	293
1461	25340	5701		4875	9	5288			5169		6785		5484		5977			3194						5617		5639		113	107	290
1462	25341	6107		3208		4658			6531	4	6365		7516	9	6448			2917						5031		5639		93	108	278
1463	25342	6282		3375		4829			4769		7650		4313		6209			4417						5437		5413		94	106	295
1464	25343	6358		4458		5408			5275		7910	7	6594		6593	6		2167						5752	9	5582		112	108	294
1465	25344	4202		4375		4289			2328		6470		2000		4399			3597						4383		4448		120	100	277
1466	25345	5419		3292		4355			5144		8020	5	4234		6582	7		4694						5682		5418		93	99	303
1467	25346	4920		3708		4314			5178		7700		5438		6439			4222						5132		5314		98	91	278
1468	25347	6183		3167		4675			4403		5515		3094		4959			5125	7					5668		5191		95	104	304
1469	Local Check	7291	5	5167	7	6229	3		6069		7650		7000		6859	4		5458	5					6176	5	5695	7	105	105	293
1470	25348	5874		4375		5124			4478		5515		4609		4997			2639						4849		5049		105	99	266
1471	25349	6890	9	5208	6	6049	4		5813		8255	3 *	6016		7034	2 * 3%		2778						6321	4 2%	5652	9	106	103	292
1472	25350	4055		3542		3798			6619	1	6900		3438		6759	5		1875						4841		5243		95	102	287
1473	25351	6078		3458		4768			2775		8035	4	3203		5405			3208						5229		5052		95	116	280
1474	25352	7248	6	3167		5207			5241		6775		7547	8	6008			3194						5180		5084		106	123	282
1475	25353	4480		3292		3886			5422		5700		5828		5561			2806						4731		4986		100	104	282
1476	25354	5327		3375		4351			5813		6695		3172		6254			2361						4774		4753		102	119	267
1477	25355	6195		4042		5118			6619	2	6185		6438		6402			3257						5647		5756	5 1%	102	103	313
1478	25356	2770		3708		3239			2775		6565		3375		4670			3264						4079		4439		98	90	290
1479	25357	6228		3667		4947			5241		7855	9	5594		6548	8		3986						5545		4982		96	110	273
1480	25358	6087		4625		5356			5422		6020		6766		5721			3389						5494		5530		94	91	287
1481	25359	2166		2875		2521			4763		6700		7156		5731			3278						3923		4097		88	94	267
	Exp Mean	**5550**		**3771**		**4661**			**5066**		**6544**		**5493**		**5805**			**3629**						**5138**		**5106**		**100**	**102**	**286**
	C.D. 5%	1576		830		596			729		428		2960		111			1013						446		229		4	15	11
	C.V.%	14.27		11.07		9.16			7.23		3.28		27.08		1.36			14.02						13.26		11.64		11.99	0.00	10.53
	Sowing Date	27-Jun		07-Aug					24-Jul		03-Jul		02-Jul					14-Sep												
	Planting Date	29-Jul		03-Sep					21-Aug		30-Jul		27-Jul					10-Oct												
	Local ©	CO(R)50		ADT (R) 46					BR-2655		JGL-1798		IET 21366					ADT 46												

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 3.38: Days to 50% Flowering of entries in IVT-IM Kharif 2015

Entry No.	IET No.	II					III													Zone III Mean (9)
		UT	PUN	HAR	J&K	Zone II N (4)	OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P.	U.P. (2)	
		PNT	LDN	KUL	CHT	Mean	BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	@MSD	VRN	GRK	Mean	
1401	25288	130				130	119	126	122	124	108	131	121	131	135	102	112	101	107	121
1402	25289	113	108	117		113	104	105	104	107	101	106	105	115	118	102	101	104	102	107
1403	25290	88	89	90	94	90	86	87	87	91	81	87	86	102	108	105	77	87	82	90
1404	25291	119	118	91		109	110	113	111	113	93	109	105	125	114	102	110	112	111	111
1405	24720	105	103	99	101	102	97	98	98	95	84	95	91	114	103	100	83	94	88	96
1406	25292	107	114	117		113	113	117	115	118	101	109	109	125	103	101	113	112	112	112
1407	24709	103	101	99	102	101	97	100	98	99	88	96	94	113	104	106	85	88	87	96
1408	25293	92	96	99	97	96	94	95	94	93	83	95	90	114	101	104	84	91	88	94
1409	25294	125	107	117		116	94	110	102	114	101	111	109	125	100	104	101	109	105	107
1410	25295	92	98	103	96	97	92	92	92	98	84	88	90	113	114	106	88	88	88	95
1411	25296	88	89	90	92	90	89	92	91	89	82	86	86	103	104	102	76	87	82	90
1412	25297	102	98	102	101	101	100	99	100	101	86	103	97	120	107	100	96	95	95	101
1413	25298	103	106	102	106	104	94	97	95	103	92	96	97	113	101	101	95	99	97	99
1414	25299	90	97	100	93	95	94	93	93	94	84	94	91	108	101	104	79	86	83	92
1415	25300	103	104	100	107	103	97	93	95	99	92	104	98	113	100	104	93	106	99	99
1416	25301	108	112	117		112	107	102	105	111	106	113	110	124	118	107	106	102	104	110
1417	25302	87	97	98	92	93	93	87	90	94	83	97	91	106	98	102	80	90	85	92
1418	25303	110	114	118		114	108	96	102	113	90	116	106	116	119	103	109	118	114	109
1419	25304	86	89	100	92	92	92	85	89	95	83	88	88	108	100	104	76	88	82	90
1420	25305	104	114			109	112	118	115	118	92	117	109	129	133	105	109	112	110	115
1421	25306	105	106	109	111	108	98	96	97	102	102	104	103	114	109	101	96	99	97	102
1422	25307	106	107	109	114	109	99	100	99	104	101	104	103	121	108	101	96	104	100	104
1423	25308	85	86	85	93	87	88	81	84	85	84	85	85	106	97	104	77	82	79	87
1424	MTU 1010 (NC)	87	91	92	93	91	89	89	89	87	83	116	95	121	98	106	77	84	81	94
1425	25309	103	106	102	114	106	97	90	93	98	83	97	92	115	102	100	82	101	91	96
1426	25310	90	96	99	95	95	93	87	90	96	87	88	90	111	98	104	81	86	83	92
1427	25311	105	107	104	107	106	100	103	101	102	91	105	99	125	101	105	93	103	98	102
1428	25312	104	105	97	107	103	97	96	96	101	87	104	97	125	103	104	85	102	93	100
1429	25313	99	104	104	102	102	93	92	92	94	88	97	93	114	105	103	85	89	87	95
1430	25314	86	92	100	100	94	92	92	92	96	81	100	92	108	112	105	78	97	88	95
1431	25315	92	95	100	108	99	93	98	95	94	83	95	91	114	101	104	82	87	85	94
1432	25316	106	115	109	113	111	107	106	106	108	88	112	102	114	118	99	101	111	106	107
1433	25317	120	114			117	112	112	112	112	88	116	105	122	140	100	106	115	111	114
1434	25318	104	105	100	108	104	100	101	100	101	88	99	96	124	114	101	80	102	91	101
1435	25319	92	99	98	100	97	95	91	93	96	84	95	92	110	101	101	95	85	90	95
1436	24717	91	102	96	107	99	93	97	95	97	83	87	89	112	98	103	95	87	91	94
1437	25320	106	125	121		117	101	102	101	114	88	114	105	123	144	102	109	116	113	112
1438	25321	104	104	104	107	105	96	102	99	99	88	106	98	114	115	101	99	104	101	102
1439	25322	103	105	104	108	105	95	94	94	102	92	97	97	112	99	104	90	93	92	97
1440	NDR 359 (NC)	104	104	104	108	105	99	101	100	103	92	105	100	114	101	103	93	102	98	101
1441	25323	104	106	104	108	105	100	98	99	103	91	99	98	112	106	104	89	89	89	98
1442	25324	102	103	103	108	104	96	97	96	102	92	96	97	114	102	100	89	93	91	98
1443	25325	105	106		109	106	102	98	100	104	92	105	100	121	115	101	100	108	104	105
1444	25326	103	101	104	108	104	98	95	96	99	88	99	95	109	102	102	77	102	90	96
1445	25327	125	117	121	116	120	107	100	103	111	90	108	103	124	117	107	91	102	96	105
1446	24731	92	95	100	95	95	98	95	96	97	86	98	93	112	104	103	81	95	88	96
1447	25328	102	103	105	107	104	98	97	98	101	92	100	98	124	106	97	89	107	98	101
1448	Zonal Check	103	107	100	107	104	97	93	95	101	92	103	99	112	105	102	95	117	106	102
1449	25329	108	116	121		115	114	114	114	115	102	115	111	126	141	103	114	116	115	117
1450	25330	106	102	105	101	103	95	97	96	105	91	104	100	113	109	104	106	100	103	102
1451	25331	92	98	97	100	96	93	97	95	94	88	95	92	111	98	101	97	86	92	95
1452	25332	95	90	90	96	93	88	91	90	91	83	87	87	104	98	98	78	89	83	90
1453	25333	101	96	99	99	99	98	97	98	96	89	95	93	114	106	99	89	104	96	98
1454	25334	106				106	104	110	107	118	93	117	109	129	115	101	99	112	105	111
1455	24735	106	106	111	113	109	97	102	99	103	92	106	100	104	111	106	488	98	293	144
1456	25335	89	95	93	95	93	89	87	88	93	85	87	88	107	105	103	80	88	84	91
1457	25336	89	97	94	98	95	94	100	97	92	85	89	88	111	112	106	80	98	89	95
1458	25337	106	110	114		110	105	110	107	110	92	111	104	125	117	101	77	100	88	105
1459	25338	92	99	102	100	98	91	99	95	103	89	98	97	114	103	102	79	90	84	96
1460	25339	90	89	93	94	91	87	89	88	90	85	86	87	104	100	100	79	86	82	89
1461	25340	120	117			118	112	109	110	116	93	116	108	124	144	97	110	89	99	112
1462	25341	92	91	97	98	95	93	87	90	94	84	89	89	111	102	96	89	95	92	94
1463	25342	96	95	96	98	96	90	90	90	95	85	96	92	110	98	99	79	106	93	94
1464	25343	108	115			111	114	111	112	114	86	116	105	129	141	100	109		109	115
1465	25344	89				89	134	124	129	137	81	136	118		140	98		128	128	125
1466	25345	89	92	92	94	92	91	91	91	96	89	95	93	109	102	97	85	88	87	94
1467	25346	92	103	102	102	99	96	99	98	97	92	96	95	114	105	100	95	91	93	98
1468	25347	88	102	100	101	98	97	89	93	97	93	96	95	110	105	98	82	85	83	95
1469	Local Check	102	111	105	102	105	104	101	103	91	106	112	103	111	117	100	95	100	98	104
1470	25348	105	107	105	115	108	101	98	100	107	93	105	102	121	119	97	98	100	99	105
1471	25349	106	117	104	115	110	101	98	99	112	92	106	103	120	118	99	108	115	111	108
1472	25350	104	101	100	107	103	94	100	97	97	92	96	95	111	99	100	81	92	86	96
1473	25351	92	121	100	94	102	91	96	93	94	89	95	93	112	99	97	79	84	82	93
1474	25352	120	114	117	110	115	107	102	104	110	92	106	103	102	117	94	101	115	108	106
1475	25353	102	105	100	100	102	98	98	98	103	91	98	97	114	101	100	93	127	110	102
1476	25354	105	105			105	98	99	99	110	94	106	103	116	116	97	106	113	109	106
1477	25355	103	107	101	108	105	98	101	99	102	97	104	101	115	108	96	92	103	97	102
1478	25356	104	101	98	107	102	93	93	93	103	97	103	101	111	105	97	85	113	99	100
1479	25357	103	100	99	100	101	92	94	93	95	92	97	95	113	98	98	97	89	93	96
1480	25358	90	101	92	101	96	92	97	95	97	77	88	87	114	100	100	81	88	84	92
1481	25359	85	86	85	92	87	84	89	87	85	82	86	84	101	97	100	83	85	84	88
	Exp Mean	**100**	**103**	**102**	**102**	**102**	**98**	**98**	**98**	**102**	**90**	**101**	**97**	**115**	**109**	**101**	**96**	**99**	**97**	**101**
	C.D. 5%	5	4	0	2	2	3	1	1	1	1	2	1	2	2	3	126	10	63	14
	C.V.%	2.53	1.75	0.23	0.91	1.66	1.30	0.75	1.07	0.39	0.77	0.94	0.73	0.87	1.02	1.67	65.74	5.27	46.07	20.93

Table No. 3.38: Days to 50% flowering of entries in IVT-IM Kharif 2015

Entry No.	IET No.	IV	V			Zone V Mean (2)	VI				Zone VI Mean (3)	VII															Zone VII Mean (10)	Overall Mean (29)
		AS	CG	CG	CG (2)		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)	PUD		
		TTB	JDP	SKL	Mean		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDG	Mean	KRK		
1401	25288	112	128	115	121	121	120	131	113	122	121	121	119	120	146	130	138	122	105	113	112	102	120	111	94	117	119
1402	25289	98	106	96	101	101	101	106	104	105	104	103	99	101	107	114	110	104	94	99	101	103	96	100	94	101	104
1403	25290	93	87	78	83	83	84	91	90	91	88	86	82	84	93	120	107	93	83	88	83	105	96	95	83	92	90
1404	25291	110	113	106	110	110	95	119	115	117	110	114	107	110	117	98	108	112	107	109	106	90	110	102	96	106	108
1405	24720	97	98	86	92	92	107	103	95	99	102	97	92	94	99	107	103	98	97	97	96	89	102	96	90	96	97
1406	25292	110	110	108	109	109	102	121	114	118	112	116	106	111	117	118	117	112	111	111	108	104	116	109	99	111	111
1407	24709	94	99	86	92	92	91	103	108	106	101	101	90	95	103	106	104	102	95	98	94	90	102	95	92	97	97
1408	25293	94	97	86	91	91	91	103	110	107	101	94	90	92	98	106	102	103	97	100	97	91	102	97	91	97	96
1409	25294	94	111	107	109	109	104	109	113	111	108	99	99	99	105	113	109	100	103	101	98	102	114	105	72	100	105
1410	25295	96	95	86	90	90	95	89	94	92	93	88	88	88	98	96	97	94	85	89	84	105	96	95	82	91	93
1411	25296	107	88	77	82	82	85	91	90	90	89	89	85	87	93	97	95	90	77	83	81	100	94	91	74	88	89
1412	25297	94	103	91	97	97	92	101	101	101	98	99	97	98	105	112	108	106	104	105	103	100	106	103	90	102	100
1413	25298	98	100	95	97	97	97	99	94	97	97	92	95	94	100	103	101	96	104	100	99	101	102	101	81	97	99
1414	25299	92	94	82	88	88	92	98	90	94	93	94	94	94	98	101	99	94	102	98	99	102	94	98	81	96	94
1415	25300	93	94	90	92	92	95	106	100	103	100	101	97	99	101	101	101	102	106	104	99	89	105	98	79	98	99
1416	25301	94	93	102	97	97	104	109	104	106	106	117	103	110	114	116	115	105	98	101	100	104	114	106	93	106	107
1417	25302	93	96	95	95	95	95	94	92	93	94	107	89	98	94	102	98	94	85	89	82	100	96	93	81	93	93
1418	25303	104	109	102	106	106	98	113	104	108	105	111	98	104	107	113	110	100	103	101	92	96	102	97	83	100	106
1419	25304	94	108	79	94	94	91	92	90	91	91	89	89	89	95	100	97	95	78	86	81	102	94	92	81	90	91
1420	25305	112	102	110	106	106	110	119	105	112	111	117	111	114	118	128	123	95	114	105	105	106	110	107	97	110	112
1421	25306	94	99	99	99	99	91	113	103	108	102	102	97	100	105	106	106	102	104	103	99	88	102	96	82	99	101
1422	25307	97	106	104	105	105	99	117	103	110	106	103	101	102	105	108	106	106	98	102	101	106	106	104	82	101	104
1423	25308	92	92	78	85	85	88	89	90	89	89	90	88	89	117	93	105	91	85	88	87	85	94	89	81	91	89
1424	MTU 1010 (NC)	93	105	78	91	91	91	98	90	94	93	91	85	88	91	100	95	94	80	87	80	83	93	85	86	88	91
1425	25309	94	89	89	89	89	92	107	89	98	96	90	93	91	95	95	95	97	98	97	95	100	102	99	84	95	96
1426	25310	96	116	81	98	98	92	99	94	97	95	90	89	89	97	102	99	95	81	88	87	102	96	95	86	92	93
1427	25311	98	103	97	100	100	95	106	99	102	100	94	98	96	102	111	106	104	105	104	103	106	112	107	87	102	102
1428	25312	94	104	91	98	98	95	112	104	108	104	97	94	95	104	111	107	104	85	94	102	103	106	104	89	99	100
1429	25313	97	88	90	89	89	94	105	96	101	98	93	92	92	100	103	102	100	92	96	97	100	96	98	90	96	96
1430	25314	94	89	81	85	85	89	98	90	94	92	88	89	88	99	103	101	94	82	88	84	102	96	94	82	92	93
1431	25315	95	96	82	89	89	91	99	96	98	95	91	89	90	102	110	106	101	85	93	97	104	105	102	81	96	95
1432	25316	104	93	98	95	95	96	119	103	111	106	117	102	110	107	115	111	111	104	108	102	103	105	103	94	106	106
1433	25317	110	109	104	106	106	103	117	116	117	112	119	111	115	117	122	119	112	107	109	96	98	105	100	93	108	111
1434	25318	97	102	91	97	97	94	101	96	99	97	101	94	97	106	111	108	102	102	102	101	106	110	106	95	103	101
1435	25319	93	97	83	90	90	92	97	96	96	95	92	90	91	100	108	104	99	104	101	93	108	97	99	86	97	95
1436	24717	98	100	86	93	93	92	100	99	99	97	87	88	87	97	107	102	101	106	103	96	103	108	102	84	98	96
1437	25320	96	104	101	102	102	103	112	99	106	105	104	97	101	113	119	116	105	101	103	99	99	105	101	87	103	107
1438	25321	99	102	91	96	96	94	98	94	96	95	97	93	95	106	106	106	101	105	103	101	90	106	99	95	100	100
1439	25322	94	101	96	98	98	92	109	99	104	100	97	94	95	100	106	103	100	105	102	100	98	105	101	81	98	99
1440	NDR 359 (NC)	104	95	89	92	92	95	105	98	102	99	94	99	97	104	113	108	105	100	102	99	103	104	102	89	101	101
1441	25323	96	100	91	95	95	91	105	97	101	98	105	97	101	106	108	107	106	108	107	96	107	102	102	89	102	100
1442	25324	101	98	88	93	93	93	103	101	102	99	95	92	93	105	103	104	103	96	99	101	88	105	98	85	97	98
1443	25325	107	104	95	99	99	94	99	104	102	99	102	100	101	104	104	104	101	99	100	108	103	116	109	92	103	103
1444	25326	95	96	88	92	92	92	98	94	96	95	100	94	97	95	99	97	94	101	97	93	99	98	97	92	96	97
1445	25327	108	104	101	102	102	99	112	104	108	105	104	104	104	104	115	109	103	95	99	99	104	106	103	95	103	106
1446	24731	97	94	85	89	89	92	101	94	97	96	91	94	92	101	104	102	98	101	99	90	100	102	97	90	97	96
1447	25328	97	113	95	104	104	95	105	101	103	100	95	97	96	103	113	108	108	88	98	109	107	106	107	90	101	102
1448	Zonal Check	94	91	79	85	85	94	109	112	111	105	98	97	98	102	108	105	102	88	95	104	107	106	106	81	99	100
1449	25329	95	119	104	112	112	104	124	117	120	115	116	104	110	118	128	123	115	86	100	102	114	109	108	98	109	112
1450	25330	100	101	99	100	100	97	100	94	97	97	101	93	97	107	103	105	95	101	98	96	89	102	95	86	97	100
1451	25331	96	96	88	92	92	92	99	94	96	95	93	90	92	99	102	101	97	85	91	97	101	102	100	81	95	95
1452	25332	91	89	81	85	85	89	94	93	94	92	92	85	89	93	100	97	96	81	88	87	103	96	95	87	92	91
1453	25333	92	100	90	95	95	95	101	96	99	97	100	97	99	106	111	108	108	85	96	100	102	106	103	93	101	99
1454	25334	98	120	106	113	113	108	125	114	120	116	110	100	105	117	125	121	114	94	104	93	90	110	98	82	103	108
1455	24735	96	99	97	98	98	101	106	103	105	103	101	95	98	106	114	110	101	95	98	86	100	98	94	81	97	114
1456	25335	95	92	82	87	87	92	97	90	94	93	93	88	90	94	99	97	95	81	88	91	101	96	96	84	92	92
1457	25336	95	97	85	91	91	91	98	96	97	95	94	91	92	104	103	103	103	106	104	101	104	106	104	92	100	96
1458	25337	96	109	100	104	104	100	113	116	115	110	103	104	104	113	116	114	110	104	107	107	107	116	110	93	107	106
1459	25338	100	102	88	95	95	95	99	90	94	95	99	89	94	103	105	104	101	86	93	101	104	106	104	91	98	97
1460	25339	92	88	79	84	84	89	98	90	94	92	93	85	89	96	99	98	95	80	87	88	100	96	95	74	91	90
1461	25340	112	114	107	111	111	106	118	114	116	113	116	114	115	118	121	119	114	114	114	107	112	110	110	97	112	113
1462	25341	96	94	83	88	88	91	92	92	92	92	92	89	90	95	99	97	94	86	90	103	98	95	99	85	93	93
1463	25342	93	91	84	88	88	88	99	94	97	94	92	89	91	99	103	101	94	104	99	87	92	95	91	85	94	94
1464	25343	109	116	107	111	111	104	119	116	118	113	118	111	115	119	122	120	113	94	103	107	101	114	107	101	110	112
1465	25344	111	131	128	130	130	125	122	116	119	121	127	142	135	129		129	136	103	119	130	88	118	112	101	119	120
1466	25345	92	92	80	86	86	89	100	94	97	94	92	89	90	95	101	98	98	86	92	90	98	95	94	87	93	93
1467	25346	97	89	89	89	89	89	103	97	100	96	99	92	95	99	109	104	105	104	104	103	103	105	104	92	101	98
1468	25347	93	98	86	92	92	93	105	95	100	98	93	93	93	102	105	103	97	98	97	89	89	95	91	85	94	95
1469	Local Check	100	94	106	100	100	96	103	96	99	98	103	106	104	105	113	109	112	99	105	108	124	119	117	98	109	105
1470	25348	96	104	102	103	103	101	115	104	109	107	105	100	102	108	112	110	111	99	105	102	111	105	106	96	105	105
1471	25349	109	96	100	98	98	102	113	103	108	106	106	104	105	109	114	111	104	98	101	102	104	105	104	93	104	106
1472	25350	94	97	86	92	92	91	100	98	99	96	100	92	96	55	104	79	102	97	99	89	104	98	97	87	93	95
1473	25351	93	94	84	89	89	89	99	95	97	94	95	90	92	102	104	103	97	87	92	89	102	96	96	84	94	95
1474	25352	98	104	101	102	102	100	112	103	108	105	108	106	107	112	111	112	112	102	107	99	102	102	101	94	105	106
1475	25353	96	101	94	98	98	89	99	96	98	95	97	97	97	105	103	104	93	106	100	102	96	105	101	87	99	100
1476	25354	102	90	102	96	96	95	98	102	100	98	100	92	96	106	98	102	102	100	101	97	97	106	100	93	99	102
1477	25355	97	101	92	97	97	94	105	94	99	97	103	99	101	107	109	108	108	104	106	101	103	102	102	93	103	102
1478	25356	96	94	87	90	90	95	106	98	102	100	100	93	97	105	98	101	96	102	99	89	93	96	93	83	95	98
1479	25357	108	88	84	86	86	92	103	98	100	98	92	90	91	96	104	100	100	83	91	102	101	102	102	90	96	96
1480	25358	92	93	83	88	88	94	98	94	96	95	92	89	90	99	103	101	104	86	95	101	100	98	100	90	96	94
1481	25359	93	89	83	86	86	83	89	91	90	88	87	79	83	94	92	93	90	80	85	91	86	94	90	82	87	88
	Exp Mean	**98**	**100**	**92**	**96**	**96**	**95**	**105**	**99**	**102**	**100**	**99**	**96**	**98**	**104**	**107**	**105**	**102**	**96**	**99**	**97**	**100**	**103**	**100**	**88**	**99**	**100**
	C.D. 5%	1	1	1		1	2	0	2	1	1	3	4	2	14	2	7	2	7	3	5	6	0	3	2	2	4
	C.V.%	0.50	0.46	0.57		0.50	0.92	0.00	1.12	0.77	0.78	1.73	1.87	1.77	6.89	0.75	4.74	0.77	3.46	2.47	2.74	3.24	0.00	2.47	1.28	3.03	11.99

Table No. 3.39: Plant Height (cm) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III													Zone III Mean (9)	IV	V			Zone V Mean (2)
		UT	PUN	HAR	J&K		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P.	U.P. (2)		AS	CG	CG	CG (2)	
		PNT	LDN	KUL	CHT		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	@MSD	VRN	GRK	Mean		TTB	JDP	SKL	Mean	
1401	25288	90				90	97	88	93	104	104	100	102	65	105	108	121	104	112	99	99	90	111	100	100
1402	25289	115	113	110		113	110	104	107	108	110	123	114	78	137	104	121	114	118	112	91	105	137	121	121
1403	25290	107	105	107	93	103	93	83	88	96	105	106	102	70	115	101	107	110	109	98	85	84	110	97	97
1404	25291	88	100	96		95	100	105	103	103	107	108	106	71	120	107	108	105	107	103	100	92	120	106	106
1405	24720	89	89	93	77	87	79	90	85	106	105	105	105	67	113	100	102	108	105	97	88	79	118	98	98
1406	25292	96	99	94		96	93	92	92	97	107	109	104	58	110	99	105	105	105	97	92	84	117	100	100
1407	24709	98	96	102	82	94	90	101	96	103	109	105	106	69	115	97	113	108	110	101	100	95	121	108	108
1408	25293	94	93	97	87	93	93	99	96	122	99	102	108	65	100	104	103	101	102	98	98	85	112	99	99
1409	25294	80	83	80		81	74	72	73	120	97	97	105	52	102	105	109	85	97	90	85	76	96	86	86
1410	25295	93	100	94	99	96	85	101	93	114	105	100	106	73	110	107	104	105	105	100	92	85	110	97	97
1411	25296	104	120	111	91	106	99	107	103	111	120	107	113	83	114	101	110	110	110	107	98	98	129	113	113
1412	25297	108	96	96	99	100	77	91	84	105	108	108	107	70	113	103	109	94	101	97	97	95	114	104	104
1413	25298	99	85	116	72	93	86	102	94	92	103	102	99	66	100	102	95	104	99	94	80	74	111	93	93
1414	25299	89	93	82	84	87	82	95	89	109	102	87	99	69	105	106	94	95	94	93	85	72	95	83	83
1415	25300	90	92	83	78	86	90	108	99	101	106	100	102	63	100	102	95	99	97	96	100	76	105	90	90
1416	25301	110	100	99		103	92	103	97	100	108	112	107	64	105	100	106	113	109	100	88	92	120	106	106
1417	25302	91	85	107	77	90	75	102	88	90	100	102	97	59	100	98	93	99	96	91	94	87	108	97	97
1418	25303	107	122	102		110	108	113	110	117	110	126	118	78	128	97	119	122	121	113	105	85	124	105	105
1419	25304	106	108	105	83	100	85	100	93	98	107	104	103	77	100	101	101	108	104	98	86	78	111	95	95
1420	25305	102	109			105	112	102	107	108	107	109	108	74	120	105	111	112	111	106	80	96	124	110	110
1421	25306	88	84	77	72	80	85	87	86	95	100	96	97	60	95	100	90	95	93	89	83	85	98	91	91
1422	25307	95	90	86	81	88	90	99	94	104	103	100	102	66	100	107	98	94	96	95	100	94	102	98	98
1423	25308	89	97	90	85	90	87	91	89	99	101	90	97	61	100	102	98	102	100	92	88	82	107	94	94
1424	MTU 1010 (NC)	82	97	111	88	94	88	93	90	112	103	96	104	76	95	99	97	107	102	96	90	97	110	104	104
1425	25309	93	100	94	78	91	100	93	97	105	105	105	105	70	105	103	108	99	104	99	94	82	115	98	98
1426	25310	91	94	94	91	92	88	78	83	104	107	94	101	67	92	100	102	106	104	93	81	89	99	94	94
1427	25311	93	95	88	83	90	95	81	88	97	108	101	102	67	100	95	107	107	107	96	100	83	113	98	98
1428	25312	109	112	97	106	106	102	115	109	110	119	108	112	80	110	98	118	106	112	107	100	81	118	99	99
1429	25313	104	95	94	81	94	102	101	102	112	106	113	110	83	115	101	115	93	104	104	97	72	88	80	80
1430	25314	99	101	100	92	98	103	101	102	113	105	103	107	77	110	99	106	105	106	103	98	89	114	101	101
1431	25315	88	102	92	85	92	100	110	105	116	101	95	104	58	115	103	100	108	104	100	97	94	117	105	105
1432	25316	99	98	91	95	96	105	103	104	110	105	111	109	96	120	100	103	103	103	106	97	86	111	98	98
1433	25317	82	84			83	90	81	86	105	96	90	97	52	95	95	91	92	92	88	84	82	82	82	82
1434	25318	120	111	106	104	110	107	115	111	127	107	108	114	74	120	101	105	108	107	108	105	96	114	105	105
1435	25319	91	98	91	82	90	100	96	98	131	106	107	115	67	105	99	101	108	105	102	91	81	112	97	97
1436	24717	91	92	89	84	89	90	95	92	100	96	95	97	67	105	104	101	108	104	95	82	80	91	86	86
1437	25320	92	92	79		88	88	97	92	109	99	104	104	53	103	106	97	98	98	94	84	79	110	94	94
1438	25321	101	104	106	91	100	100	107	104	118	107	115	113	76	115	109	108	116	112	107	96	94	122	108	108
1439	25322	91	90	82	75	84	95	97	96	103	96	101	100	70	103	101	94	99	97	95	88	88	91	89	89
1440	NDR 359 (NC)	108	99	84	90	95	97	100	98	102	101	99	100	69	115	100	99	100	100	98	80	88	96	92	92
1441	25323	104	94	85	82	91	92	94	93	122	101	102	108	58	112	103	104	96	100	98	88	75	96	85	85
1442	25324	102	107	94	95	99	103	103	103	115	125	105	115	65	120	99	115	116	116	107	99	93	120	107	107
1443	25325	103	97		80	93	95	91	93	110	104	99	104	60	115	100	106	106	106	99	93	80	117	99	99
1444	25326	104	98	88	92	95	105	106	105	118	105	107	110	65	105	101	108	112	110	103	100	93	117	105	105
1445	25327	110	103	91	92	99	95	114	105	89	107	106	101	64	130	107	104	106	105	102	92	93	123	108	108
1446	24731	106	103	86	87	95	102	88	95	102	104	100	102	72	110	109	107	104	105	99	83	87	117	102	102
1447	25328	81	83	68	77	77	80	100	90	91	96	84	90	59	85	102	89	98	93	87	71	80	85	82	82
1448	Zonal Check	85	83	71	86	81	92	97	95	107	105	111	108	74	111	107	111	102	106	101	100	88	108	98	98
1449	25329	99	110	84		98	95	92	93	116	108	105	110	70	114	104	112	101	106	101	98	97	117	107	107
1450	25330	105	97	90	100	98	95	97	96	108	107	110	108	70	121	101	110	111	111	103	105	85	113	99	99
1451	25331	105	104	92	104	101	100	100	100	106	106	109	107	69	116	103	112	108	110	103	113	98	120	109	109
1452	25332	93	103	97	101	99	95	111	103	104	104	107	105	82	109	104	103	110	106	103	93	86	112	99	99
1453	25333	96	107	97		100	100	91	96	123	111	103	112	69	112	107	107	118	112	104	97	89	113	101	101
1454	25334	104				104	114	105	110	120	115	124	120	78	113	101	106	120	113	111	100	102	134	118	118
1455	24735	104	108	111	119	110	110	123	117	118	112	125	118	79	122	103	124	118	121	115	112	101	125	113	113
1456	25335	85	96	105	89	94	112	79	95	130	99	96	108	80	106	104	102	110	106	101	91	92	114	103	103
1457	25336	117	112	109	118	114	115	117	116	119	111	114	114	84	132	105	115	117	116	114	100	103	135	119	119
1458	25337	124	104	99		109	120	107	113	84	114	126	108	74	126	102	123	116	119	110	102	91	134	113	113
1459	25338	104	99	91	95	97	105	97	101	116	106	107	110	73	121	100	117	114	116	106	99	84	119	102	102
1460	25339	99	110	102	97	102	90	93	91	106	103	97	102	76	115	99	110	114	112	100	92	86	110	98	98
1461	25340	102	103			102	112	103	108	111	111	108	110	66	113	92	111	110	110	105	84	94	111	102	102
1462	25341	104	109	99	103	104	113	107	110	115	125	118	119	75	115	100	118	113	115	111	103	97	129	113	113
1463	25342	107	108	104	92	103	100	113	107	110	104	111	108	76	111	103	109	116	113	106	100	84	129	106	106
1464	25343	105	99			102	105	96	101	118	115	115	116	66	114	101	118		118	106	85	93	122	108	108
1465	25344						100	97	98	89	99	109	99		100	97		99	99	99	90	82	95	89	89
1466	25345	95	102	105	88	97	98	104	101	102	99	105	102	72	112	98	101	109	105	100	82	92	114	103	103
1467	25346	92	88	77	81	85	90	94	92	93	92	97	94	72	99	98	94	101	97	92	86	78	98	88	88
1468	25347	106	106	91	93	99	103	115	109	105	101	110	105	74	103	99	103	101	102	102	100	94	126	110	110
1469	Local Check	102	81	96	107	97	114	96	105	116	100	91	102	77	125	100	91	95	93	100	100	95	113	104	104
1470	25348	99	93	81	87	90	100	101	100	110	101	100	103	62	112	101	95	102	98	98	91	89	104	96	96
1471	25349	93	97	96	82	92	97	111	104	106	112	116	111	72	114	107	109	106	108	105	93	90	131	110	110
1472	25350	100	98	106	92	99	110	100	105	105	115	100	107	77	112	101	100	107	103	103	90	83	118	100	100
1473	25351	111	121	120	106	114	115	120	118	123	125	121	123	79	128	104	120	106	113	115	100	102	130	116	116
1474	25352	118	119	113	109	115	116	126	121	112	145	132	130	70	137	106	129	121	125	121	110	110	132	121	121
1475	25353	112	104	107	91	103	90	110	100	102	110	107	106	76	107	108	106	104	105	101	91	92	111	101	101
1476	25354	124	117			120	103	124	113	109	141	128	126	93	140	101	95	126	110	118	110	105	147	126	126
1477	25355	100	99	96	84	95	100	97	99	103	110	104	106	69	106	103	106	99	102	99	100	86	108	97	97
1478	25356	91	88	91	80	87	90	96	93	84	97	100	94	63	95	100	99	97	98	91	80	78	93	85	85
1479	25357	107	107	105	106	106	107	121	114	111	126	114	117	76	115	99	117	115	116	111	100	103	132	117	117
1480	25358	87	88	87	85	87	85	93	89	99	102	91	97	70	105	107	99	103	101	94	76	83	95	89	89
1481	25359	83	106	98	88	94	88	95	91	94	97	104	98	69	95	101	109	106	108	95	93	78	103	91	91
	Exp Mean	**99**	**99**	**95**	**90**	**96**	**97**	**100**	**99**	**107**	**107**	**105**	**107**	**70**	**111**	**102**	**106**	**106**	**106**	**101**	**93**	**88**	**113**	**101**	**101**
	C.D. 5%												13							13				14	14

Table No. 3.39 Contd.: Plant Height (cm) of entries in IVT-IM Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (3)	VII														Zone VII Mean (10)	Overall Mean (29)
		MH	GU	GU	GU (2)		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)	PUD		
		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDG	Mean	KRK		
1401	25288	145	97	109	103	117	126	125	126	112	99	106	115	104	109	92	101	90	94	125	109	104
1402	25289	134	100	119	110	118	137	129	133	113	107	110	104	100	102	96	95	94	95	115	109	111
1403	25290	103	76	112	94	97	110	101	105	109	101	105	97	83	90	86	101	86	91	112	98	98
1404	25291	104	97	123	110	108	139	122	130	115	102	108	113	109	111	87	104	81	91	135	111	105
1405	24720	135	93	107	100	112	116	104	110	103	99	101	89	107	98	81	110	72	88	106	99	98
1406	25292	120	96	110	103	109	123	116	120	107	103	105	107	110	109	85	119	68	91	135	107	102
1407	24709	118	101	115	108	111	127	117	122	111	103	107	100	104	102	86	105	78	90	112	104	103
1408	25293	117	95	105	100	106	119	109	114	97	101	99	94	85	90	87	109	78	91	100	98	98
1409	25294	116	89	96	93	100	103	90	97	89	84	86	70	103	86	72	84	59	72	112	87	88
1410	25295	103	96	104	100	101	112	101	107	104	99	102	93	84	88	78	104	85	89	125	99	99
1411	25296	127	118	114	116	120	117	119	118	125	107	116	110	85	97	93	104	85	94	123	107	108
1412	25297	128	102	110	106	113	125	109	117	104	99	102	105	94	99	81	99	67	83	125	101	101
1413	25298	116	88	109	99	104	104	89	97	99	93	96	93	93	93	73	80	70	74	108	90	93
1414	25299	89	81	103	92	91	98	83	90	97	90	93	103	81	92	75	95	60	76	119	90	90
1415	25300	116	100	101	101	106	114	104	109	107	98	102	103	101	102	76	108	74	86	123	101	97
1416	25301	119	100	108	104	109	122	114	118	112	101	107	105	91	98	80	100	79	86	102	101	102
1417	25302	100	89	100	95	96	110	97	103	103	101	102	88	75	81	69	79	70	72	132	92	92
1418	25303	126	110	108	109	115	139	128	133	126	107	116	115	100	107	87	79	79	82	104	106	110
1419	25304	101	127	111	119	113	114	98	106	112	104	108	98	94	96	73	94	83	83	117	99	99
1420	25305	143	116	114	115	124	134	131	132	124	106	115	117	121	119	94	99	92	95	117	113	110
1421	25306	116	83	81	82	93	117	94	105	102	81	91	94	92	93	75	88	67	77	140	95	90
1422	25307	125	80	106	93	104	119	104	111	103	98	100	97	85	91	83	113	73	89	117	99	97
1423	25308	104	74	107	91	95	99	91	95	94	97	95	88	72	80	73	100	82	85	140	94	93
1424	MTU 1010 (NC)	118	80	106	93	101	105	100	103	97	102	99	99	73	86	76	109	86	90	104	95	96
1425	25309	135	92	112	102	113	117	101	109	108	100	104	100	100	100	83	97	76	85	138	102	100
1426	25310	120	81	104	93	102	103	89	96	102	105	103	94	81	87	79	91	74	81	115	93	94
1427	25311	123	96	99	98	106	114	106	110	99	97	98	95	92	93	82	108	71	87	119	98	97
1428	25312	115	108	132	120	118	127	111	119	121	109	115	109	100	105	92	91	97	93	117	107	108
1429	25313	121	106	112	109	113	120	100	110	114	100	107	99	110	104	79	95	67	80	143	103	101
1430	25314	117	101	103	102	107	115	107	111	113	96	105	96	93	95	86	111	92	96	115	102	102
1431	25315	106	93	79	86	93	112	109	110	108	99	103	104	86	95	86	90	80	85	124	100	98
1432	25316	114	107	124	116	115	130	109	119	112	104	108	115	104	109	84	102	78	88	117	105	105
1433	25317	108	86	96	91	97	112	98	105	81	93	87	86	95	90	72	97	69	79	122	92	90
1434	25318	149	98	134	116	127	128	119	124	122	110	116	113	101	107	101	127	92	107	139	115	112
1435	25319	116	93	105	99	105	121	100	110	107	100	103	102	95	98	79	92	70	80	123	99	99
1436	24717	116	92	124	108	111	107	92	99	101	95	98	95	84	89	87	103	75	89	111	95	95
1437	25320	106	88	90	89	95	116	110	113	106	97	101	96	85	90	74	101	74	83	112	97	94
1438	25321	129	102	111	107	114	136	125	130	122	103	112	103	110	106	90	101	99	97	114	110	108
1439	25322	125	95	107	101	109	106	101	104	105	96	100	99	85	92	77	99	74	83	103	94	94
1440	NDR 359 (NC)	117	96	113	105	109	110	95	103	106	95	100	98	95	96	78	117	75	90	123	99	98
1441	25323	118	84	118	101	107	109	99	104	100	94	97	96	94	95	79	98	78	85	121	97	96
1442	25324	126	98	131	115	118	131	98	115	124	105	114	119	94	106	94	91	82	89	114	105	106
1443	25325	116	93	104	99	104	117	105	111	106	101	104	101	95	98	84	93	72	83	107	98	98
1444	25326	114	97	96	97	102	132	113	122	108	100	104	113	82	98	82	102	84	89	97	101	101
1445	25327	123	96	110	103	110	118	117	118	111	102	107	97	101	99	89	101	74	88	113	102	102
1446	24731	116	95	96	96	102	130	112	121	111	102	107	110	93	101	85	98	79	87	132	105	101
1447	25328	100	76	87	82	88	102	88	95	97	85	91	84	73	78	69	79	55	68	145	88	85
1448	Zonal Check	135	107	111	109	118	113	103	108	102	95	99	106	92	99	85	108	77	90	115	100	99
1449	25329	122	110	124	117	119	127	123	125	109	103	106	112	110	111	89	102	93	95	116	108	106
1450	25330	131	104	109	107	115	122	116	119	110	105	107	98	85	91	84	92	84	87	129	103	103
1451	25331	136	105	100	103	114	126	111	118	108	104	106	108	105	107	90	108	86	95	131	108	106
1452	25332	97	96	110	103	101	112	104	108	99	105	102	91	85	88	81	114	80	92	112	98	100
1453	25333	125	96	104	100	108	129	108	118	113	109	111	105	101	103	87	97	75	86	121	104	104
1454	25334	147	129	112	121	129	152	134	143	109	116	112	117	102	109	97	94	84	92	114	112	113
1455	24735	129	112	109	111	117	151	126	138	128	108	118	111	96	103	87	99	96	94	131	113	114
1456	25335	115	97	106	102	106	129	111	120	110	135	123	99	65	82	82	98	84	88	106	102	101
1457	25336	147	126	126	126	133	143	128	135	122	110	116	130	110	120	108	128	75	104	100	115	116
1458	25337	154	122	103	113	126	141	136	138	113	104	108	117	103	110	94	117	82	98	117	112	112
1459	25338	133	96	97	97	109	123	117	120	108	103	106	112	110	111	92	102	86	94	130	108	105
1460	25339	104	101	100	101	102	120	107	114	115	103	109	92	71	82	77	93	77	82	114	97	99
1461	25340	130	100	98	99	109	133	127	130	117	103	110	115	110	113	92	115	83	97	116	111	107
1462	25341	124	91	109	100	108	130	115	122	114	105	109	114	112	113	91	104	76	90	118	108	108
1463	25342	131	105	109	107	115	130	116	123	120	105	112	111	85	98	84	99	82	88	137	107	106
1464	25343	142	104	104	104	117	143	130	137	110	102	106	115	102	109	89	96	85	90	123	109	108
1465	25344	114	89	106	98	103	133	108	121	107		107	105	102	104	94	104	74	90	114	104	100
1466	25345	104	86	98	92	96	126	106	116	112	98	105	93	95	94	77	104	76	86	111	100	99
1467	25346	100	86	97	92	94	109	93	101	102	88	95	89	84	87	78	88	74	80	132	94	91
1468	25347	117	96	102	99	105	130	114	122	121	108	115	110	91	100	85	94	90	90	135	108	104
1469	Local Check	125	96	115	106	112	122	111	117	102	89	95	116	109	113	113	100	103	105	132	110	105
1470	25348	115	97	110	104	107	124	119	121	104	96	100	108	104	106	85	107	75	89	113	103	99
1471	25349	120	109	88	99	106	128	121	125	111	101	106	105	103	104	83	91	79	85	128	105	103
1472	25350	112	97	107	102	105	119	106	113	100	106	103	97	96	97	83	118	84	95	136	104	102
1473	25351	136	123	119	121	126	144	122	133	125	113	119	112	95	104	88	108	95	97	152	115	116
1474	25352	141	123	120	122	128	144	146	145	141	137	139	133	110	122	102	132	106	113	146	130	123
1475	25353	126	99	133	116	119	116	99	108	115	99	107	102	95	99	93	118	83	98	119	104	104
1476	25354	144	120	108	114	124	146	131	139	131	111	121	132	108	120	118	105	105	109	103	119	119
1477	25355	124	115	135	125	125	132	118	125	100	101	100	106	95	101	89	96	85	90	131	105	103
1478	25356	97	86	96	91	93	109	98	103	98	89	94	95	73	84	69	95	76	80	110	91	90
1479	25357	127	117	125	121	123	124	124	124	114	108	111	114	83	98	101	96	96	98	103	106	110
1480	25358	107	98	102	100	102	105	80	92	99	96	98	91	87	89	76	91	77	81	96	90	91
1481	25359	104	83	105	94	97	91	88	89	108	93	100	79	85	82	85	99	83	89	122	93	94
	Exp Mean	**121**	**99**	**108**	**103**	**109**	**122**	**110**	**116**	**109**	**101**	**105**	**103**	**94**	**99**	**85**	**101**	**80**	**89**	**120**	**103**	**102**
	C.D. 5%				0	0									0				9		18	15

Table No. 3.40: Panicles/ M² of entries in IVT-IM Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III													Zone III Mean (9)
		UT	PUN	HAR	J&K		OD	OD	OD (2)	BI	BI	BI	BI (3)	JH	W.B	U.P.	U.P.	U.P.	U.P. (2)	
		PNT	LDN	KUL	CHT		BBN	JYP	Mean	PTN-ICAR	PTN	SBR	Mean	RCI	CHN	@MSD	VRN	GRK	Mean	
1401	25288	311				311	217	415	316	266	245	314	275	231	225	292	294	305	299	279
1402	25289	314	202	368		294	247	269	258	303	210	241	251	255	246	294	209	240	225	247
1403	25290	308	323	313	271	304	227	456	341	265	315	240	273	122	238	292	286	236	261	265
1404	25291	304	278	391		324	238	374	306	214	228	273	238	203	255	303	239	281	260	256
1405	24720	323	284	306	285	299	210	320	265	268	228	253	249	210	248	308	278	209	244	247
1406	25292	312	267	328		302	252	364	308	279	315	272	288	253	188	305	339	281	310	282
1407	24709	316	258	386	280	310	244	456	350	246	245	260	250	278	195	316	285	211	248	269
1408	25293	305	294	389	275	316	257	388	322	244	228	289	253	182	202	306	283	202	242	252
1409	25294	302	344	345		330	258	473	365	292	385	252	310	230	242	307	282	220	251	293
1410	25295	305	189	366	278	284	173	259	216	260	245	210	238	177	262	306	222	302	262	234
1411	25296	272	251	353	281	289	240	418	329	253	280	217	250	183	240	306	278	204	241	257
1412	25297	253	258	346	288	286	237	354	295	274	315	233	274	222	251	309	298	205	251	265
1413	25298	328	304	314	271	304	221	286	253	235	350	206	264	159	190	319	298	325	311	252
1414	25299	313	208	338	260	280	249	320	284	246	350	266	287	208	204	321	262	153	207	251
1415	25300	325	251	358	291	306	242	418	330	223	315	222	253	159	205	295	260	289	274	259
1416	25301	322	317	383		341	228	354	291	276	315	249	280	228	252	297	302	296	299	278
1417	25302	320	310	313	277	305	248	248	248	255	245	221	240	277	216	301	287	273	280	252
1418	25303	320	259	381		320	216	262	239	282	333	241	285	178	263	317	235	223	229	248
1419	25304	326	301	331	284	310	233	459	346	280	315	211	269	227	250	321	291	249	270	279
1420	25305	345	241			293	199	330	265	251	263	278	264	152	258	318	206	294	250	248
1421	25306	320	238	405	273	309	220	286	253	218	300	288	269	129	244	330	288	375	331	261
1422	25307	326	235	331	269	290	226	323	275	222	298	227	249	231	234	304	228	375	302	262
1423	25308	307	314	349	280	312	219	282	250	260	385	228	291	255	216	290	344	238	291	270
1424	MTU 1010 (NC)	304	274	377	281	309	250	354	302	268	315	204	262	240	227	280	263	252	258	264
1425	25309	299	304	343	275	305	263	327	295	259	228	251	246	279	252	278	330	244	287	270
1426	25310	290	231	330	267	280	237	255	246	245	201	215	220	131	261	291	265	263	264	230
1427	25311	325	231	374	275	301	224	357	291	225	315	212	251	231	222	289	259	231	245	253
1428	25312	284	301	356	280	305	187	422	304	240	298	217	251	179	231	306	298	246	272	257
1429	25313	314	347	377	279	329	213	282	248	262	245	192	233	207	232	308	299	257	278	243
1430	25314	304	245	382	275	301	243	293	268	234	298	236	256	207	225	307	223	352	287	256
1431	25315	311	294	391	277	318	214	459	336	245	368	233	282	257	253	316	269	270	269	285
1432	25316	319	317	357	266	315	240	452	346	357	315	304	325	231	259	318	330	311	321	311
1433	25317	324	307			315	209	262	236	242	210	255	236	203	253	312	236	258	247	236
1434	25318	311	198	371	277	289	219	293	256	218	158	185	187	179	220	308	251	188	220	212
1435	25319	295	264	371	248	294	184	252	218	240	333	224	265	206	217	309	254	250	252	240
1436	24717	318	244	387	260	302	197	398	298	231	315	211	252	156	238	288	276	326	301	261
1437	25320	322	304	380		335	230	425	327	297	333	215	281	251	252	290	268	223	245	277
1438	25321	312	215	361	263	288	220	252	236	206	403	237	282	178	238	297	324	263	293	258
1439	25322	318	341	388	276	331	214	350	282	286	315	227	276	252	219	285	309	216	262	265
1440	NDR 359 (NC)	311	271	355	287	306	217	252	234	246	333	236	271	159	250	291	288	165	227	238
1441	25323	321	218	331	275	286	218	293	255	253	333	221	269	230	260	285	237	208	222	250
1442	25324	331	267	338	264	300	264	422	343	285	298	247	276	379	219	289	309	250	280	297
1443	25325	320	205		265	263	227	463	345	253	315	246	271	182	250	306	307	215	261	273
1444	25326	304	261	368	273	301	230	282	256	257	315	224	265	131	238	317	245	229	237	239
1445	25327	302	261	381	261	301	220	395	307	258	315	274	282	232	251	305	274	231	252	272
1446	24731	309	284	362	282	309	243	398	321	267	333	245	281	355	248	309	347	297	322	303
1447	25328	321	307	359	273	315	230	361	295	342	263	219	274	379	257	304	373	279	326	300
1448	Zonal Check	316	274	368	275	308	261	459	360	281	298	249	276	207	264	306	329	264	296	290
1449	25329	302	268	397		322	228	418	323	234	315	279	276	205	263	294	252	313	282	278
1450	25330	307	251	378	273	302	225	323	274	219	315	280	271	205	272	301	252	294	273	265
1451	25331	314	215	348	290	292	221	418	320	228	350	247	275	178	244	299	283	254	268	269
1452	25332	303	209	369	282	290	227	327	277	215	315	227	252	303	219	303	368	265	316	274
1453	25333	288	238	368	283	294	248	534	391	234	228	218	226	280	249	317	263	267	265	280
1454	25334	319				319	226	354	290	253	385	260	299	203	218	316	229	281	255	267
1455	24735	293	248	367	257	291	194	293	243	232	263	228	241	253	260	309	258	247	252	247
1456	25335	319	280	346	285	307	210	422	316	237	263	230	243	279	218	311	282	185	233	258
1457	25336	308	224	353	276	290	227	422	324	199	263	231	231	230	230	319	232	224	228	251
1458	25337	323	274	389		329	233	432	332	233	368	250	283	157	249	323	270	290	280	276
1459	25338	312	340	380	275	327	220	412	316	259	245	241	248	181	227	305	295	292	293	263
1460	25339	306	264	382	286	309	210	320	265	266	245	231	247	279	224	319	358	246	302	264
1461	25340	322	367			344	224	354	289	243	298	261	267	180	261	320	326	273	299	268
1462	25341	296	244	379	286	301	214	299	257	233	263	228	241	231	252	318	289	270	280	253
1463	25342	310	281	404	275	317	228	344	286	288	298	215	267	181	266	331	325	260	292	267
1464	25343	331	390			360	223	405	314	237	298	269	268	252	273	321	259		259	277
1465	25344						218	378	298	284	350	314	316		259	309		128	128	276
1466	25345	330	264	368	273	309	232	327	279	274	333	218	275	228	260	303	337	184	261	266
1467	25346	317	245	374	257	298	189	228	209	279	315	250	281	305	249	301	266	173	220	250
1468	25347	312	311	320	287	307	251	643	447	304	263	229	265	229	220	304	330	225	277	299
1469	Local Check	314	363	342	277	324	236	313	274	258	350	262	290	176	260	316	317	200	258	263
1470	25348	325	234	361	284	301	206	262	234	170	368	267	268	180	255	306	189	289	239	243
1471	25349	282	334	359	266	310	221	429	325	277	315	247	280	228	263	298	299	307	303	287
1472	25350	310	235	373	288	301	221	350	286	251	315	229	265	203	272	315	302	246	274	265
1473	25351	303	238	359	290	297	225	357	291	256	263	220	246	178	250	308	211	173	192	237
1474	25352	311	267	405	273	314	235	367	301	261	245	235	247	202	255	318	267	258	262	258
1475	25353	288	218	383	275	291	217	316	267	229	315	239	261	203	219	312	255	225	240	246
1476	25354	316	201			259	213	327	270	221	193	206	206	234	233	317	224	257	240	234
1477	25355	323	330	367	265	321	231	544	388	224	315	262	267	305	249	308	333	291	312	306
1478	25356	311	310	362	255	309	204	330	267	282	368	280	310	178	217	311	294	289	291	271
1479	25357	309	211	388	269	294	224	296	260	221	315	210	249	228	223	316	207	236	222	240
1480	25358	316	244	373	259	298	212	320	266	282	228	174	228	252	261	298	245	207	226	242
1481	25359	306	265	314	273	289	208	262	235	219	245	203	222	153	245	302	311	249	280	233
	Exp Mean	**311**	**270**	**362**	**275**	**305**	**225**	**358**	**291**	**253**	**296**	**239**	**263**	**218**	**240**	**306**	**280**	**252**	**266**	**262**
	C.D. 5%	25	71	47	31	24	24	60	30	35	81	50	34	128	11	15	52	61	40	21
	C.V.%	4.09	13.19	6.51	5.66	7.85	5.30	8.48	7.39	6.97	13.85	10.46	11.22	29.41	2.36	2.51	9.39	12.07	10.69	12.40

Table No. 3.40 Contd.: Panicles/ M² of entries in IVT-IM Kharif 2015

Entry No.	IET No.	IV	V			Zone V	VI				Zone VI	VII														Zone VII	Overall
		AS	CG	CG	CG (2)	CEN (2)	MH	GU	GU	GU (2)	Mean (3)	A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)	PUD	Mean (10)	Mean (29)
		TTB	JDP	SKL	Mean		KJT	NWG	NVS	Mean		MTU	RGL	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	KTG	MDG	Mean	KRK		
1401	25288	199	265	195	230	230	221	270	315	293	269	304	462	383	330	410	370	363	325	344	365	355	5	242	239	316	286
1402	25289	284	264	237	250	250	230	279	256	267	255	304	382	343	297	438	368	515	349	432	285	366	6	219	347	329	283
1403	25290	215	243	242	242	242	257	266	271	269	265	258	416	337	363	428	395	378	300	339	275	355	5	212	336	311	283
1404	25291	292	244	228	236	236	234	277	238	258	250	274	433	353	314	413	363	423	279	351	330	325	6	220	258	305	280
1405	24720	278	229	266	247	247	226	270	267	268	254	314	404	359	281	468	374	350	283	316	275	330	6	204	251	296	273
1406	25292	211	191	267	229	229	234	273	218	245	242	288	423	355	297	453	375	353	325	339	305	339	6	217	231	302	281
1407	24709	313	329	247	288	288	214	268	244	256	242	288	418	353	297	441	369	360	300	330	310	382	7	233	256	306	287
1408	25293	322	251	228	239	239	223	268	282	275	258	357	434	395	330	473	401	370	311	340	330	366	6	234	235	321	287
1409	25294	187	235	222	228	228	260	269	212	240	247	261	465	363	347	473	410	358	286	322	350	302	7	220	238	308	289
1410	25295	198	196	197	196	196	236	266	256	261	252	271	421	346	297	420	359	320	300	310	320	372	6	233	123	285	257
1411	25296	241	249	227	238	238	215	273	286	279	258	268	447	357	297	450	374	320	307	314	345	376	7	242	230	305	276
1412	25297	272	275	214	244	244	262	264	281	272	269	290	418	354	330	452	391	373	279	326	350	348	6	235	340	318	286
1413	25298	217	265	194	229	229	196	269	280	274	248	307	486	396	325	422	373	298	300	299	320	382	6	236	275	312	277
1414	25299	226	196	186	191	191	178	264	285	274	242	291	398	344	264	399	332	290	244	267	345	383	6	244	249	287	261
1415	25300	318	269	265	267	267	223	267	279	273	256	337	467	402	330	432	381	350	286	318	335	301	6	214	233	308	285
1416	25301	223	235	180	208	208	246	277	248	263	257	278	482	380	197	435	316	513	307	410	380	300	6	229	252	315	288
1417	25302	225	211	211	211	211	222	266	286	276	258	344	416	380	297	413	355	380	426	403	350	339	6	231	246	321	280
1418	25303	259	326	236	281	281	212	279	235	257	242	357	421	389	330	431	380	443	311	377	325	280	6	204	327	323	284
1419	25304	204	274	212	243	243	251	266	305	286	274	307	515	411	363	386	374	530	229	380	390	382	6	259	404	351	303
1420	25305	202	186	226	206	206	215	274	259	266	249	255	423	339	297	441	369	443	255	349	320	301	6	209	344	308	269
1421	25306	314	272	237	254	254	246	269	250	259	255	324	447	385	281	437	359	363	290	326	355	300	6	220	361	316	287
1422	25307	282	264	203	233	233	209	272	307	290	263	310	437	374	297	453	375	480	286	383	305	320	6	210	412	331	288
1423	25308	217	220	221	220	220	264	268	338	303	290	287	461	374	330	429	380	390	304	347	375	330	7	237	444	335	295
1424	MTU 1010 (NC)	232	226	270	248	248	195	269	311	290	258	254	555	404	363	428	395	440	283	361	355	306	6	222	235	322	287
1425	25309	294	216	276	246	246	248	268	302	285	273	327	487	407	314	428	371	415	227	321	365	359	6	243	334	326	294
1426	25310	320	193	207	200	200	204	273	240	256	239	304	415	359	297	447	372	408	293	350	275	318	6	200	387	315	268
1427	25311	219	259	258	258	258	249	272	286	279	269	281	428	354	297	453	375	465	297	381	335	370	6	237	338	327	286
1428	25312	289	272	258	265	265	204	276	278	277	252	277	411	344	281	438	359	490	209	350	420	463	6	296	244	324	288
1429	25313	297	245	259	252	252	255	270	301	285	275	294	484	389	363	449	406	408	279	343	430	335	7	257	339	339	294
1430	25314	238	237	203	220	220	209	268	274	271	250	271	423	347	330	431	380	395	290	342	340	316	6	221	233	303	275
1431	25315	334	236	228	232	232	189	270	298	284	252	297	467	382	363	437	400	420	304	362	295	335	6	212	235	316	295
1432	25316	222	251	254	253	253	275	268	231	249	258	277	451	364	347	437	392	455	304	379	445	345	6	265	360	342	310
1433	25317	227	154	232	193	193	223	271	283	277	259	466	438	452	330	446	388	363	346	354	315	367	6	229	343	342	280
1434	25318	293	201	179	190	190	206	265	304	284	258	350	405	377	297	429	363	343	328	335	295	355	6	219	250	306	261
1435	25319	257	116	174	145	145	208	265	295	280	256	281	409	345	297	431	364	380	297	338	295	348	6	216	442	318	270
1436	24717	286	227	215	221	221	194	273	271	272	246	294	457	376	314	449	381	405	307	356	275	362	6	214	295	316	282
1437	25320	214	218	240	229	229	223	266	275	271	255	317	482	399	363	420	392	555	304	429	290	366	6	221	311	341	298
1438	25321	197	234	238	236	236	220	272	289	280	260	281	441	361	314	470	392	478	293	385	335	302	6	214	323	324	281
1439	25322	330	206	229	217	217	222	272	260	266	251	310	376	343	281	450	365	400	318	359	315	367	6	229	329	315	289
1440	NDR 359 (NC)	262	206	206	206	206	184	281	271	276	245	284	426	355	347	447	397	388	248	318	350	364	6	240	274	313	273
1441	25323	366	249	193	221	221	174	277	265	271	239	353	467	410	297	423	360	445	286	366	340	376	6	241	335	333	284
1442	25324	244	226	247	236	236	233	273	305	289	270	317	576	447	314	452	383	408	349	378	325	408	7	247	341	350	307
1443	25325	320	206	217	211	211	213	275	284	279	257	294	444	369	314	452	383	443	279	361	305	348	6	220	360	324	286
1444	25326	259	266	243	255	255	235	273	297	285	268	314	441	377	347	477	412	420	293	357	405	301	6	237	376	338	286
1445	25327	298	282	219	250	250	250	276	221	248	249	307	397	352	363	464	413	503	241	372	360	300	6	222	381	332	294
1446	24731	311	255	289	272	272	270	276	247	261	264	311	444	377	347	465	406	458	321	389	370	396	6	257	344	346	313
1447	25328	240	258	251	254	254	181	269	276	272	242	330	670	500	314	441	377	418	287	352	385	393	6	261	341	358	311
1448	Zonal Check	254	217	266	241	241	189	275	351	313	272	314	453	383	297	473	385	405	324	365	350	335	6	230	334	329	299
1449	25329	243	194	222	208	208	256	276	375	325	302	284	406	345	297	434	365	498	290	394	370	418	6	265	284	328	297
1450	25330	346	207	265	236	236	219	280	279	279	259	304	434	369	347	465	406	510	339	424	370	412	6	263	279	346	298
1451	25331	333	183	293	238	238	239	277	327	302	281	304	411	357	297	428	362	538	297	417	395	318	6	240	284	328	294
1452	25332	256	245	211	228	228	198	269	317	293	261	277	399	338	297	425	361	375	283	329	350	404	6	253	233	305	282
1453	25333	243	240	228	234	234	215	266	312	289	264	284	485	384	297	464	380	328	286	307	435	330	6	257	252	316	288
1454	25334	344	214	158	186	186	207	269	266	267	247	281	408	344	330	471	401	373	290	331	320	355	6	227	361	319	284
1455	24735	367	249	189	219	219	192	265	309	287	255	287	432	360	314	450	382	493	321	407	300	380	7	229	267	325	283
1456	25335	245	190	264	227	227	253	269	282	275	268	311	502	406	330	524	427	473	272	372	375	418	6	266	235	344	293
1457	25336	272	239	225	232	232	198	272	247	259	239	311	393	352	297	474	386	505	262	383	285	383	7	225	245	316	277
1458	25337	370	250	202	226	226	255	273	234	253	254	334	423	378	281	513	397	385	307	346	345	400	7	251	232	322	296
1459	25338	289	206	268	237	237	253	273	270	271	265	274	472	373	297	468	383	420	248	334	370	366	7	248	363	328	294
1460	25339	288	231	179	205	205	202	267	316	291	261	264	479	371	363	440	401	380	283	331	425	408	6	280	343	339	293
1461	25340	324	195	176	185	185	232	281	264	272	259	267	421	344	330	476	403	400	297	348	330	355	6	230	364	324	290
1462	25341	367	192	205	198	198	217	267	308	287	264	261	418	339	297	446	371	350	285	317	310	325	7	214	333	303	278
1463	25342	371	234	192	213	213	213	267	282	275	254	288	470	379	330	476	403	465	188	327	395	399	6	267	321	334	295
1464	25343	216	254	204	229	229	235	275	303	289	271	258	439	348	297	462	380	333	301	317	405	393	6	268	324	322	294
1465	25344	246	280	188	234	234	250	266	213	239	243	281	441	361	330		330	368	290	329	360	330	7	232	316	302	277
1466	25345	361	241	244	243	243	248	268	307	287	274	327	588	457	314	452	383	453	283	368	410	380	7	266	273	348	303
1467	25346	245	223	202	213	213	208	271	237	254	239	301	439	370	314	441	377	393	297	345	385	382	6	258	272	323	278
1468	25347	239	233	258	245	245	254	266	222	244	247	327	499	413	347	500	423	380	276	328	435	339	6	260	306	341	304
1469	Local Check	208	191	253	222	222	263	286	256	271	268	281	507	394	330	452	391	491	283	387	345	397	7	249	290	338	293
1470	25348	263	174	234	204	204	183	274	215	244	224	324	385	354	314	432	373	280	311	295	315	339	6	220	283	299	266
1471	25349	278	161	191	176	176	213	278	196	237	229	337	443	390	314	485	399	448	290	369	330	400	7	246	279	333	292
1472	25350	365	217	256	236	236	230	274	239	256	247	284	449	366	281	417	349	413	321	367	335	382	6	241	256	314	287
1473	25351	357	222	234	228	228	195	265	200	233	220	268	561	414	347	450	398	558	234	396	275	393	6	225	235	332	280
1474	25352	341	231	223	227	227	215	272	221	247	236	300	421	360	164	461	312	448	269	358	385	376	7	256	275	310	282
1475	25353	286	179	211	195	195	227	267	239	253	244	284	528	406	330	470	400	443	304	373	330	382	6	239	311	339	282
1476	25354	261	216	198	207	207	170	269	225	247	221	294	400	347	347	477	412	438	307	372	310	339	6	218	335	325	267
1477	25355	367	256	244	250	250	220	274	250	262	248	337	504	420	314	461	387	465	297	381	390	300	6	232	364	343	313
1478	25356	211	260	199	229	229	197	267	183	225	216	264	565	414	347	458	402	335	304	319	410	383	7	266	340	341	290
1479	25357	241	260	198	229	229	206	269	189	229	221	310	411	361	297	452	374	328	314	321	350	418	7	258	323	321	273
1480	25358	370	243	228	236	236	221	277	266	271	254	291	520	405	330	431	380	478	293	385	370	280	6	219	341	334	287
1481	25359	221	212	163	187	187	176	263	159	211	199	251	394	322	297	474	386	340	286	313	565	382	6	318	295	329	267
	Exp Mean	**274**	**230**	**224**	**227**	**227**	**222**	**271**	**268**	**269**	**254**	**299**	**451**	**375**	**315**	**448**	**381**	**414**	**292**	**353**	**349**	**357**	**6**	**237**	**303**	**323**	**286**
	C.D. 5%	21	56	35		27	41	8	49	27	20	30	99	52	83	49	54	68	37	38	105	40	1	35	51	21	11
	C.V.%	3.85	12.24	7.93		8.54	9.31	1.53	9.12	7.05	7.08	5.02	11.02	9.86	13.18	5.45	10.11	8.20	6.39	7.71	15.16	5.66	4.79	12.93	8.54	10.55	10.53

ADVANCE VARIETY TRIAL 1- LATE (AVT1-L)

Location : 15 **Entries: 35**
Checks : National: Swarna, Zonal – NDR 8002 (Eastern), Ranjeet-(North Eastern), Salivahana-(Western), Pushyami-(Southern), Hybrid – PA 6444 and Local check **Table:3.41**

Advance Variety Trial – 1 – Late (AVT- 1 – L) was constituted with 35 entries including four checks. The trial was sent to 17 locations, but the data from ICAR – Patna and Bapatla centres was not received. Data from Ponnampet centre was not included in the mean owing to very low experimental mean yield (2607 kg/ha) at the location. The CV % of the experiment ranged from 5.57 at Karaikal to 16.89% at Ragolu; the experimental mean grain yield ranged 3452 kg/ha at Nawagam to 5891 kg/ha at Raipur. Days to 50% flowering duration ranged from 86 days (IET 24240) to 120 days (Salivahana-zonal check) in Western zone (VI); 106 days (IET 24274) to 118 days (IET 24395) in Eastern & central zones (III & V); 97 days (zonal check Pushyami) to 119 days (local check). The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m, AND plant height are presented in 3.42, 3.43, 3.44 and 3.45.

Overall Performance of Promising Entries in Advanced Variety Trial 1-Late (AVT 1-L) Kharif 2015

IET No/ Designation/ Cross combination	GY/ FD /GT	Yield Adv (%) Over NC/ ZC/LC	Yield Adv (%) over checks NC/ZC/ LC			% Increase Over the Best Check					
						State			Zone		
						Rank	Yield Kg/ha	% BVC	Rank	Yield kg/ha	% BVC
23725 OR 2560-3 Pratikshya / IR32253-7	5509 104 MS	17.08 41.58 ***6.68*** 12.26	BBN CHN RPR RGL WGL ADT SRS	4605 5556 6365 6440 6481 6544 4918	(4) (5) (4) (4) (2) (1) (4)	TEL-2 TN-1 KA-4	6481 6544 4918	8.55 57.57 11.97	R_3-4 R_5-4 R_7-1	4979 6365 5509	4.16 3.39 6.68
Swarna (NC)	4705 110										
Zonal Check	3891 111										
Local Check	***5164 114***										
PA 6444 (HC)	4907 102										

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; HC- Hybrid Check GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BVC- Best Varietal Check

The performance of entries in different zones is discussed here under.

Zone III : It was represented by 5 Locations. One entry recorded the required yield superiority. IET 24395 (RP 5865-300-4-1-1-1-2-3) from the cross MTU 1075 and MTU 1010 ranked first (5150 kg/ha) in this zone with 121 days to 50% flowering possessing medium slender grains. It was significantly superior to national (15.49%) zonal (7.74%) , local (13.41%) and hybrid (18.03%). however , it stood first (5608 kg/ha) in the state of West Bengal with 8.85 % and 34.00 % yield advantage over the best varietal and hybrid checks respectively. Quality wise this entry IET 24395 recorded 62.8% HRR, 25.49% amylase content and 22mm GC.

ZONE V : This zone is represented lay 5 locations. Three entries (IETs 23767, 24367 and 24297) out yielded the checks with desired yield advantage. IET 23767 (OR 2481-9) from the cross IR 64/Pratikshya// Pathara possessing short bold grains, 105 days to 50% flowering recorded 6848 kg/ha of grain yield with an yield advantage of 22.98, 11.24, 32.84 and 34.32 % over national , zonal, local and hybrid checks respectively. It was the first (6848 kg/ha) ranking entry in Chhattisgarh state with 11.24 % and 34.32% yield advantage over the best varietal and hybrid checks respectively. Quality wise it recorded 31.2% HRR intermediate AC (25.37) and moderate GC (41mm), hence it may be dropped. (Table 3.46).

IET 24367 (OR 2344-1) registered 2nd rank (6610kg/ha) with 108 days to 50% flowering and short bold grains. It out yielded all the 4 checks with required yield advantage. Quality wise it exhibited good HRR (66.0%), 24.78% amylase content and moderate GC (44mm).

Zone wise Performance of Promising Entries in Advanced Variety Trial 1-Late (AVT 1-L) Kharif 2015:

Rank	IET No/ Designation /Cross combination	GY/FD/ GT	Yield Adv(%) over NC/ZC/ LC/HC	% Increase over the best check			
				State			
				Rank	Yield	% BVC	% HC
Promising Entries in Zone III : (Eastern)							
1.	24395 RP 5865-300-4-1-1-1-2-3 MTU 1075 / MTU 1010	5150 121 MS	15.49 7.74 13.41 18.03	WB-1	5608	8.85	34.00
	Swarna (NC)	4459 114					
	Zonal Check	4780 119					
	Local Check	4541 117					
	PA 6444 (HC)	4363 113					
Promising Entries in Zone V :							
1.	23767 OR 2481-9 IR 64/Pratikshya //Pathara	6848 105 MB	22.98 11.24 32.84 34.32	CG-1	6848	11.21	34.32
2.	24367 OR 2344-1 Jagannath IR 21567-1-18-3	6610 108 SB	18.71 7.37 28.22 29.65	CG-2	6610	7.37	29.65
3.	24297 OR (T) 26 Lalat Mutant	6563 104 SB	17.86 6.61 27.31 28.73	CG-3	6563	6.61	28.73
	Swarna (NC)	5568 107					
	Zonal Check	6156 108					
	Local Check	5155 107					
	PA 6444 (HC)	5098 95					

Rank	IET No/ Designation /Cross combination	GY/FD/ GT	Yield Adv(%) over NC/ZC/ LC/HC	% Increase over the best check			
				State			
				Rank	Yield	% BVC	% HC
Promising Entries in Zone VI :							
1.	23767 OR 2481-9 IR 64 /Pratikshya// Pathara	5080 107 MB	31.06 60.25 37.11 5.59	MH-1 GU-7	5993 4167	37.2 16.69	11.20 -1.55
2.	23765 OR 2482-2 Dular / Dular (D)	4865 102 MB	25.51 53.47 31.30 1.12	MH-5 GU-3	505 4696	15.27 31.50	-6.56 10.93
3.	24241 PNP-9776 NPG-5/ NPG-6	4540 101 MS	17.13 43.21 22.53 -	GU-1	5357	50.01	26.55
	Swarna (NC)	3876 107					
	Zonal Check	3170 120					
	Local Check	3705 113					
	PA 6444 (HC)	4811 97					
Promising Entries in Zone VII :							
1.	23725 OR 2560-3 Pratikkshya/ IR 32253-7	5509 109 MS	17.08 41.58 6.68 12.26	TEL-2 TN-1 KA-4	6481 6544 4918	8.55 57.57 11.97	49.53 38.17 -3.64
	Swarna (NC)	4705 113					
	Zonal Check	3891 97					
	Local Check	5164 119					
	PA 6444 (HC)	4907 104					

Zone VI : This zone is represented by 2 locations and three entries (IETs 23767, 23765 and 24241)registered the required yield advantage. IET 23767 (OR 2481-9) recorded first rank (5080Kg/ha) with 107 days to 50% flowering and medium bold grains. It out yielded all the four checks with significantly superior yield advantage i.e., 31. 06%.,(National),60.25% (Zonal), 37.11% (Local) and 5059%(hydride) checks. This entry registered 1st rank (5993Kg/ha) in Maharashtra with 37.20% and 11.20% over the best varietal and hybrid checks respectively. It also stood 7th best in Gujarat (4167 Kg/ha with 16.69% yield advantage over the best check.

The second best entry IET 23765 (OR2482-2) from the cross Dular /Dular (D) with 25.51, 53.47 and 31.30% yield advantage over national, zonal and local checks respectively , possessing medium bold grains , 102 days to 50 % flowering and 4865 kg/ha grain yield. It recorded third rank (4696 kg/ha) in Gujarat with 31.50% and 10.93% yield advantage over the best varietal and hybrid checks respectively, while it was 5th best entry (5035 kg/ha) in Maharashtra with 15.27% yield superiority over the best varietal check. Quality wise it recorded 40% HRR, intermediate amylose content (25.05%) and medium GC (40mm). Owing to poor HRR, it may be dropped from further testing.

ZONE VII : This zone is represented by 8 locations and 1 entry fulfilled the desired yield advantage over the best check. IET 23725 (OR 2560-3) from the cross Praikshya/IR 32253-7 out yielded national (17.08%), zonal (41.58%) , local (6.68%) and hybrid checks (12.26%) with a mean grain yield of 5509 kg/ha, 109 days to 50 % flowering and medium slender grains. It was first ranking entry (6544 kg/ha) in Tamil Nadu with 57.57% and 38.17% yield advantage over the best varietal and hybrid checks respectively. This entry registered 2nd rank (6481 kg/ha) in Telangana with 8.55 and 49.53 % yield advantage over the best varietal and hybrid checks respectively. It also registered 4th rank (4918 kg/ha) in Karnataka with 11.97 % yield improvement over the best varietal check. It recorded 53.8% HRR, intermediate AC (23.81%) and hard GC 23mm).

The following entries qualify for promotion to third and final year of testing based on their performance in their respective zones.

Performance of promising entries in Advance Variety Trial-1-Late (AVT-1-Late) Kharif, 2015

IET No.	Overall			Zone III		Zone V		Zone VI		Zone VII		Remarks
	FD	GT	% BVC	% BVC	FD	% BVC	FD	% BVC	FD	% BVC	FD	
23725	104	MS	6.68							6.68	109	Promote
24395				7.74	121			11.4	110			Promote
23767						11.24	105	31.06	107			Drop
24367						7.37	108					Promote
24297						6.61	104	12.00	108			Promote
23765								25.51	102			Drop
24241								17.13	101			Promote
24284								5.00	103			Promote
23610								12.00	107			Promote
24236								13.00	103			Promote
	5164 kg/ha (LC)			4780 kg/ha (ZC)		6156 kg/ha (ZC)		3876 kg/ha (NC)		5164 kg/ha (LC)		
	4907 kg/ha (HC)			4363 kg/ha (HC)		5098 kg/ha (HC)		4811 kg/ha (HC)		4907 kg/ha (HC)		

INITIAL VARIETY TRIAL-LATE (IVT-L)

Location : 15 **Entries: 64**
Checks : National: Swarna, Zonal – NDR 8002 (Eastern), Ranjeet-(North Eastern), Salivahana-(Western), Pushyami-(Southern), Hybrid – PA 6444 and Local check **Table:3.47**

Initial Variety Trial-Late was constituted with 64 entries including 4 checks and three hybrid entries. The trial was sent at 18 locations; however data from Cuttack, Igatpuri and Bapatla was not received. Due to very low yields at Kolkata, Nawagam and Ponnampet the data from these centres was not included in the mean. The experimental mean ranged from 3332 kg/ha at Bhubaneshwar to 6963 kg/ha at Ragolu. The CV of the experiments ranged from 7.73% at Karaikal to 17.40% at Nellore. The performance of the test entries across 12 locations ranged from 3298 kg/ha (IET 25232) to 6152 kg/ha (IET 25269). The details of days to 50% flowering, plant height and panicles per sq.m etc, are presented in the tables 3.48, 3.49, 3.50 and 3.51**.** Three top ranking entries IETs 25269, 25278 and 25271 out yielded the best varietal and hybrid checks with required yield superiority on overall mean basis and discussed below.

Overall Performance of Promising Entries in Initial Variety Trial 1-Late (IVT-L) Kharif 2015:

IET No/ Designation/ Cross combination	GY/ FD/ GT	Yield Adv (%) over NC/ZC /LC/HC	% Increase over the best check				% Increase over the best check			
			State				Zone			
			Rank	Yield	% BVC	% HC	Rank	Yield	% BVC	% HC
25269 MEPH-126 (Hybrid)	6152 113 LS	21.72 19.78 17.18 ***18.78***	OD- BI-4 WB-2 CH-1 MH-8 TN-1 KA-2	3678 6487 6335 7713 5583 7545 6985	27.97 29.19 26.22 22.79 13.54 50.00 46.52	- 25.59 33.75 36.82 25.47 71.39 36.21	R**3**-3 R**5**-1 R**6**-8 R**7**-1	5500 7713 5583 6289	39.73 22.79 13.54 5.44	14.39 25.47 25.74 18.54
25278 CRHR-103 (Hybrid)	5942 109 LS	17.57 15.69 13.18 ***14.73***	BI-1 WB-1 TEL-2	7167 6481 8118	42.74 29.12 7.63	47.77 39.97 24.29	R**3**-1	5890	49.64	22.50
25271 MTU 1194 (MTU 2035-18-1-1) MTU 1081/ MTU 1064	5627 119 SB	11.33 9.55 7.18 ***8.65***	TN-5 KA-7	6283 5254	24.91 10.21	42.73	R**3**- R**7**-2	4253 6273	8.05 5.18	-1.15 18.24
Swarna (NC)	5054 112									
Zonal Check (ZC)	5136 113									
Local check (LC)	5250 118									
PA 6444 (HC)	***5179 103***									

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; HC- Hybrid Check GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BVC- Best Varietal Check

On overall mean basis IET 25269 (MEPH-126) a hybrid stood first (6152 kg/ha) in this trial with 113 days to 50% flowering and long slender grains. This hybrid entry out

yielded all the four checks with yield superiority of 21.72, 19.78, 17.18 and 18.78% over national, zonal, local and hybrid checks respectively. State wise this entry exhibited the superior performance in Tamil Nadu (1st, 7545 kg/ha) with 50 and 71.39% yield advantage over best varietal and hybrid checks respectively. Similarly, it was the top ranking entry (7713 kg/ha) in Chhattisgarh with 22.79 and 25.47%; 2nd best entry (6335kg/ha) in West Bengal with 26.22% and 36.82%; 2nd best entry (6985 kg/ha) in Karnataka with 46.52% and 36.21%; 4th best entry in Bihar (6487 kg/ha) with 29.19 and 33.75%; 8th best entry (5583 kg/ha) in Maharashtra with 13.54 and 25.74% over the best varietal and hybrid checks respectively in those states.

The zonal wise performance also revealed that it was the 1st ranking entry (7713 kg/ha) in 5th zone (Central) with 22.79% and 25.47%; 1st ranking (6289 kg/ha) entry with 49.64% and 22.50% yield advantage over the best varietal and hybrid checks in 7th zone (Southern). IET 25269 registered 3rd rank (5500 kg/ha) in 3rd zone (Eastern) with 39.73% and 14.39% and 8th rank (5583 kg/ha) in 6th zone (Western) with 13.54% and 25.74% yield superiority over the best varietal and hybrid checks respectively.

IET 25278 (CRHR-103) registered second rank on overall mean basis with a mean grain yield of 5942 kg/ha, 109 days to 50% flowering and long slender grains. It was superior to national (17.57%) zonal (15.69%), local (13.18%) and hybrid checks (14.73%). It recorded 1st rank (5890 kg/ha) in the 3rd zone (Eastern) with 49.64 and 22.50% yield advantage over the best varietal and hybrid checks respectively. It was also ranked first (7167 kg/ha) in Bihar with 42.74% and 47.77% yield improvement while in West Bengal it yielded (1st, 6481 kg/ha) 29.12 and 39.97% higher than the best varietal and hybrid checks respectively.

IET 25271 (MTU 1194) from the cross MTU 1081/MTU 1064 registered third rank (5627 kg/ha) with 119 days to 50% flowering and short bold grains. It out yielded national (11.33%), zonal (9.55%), local (7.18) and hybrid (8.65%) checks. It registered 4253 kg/ha grain yield with 8.05% yield advantage over the best check in zone 3 (Eastern) and stood 2nd best (6273 kg/ha) with 5.18% yield superiority over the best check in zone 7 (Southern). State wise this entry IET 25271 performed well in Karnataka (7th, 5254 kg/ha) and Tamil Nadu (5th, 6283 kg/ha) with more than 5% yield superiority over the best checks in those states.

In addition to the above discussed 3 best entries in the trial on overall mean basis, IETs 25252, 25228, 25261 registered the desired yield advantage over the best check and qualify for promotion.

Zone wise performance of the entries is discussed here under:

Zone III- Eastern zone: The Eastern zone was represented by 4 locations, BBN, PTN-ICAR, CHN and KOL. However the data from Kolkata was not included in experimental mean owing to low yields. The CV% of the experimental sites ranged from 9.26 at Patna (ICAR centre) to 11.56% at Bhubaneswar. Experimental mean of locations ranged from 3332 kg/ha at Bhubaneswar to 4601 kg/ha at Chinsurah. Days to flowering ranged from 95 days (IET 25240) to a maximum of 132 days (IET 25245). Plant height of the entries ranged from 88 cms (IET 25232) to 142 cm (IET 25258) while the no. of panicles per sq.m varied from a minimum of 207 (IET 25258) to a maximum of 352 (IET 25270). Mean yield of the entries in this zone ranged from 2763 kg/ha (IET 25233) to 6481 kg/ha (IET 25278) of the 60 test entries evaluated in this zone, 22 entries recorded the required yield superiority over the best varietal/hybrid check in this zone.

Performance of Promising Entries in Initial Varietal Trial – Late (IVT-L), Kharif 2015.

IET No.	Overall			Zone-III		Zone V		Zone VI		Zone		Remarks
	Yield	FD	%BVC %HC	%BVC %HC	FD	%BVC %HC	FD	%BVC %HC	FD	%BVC %HC	FD	
25269	6152	113	17.18 (18.78)	39.73 (14.39)	112	22.79 (25.47)	108	13.54 (25.74)	113	5.44 (18.54)	114	Promoted
25278	5942	109	13.18 (14.73)	49.64 (2.50)	108					3.25 (16.07)	109	Promoted
25271	5627	119	7.18	8.05	124					5.18	117	Promoted
25252	5530	112	5.33	21.44	113	9.47	102					Promoted
25228	5529	115	5.31	33.86	119			18.38	104			Promoted
25261	5516	114	5.06	16.92	115							Promoted
25231		110		44.89 (18.61)	110	11.09 (13.51)	104	13.78 (26.01)	111			Promoted
25236		106		29.95 (6.38)	110			*21.04 (34.05)*	113			Promoted
25246		112		29.67	111			13.78	119			Promoted
25260		107		26.37	110							Promoted
25287		107		25.43	110	13.18	106	13.78	111			Promoted
25229		104		19.76	106							Promoted
25256		103		19.48	104	10.06	96	16.69	100			Shift to IM
25235		101		18.14	102							Shift to IM
25259		103		16.76	109							Promoted
25254		108		15.11	102							Shift to IM
25284		105		14.40	102							Shift to IM
25263		107		14.15	112							Promoted
25268		105		14.15	111							Promoted
25244		108		13.33	109							Promoted
25272		110		13.16	110							Promoted
25230		101		12.22	107							Shift to IM
25239		102		11.68	102							Shift to IM
25241		118		11.02	124	12.54	115					Promoted
25255		120		10.51	122							Promoted
25286		105		9.12	106							Promoted
25273		111		9.01	109							Promoted
25281		104		4.82	106							Promoted
25264		120				18.81	113					Promoted
25266		117				15.63	107					Promoted
25249		112				13.43	113					Promoted
25248		114						14.27	121			Promoted
25270		113						6.77	114			Promoted
Best varietal check & Yield				3936 (NC)		6281 (NC)		4917 (NC)		5964 (LC)		

FD: Days to 50% flowering; BVC: Best varietal check; HC: Hybrid Check; NC: National Check; LC: Local check; Figures in parenthesis are percentage improvement over Hybrid check.

Zone V – Central zone: This zone is represented by a single location, Raipur. The experimental mean yield at this location was 5474 kg/ha with a CV of 12%. Among the 60 test entries, only 8 test entries registered the required yield advantage over the best check.

Zone VI – Western Zone: This zone is represented by two locations Shirgaon (Maharashtra) and Nawagam (Gujarat). However the data from Nawagam was not included in the mean due to low experimental mean yield (2870 kg/ha) at this location. Therefore the experimental mean yield of Shirgaon location was only considered (4239 kg/ha) and the CV was 14.69%. The performance of the entries ranged from, 3226 kg/ha (IET 25239) to 5924 kg/ha (IET 25236), 9 test entries registered the required yield advantage over the best check, however two entries IETs 25236 and 22256 were suggested for shift to medium duration group due to less than 110 days to 50% flowering.

Zone VII – Southern zone: This zone is represented by 8 locations namely, Maruteru, Ragolu, Nellore (AP), Warangal (Telangana), Sirsi, Ponnampet (Karnataka), Aduthurai (TN) and Karaikal (Pondicherry). However due to very low experimental mean, the data from Ponnampet was not included in the mean. The experimental mean ranged from 3666 kg/ha at Sirsi to 6963 kg/ha at Ragolu. The CV of the experimental ranged from 7.73% at Karaikal to 17.40% at Nellore. The performance of the best entries across the locations ranged from a minimum of 3164 kg/ha (IET 25285) to 6289 kg/ha (IET 25269) only one entry IET 25271 out yielded the best check in this zone with the required yield superiority.

Trial 15: Composition of entries in Advance Variety Trial 1 – Late (AVT 1-L), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
2nd year of testing				
1501	24264	NLR 3276	NLR 145/NLR 34452	MS
1502	24385	PAN 830	-	LS
1503	**Local Check**			
1504	24273	OR 2560-6	Pratikshya/ IR 32253-7	LS
1505	**PA 6444 (HC)**			
1506	24395	RP 5865-300-4-1-1-1-2-3	MTU 1075 / MTU 1010	MS
1507	23765	OR2482-2	Dular / Dular(D)	MB
1508	24238	YNP-9843	IET 19810/ IET 23098	MS
1509	**NDR 8002 (Eastern), Pushayami (Southern), Salivahana (Western), Ranjeet (North Eastern)--ZC**			
1510	24412	CR 3862-25-7-3	Swarna/Sarasa	MS
1511	23725	OR 2560-3	Pratikshya/IR 32253-7	MS
1512	24274	R 1641-914-1-400-1	MTU 1001/ Swarna	SB
1513	24252	CB 11 107	BPT 5204 / CO (R)50	MS
1514	**Swarna (NC)**			
1515	24414	OR (T) 20	Daya Mutant	SB
1516	23742	Culture KAU MK 157	Mahsuri/Kuthiru	MB
1517	24284	OR 2573-4	Birupa/ IR 76561-AC-8-8	LB
1518	24261	MTU 1181 (RM 39-52-1-1)	CM 123/ MTU 3626	SB
1519	24352	OR 2487-9	OR 2076-2/Ashoka 228	LB
1520	23610	NP 7061	IR 64/ Mahsuri//IR 36	MS
1521	23752	R 741-55-2-1-R-1	RP 2115-40-9/BG 4001	LB
1522	24292	MTU 1182 (MTU II 365-62-1-1)	MTU 1075/ IR 64	LB
1523	24418	WGL-737	RP 4616-3-6/Kavya	LB
1524	23767	OR2481-9	IR 64/Pratikshya//Pathara	MB
1525	24240	NP-9862	PR-116/NP-45	SB
1526	24365	PAN 828	-	LS
1527	24297	OR (T) 26	Lalat Mutant	SB
1528	24234	NR 348	ACC. 413-1-2/ACC.457-1-2-1	MS
1529	24241	PNP-9776	NPG-5/NPG-6	MS
1530	24367	OR 2344-1	Jagannath / IR 21567-1-18-3	SB
1531	24235	KSLRV-221	KSLRV-32/KSLM-63	MS
1532	24374	RNR 11481	MTU 1010/JGL 3855	MS
1533	24246	CR 2819-1-5-3-B-2-B-12-B	TRC-87-251/ARC10063	LB
1534	24236	PRNP-9369	NPG-5/NPG-8	MS
1535	24263	JGL 18629	JGL7046/Swarna//BPT 5204	MS

Table No. 3.42: Grain Yield (kg/ha) of entries in AVT1-L Zone 3&5 Kharif 2015

Entry No.	IET No.	III																V						Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		OD		OD		OD (2)			W.B		W.B		W.B (2)			Zone III Mean (4)			CG		Overall Mean (5)					
		BBN		CRR		Mean			CHN		KKT		Mean						RPR							
1502	24385	4678	3	5600	5	5139	3	9% **13%**	3872		6400	1 #	5136	4 #	**23%**	5138	2 #	7% **18%**	6292	5 #	5369	1 #	6% **19%**	114	124	257
1503	Local Check	2778		5083	7	3930			4349		5956	2 #	5152	3 #	**23%**	4541		4%	5155		4664		3%	115	119	237
1505	PA 6444 (HC)	4167		4917		4542			3591		4778	4	4185			4363			5098		4510			110	111	238
1506	24395	4386	7	4998	9	4692	8	**3%**	5527	6 #	5689	3 #	5608	1 #	9% **34%**	5150	1 #	8% **18%**	6232	6 #	5367	2 #	6% **19%**	118	112	253
1509	Zonal Check	3728		5725	3	4727	6	**4%**	5135	8 #	4533	7	4834	8 #	**16%**	4780	8	**10%**	6156	7 #	5055	8 #	**12%**	117	110	225
1511	23725	4605	4	5176	6	4891	4	3% **8%**	5556	5 #	4578	6	5067	5 #	**21%**	4979	4 #	4% **14%**	6365	4 #	5256	4 #	4% **17%**	107	110	221
1512	24274	3728		5030	8	4379			4826	#	3689		4257		2%	4318			5375		4530			106	107	250
1514	Swarna (NC)	4386	8	4905		4646		2%	5191	7 #	3356		4273		2%	4459		2%	5568		4681		4%	113	107	248
1519	24352	4313	9	4804		4558			5107	9 #	3778		4442		6%	4500		3%	5647		4730		5%	116	117	238
1520	23610	4532	5	6020	2 #	5276	2	12% **16%**	4910	#	3600		4255		2%	4766	9	**9%**	5151		4843		7%	111	112	236
1524	23767	4094		4861		4477			6510	1 *#	4311	9	5410	2 #	5% **29%**	4944	5 #	3% **13%**	6848	1 #	5325	3 #	5% **18%**	114	105	244
1526	24365	4751	2	6178	1 #	5465	1 #	16% **20%**	4770	#	4422	8	4596		10%	5030	3 #	5% **15%**	6090	8 #	5242	6 #	4% **16%**	113	121	227
1527	24297	4898	1	4800		4849	5	3% **7%**	6341	2 *#	3667		5004	6 #	**20%**	4926	6 #	3% **13%**	6563	3 #	5254	5 #	4% **16%**	111	115	261
1529	24241	4532	6	4865		4698	7	**3%**	5752	4 #	3644		4698	#	**12%**	4698		8%	5259		4811		7%	113	106	252
1530	24367	3655		5725	4	4690	9	**3%**	5892	3 #	4022		4957	7 #	**18%**	4824	7	1% **11%**	6610	2 #	5181	7 #	2% **15%**	117	121	232
1532	24374	4167		4764		4465			4770	#	4733	5	4752	9 #	**14%**	4608		6%	5847	9	4856	9	**8%**	116	121	249
	Exp Mean	**4212**		**5216**		**4714**			**5131**		**4447**		**4789**			**4752**			**5891**		**4979**			**113**	**114**	**242**
	C.D. 5%	920		1065		798			820		792		509			478			965		377			1	0	9
	C.V.%	13.10		12.25		14.66			9.58		10.68		9.21			12.44			9.82		10.51			0.88	0.00	5.37
	Sowing Date	30-Jun		17-Jun					23-Jun		25-Jun								06-Jul							
	Planting Date	29-Jul		01-Aug					05-Aug		26-Jul								27-Jul							
	Local ©	Upahar		Sumit					Kaushalya (IET 19140)		MTU-7209								Jaldubi							

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.42: Grain Yield (kg/ha) of entries in AVT1-L Zone 6 Kharif 2015

Entry No.	IET No.	VI				Zone VI (2)			Overall Mean (2)			Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		MH		GU										
		SHR		NWG										
1501	24264	3750		3108		3429			3429			97	113	244
1502	24385	5014	6 …15%	4563	4 *	4789	4 *	24%	4789	4 *	24%	107	131	229
1503	Local Check	4368		3042		3705			3705			113	123	221
1504	24273	3951		2910		3431			3431			97	120	231
1505	PA 6444 (HC)	5389	2 * …23%	4233	6 *	4811	3 *	24%	4811	3 *	24%	97	114	252
1506	24395	4736	7 …8%	3902		4319	*	11%	4319	*	11%	110	118	229
1507	23765	5035	5 …15%	4696	3 *#	4865	2 *	26% **1%**	4865	2 *	26% **1%**	102	123	225
1508	24238	3694		3505		3600			3600			100	114	231
1509	Zonal Check	3826		2513		3170			3170			120	108	228
1510	24412	4674	9 …7%	2315		3494			3494			107	117	244
1511	23725	3653		3373		3513			3513			98	123	227
1513	24252	4056		1257		2656			2656			116	114	225
1514	Swarna (NC)	4181		3571		3876			3876			107	99	233
1516	23742	5264	3 * …21%	1786		3525			3525			107	127	255
1517	24284	4264		3902		4083		5%	4083		5%	103	131	233
1520	23610	4715	8 …8%	3968	9	4342	8 *	12%	4342	8 *	12%	107	112	231
1521	23752	4069		3571		3820			3820			101	115	232
1524	23767	5993	1 * …37% _11%	4167	7 *	5080	1 *	31% **6%**	5080	1 *	31% **6%**	107	108	254
1525	24240	4569	…5%	2513		3541			3541			86	112	237
1526	24365	5090	4 …17%	4167	8 *	4628	5 *	19%	4628	5 *	19%	106	138	231
1527	24297	3854		4828	2 *#	4341	9 *	12%	4341	9 *	12%	108	117	233
1528	24234	4347		2183		3265			3265			105	112	234
1529	24241	3722		5357	1 *#	4540	6 *	17%	4540	6 *	17%	101	109	247
1533	24246	4396	…1%	2579		3488			3488			97	128	236
1534	24236	4292		4431	5 *	4361	7 *	13%	4361	7 *	13%	103	95	248
1535	24263	4083		3307		3695			3695			107	100	245
	Exp Mean	**4423**		**3452**		**3937**			**3937**			**104**	**116**	**236**
	C.D. 5%	731		403		437			376			1	6	9
	C.V.%	10.07		7.13		9.70			8.33			0.56	0.00	3.19
	Sowing Date	10-Jun		09-Jun										
	Planting Date	04-Jul		16-Jul										
	Local ©	RTN 2		Mahsuri										

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.42 : Grain Yield (kg/ha) of entries in AVT1-L Zone 7 Kharif 2015

Entry No.	IET No.	VII																					
		A.P.		A.P.		A.P.		A.P. (3)			TEL			TN			KA		KA		KA (1)		
		MTU		RGL		NLR		Mean			WGL			ADT			SRS		@PNP		Mean		
1502	24385	3140		5874	5	4833	9 #	4616			3356			4333	7	...4%	6216	1 *#	2195		6216	1 *	42% **22%**
1503	Local Check	5044	7	5597	7	6693	2 #	5778	2 #	**14%**	5023	7	_16%	4153	8		4392	8	3297	2	4392	8 *	
1505	PA 6444 (HC)	5112	5	6440	3	3639		5064	8		4334			4736	4 *	...14%	5104	2	3065	3	5104	2 *	16%
1506	24395	5915	2 #	4969	9	4638	#	5174	6	**2%**	4775	8	_10%	5773	2 *#	...39% _22%	4975	3	2921	6	4975	3 *	13%
1509	Zonal Check	3597		4290		4088		3992			5350	6	_23%	3065			3427		3504	1	3427	*	
1511	23725	3623		6440	4	6485	3 #	5516	3	**9%**	6481	2 #	...9% _50%	6544	1 *#	...58% _38%	4918	4	1658		4918	4 *	12%
1514	Swarna (NC)	6017	1 #	4270		4890	8 #	5059	9		5970	5 #	_38%	4131	9		3745		2016		3745	*	
1515	24414	4717		6667	1	4039		5141	7	**2%**	6252	4 #	...5% _44%	4563	5	...10%	4271	9	2948	5	4271	9 *	
1518	24261	5050	6	5730	6	4342		5041			6257	3 #	...5% _44%	4393	6	...6%	4202		3038	4	4202	*	
1522	24292	5458	3	6533	2	6973	1 #	6321	1 #	9% **25%**	4567	9	_5%	3177			4556	7	2061		4556	7 *	4%
1523	24418	4910	8	4660		5424	7 #	4998			3646			5446	3 *#	...31% _15%	4093		2491	9	4093	*	
1526	24365	3603		5597	8	5572	6 #	4924			4516		_4%	3008			4779	6	2742	8	4779	6 *	9%
1527	24297	4866	9	4907		6246	4 #	5340	4	**5%**	3305			3095			3890		2885	7	3890	*	
1531	24235	5201	4	4331		6184	5 #	5239	5	**3%**	7117	1 *#	...19% _64%	3349			4914	5	1676		4914	5 *	12%
	Exp Mean	**4732**		**5450**		**5289**		**5157**			**5068**			**4269**			**4534**		**2607**		**4534**		
	C.D. 5%	564		1545		989		619			1064			436			998		557				
	C.V.%	7.11		16.89		11.14		12.80			12.51			6.09			13.11		12.73				
	Sowing Date	30-Jun		07-Jul		04-Aug					24-Jun			07-Aug			27-Jun		20-Jul				
	Planting Date	05-Aug		07-Aug		08-Sep					28-Jul			05-Sep			30-Jul		27-Aug				
	Local ©	MTU 1061		RGL 11414 (Vamsadhara)		NLR 33892					Siddhi (WGL-44)			CR 1009			ASHA (IET9926)		Tunga (IET 13901)				

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.42 Contd.: Grain Yield (kg/ha) of entries in AVT1-L Zone 7 Kharif 2015

Entry No.	IET No.	PUD KRK		Region VII Mean (7)			Overall Mean(7)			Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
1502	24385	5159	4	4702			4702			110	120	328
1503	Local Check	5246	3	5164	2	**5%**	5164	2	**5%**	119	119	349
1505	PA 6444 (HC)	4984	7	4907	7		4907	7		104	109	321
1506	24395	3206		4893	8		4893	8		111	107	309
1509	Zonal Check	3421		3891			3891			97	101	313
1511	23725	4071		5509	1 #	7% **12%**	5509	1 #	7% **12%**	109	107	330
1514	Swarna (NC)	3913		4705			4705			113	93	329
1515	24414	5429	1 #	5134	4	**5%**	5134	4	**5%**	107	105	308
1518	24261	4841	8	4974	6	**1%**	4974	6	**1%**	101	108	305
1522	24292	4667	9	5133	5	**5%**	5133	5	**5%**	112	110	334
1523	24418	5040	5	4746	9		4746	9		108	105	323
1526	24365	4643		4531			4531			109	112	306
1527	24297	5357	2	4524			4524			106	107	311
1531	24235	5016	6	5159	3	**5%**	5159	3	**5%**	107	101	320
	Exp Mean	**4642**		**4855**			**4855**			**108**	**107**	**321**
	C.D. 5%	434		357			357			1	4	15
	C.V.%	5.57		12.07			12.09			2.12	0.00	8.22
	Sowing Date	19-Aug										
	Planting Date	23-Sep										
	Local ©	KKL(R)1										

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.43: Days to 50% Flowering of entries in AVT1-L Zone 3&5 Kharif 2015

Entry No.	IET No.	III						Zone III Mean (4)	V	Overall Mean (5)
		OD	OD	OD (2)	W.B	W.B	W.B (2)		CG	
		BBN	CRR	Mean	CHN	KKT	Mean		RPR	
1502	24385	107	122	115	122	112	117	116	105	114
1503	Local Check	122	123	123	114	110	112	117	107	115
1505	PA 6444 (HC)	100	124	112	110	121	115	113	95	110
1506	24395	114	128	121	121	118	120	121	108	118
1509	Zonal Check	111	127	119	115	122	119	119	108	117
1511	23725	101	113	107	112	110	111	109	99	107
1512	24274	100	110	105	112	109	111	108	99	106
1514	National ©	113	113	113	123	107	115	114	107	113
1519	24352	108	131	120	117	115	116	118	108	116
1520	23610	108	109	108	121	112	116	112	107	111
1524	23767	110	124	117	117	114	116	116	105	114
1526	24365	108	121	114	114	122	118	116	103	113
1527	24297	107	125	116		109	109	114	104	111
1529	24241	106	121	114	115	121	118	116	100	113
1530	24367	114	127	120	124	113	118	119	108	117
1532	24374	113	124	119	115	122	119	119	108	116
	Exp Mean	**109**	**121**	**115**	**117**	**115**	**116**	**115**	**104**	**113**
	C.D. 5%	2	2	1	0	2	1	1	2	1
	C.V.%	0.88	0.81	0.84	0.00	1.19	0.84	0.84	0.90	0.88

Table No. 3.43: Days to 50% flowering of entries in AVT1-L Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		SHR	NWG		
1501	24264	90	104	97	97
1502	24385	95	119	107	107
1503	Local Check	106	119	113	113
1504	24273	89	105	97	97
1505	PA 6444 (HC)	87	107	97	97
1506	24395	95	126	110	110
1507	23765	90	114	102	102
1508	24238	88	112	100	100
1509	Zonal Check	105	135	120	120
1510	24412	90	123	107	107
1511	23725	88	107	98	98
1513	24252	93	139	116	116
1514	Swarna (NC)	93	120	107	107
1516	23742	88	126	107	107
1517	24284	90	116	103	103
1520	23610	95	119	107	107
1521	23752	87	115	101	101
1524	23767	92	123	107	107
1525	24240	73	99	86	86
1526	24365	93	119	106	106
1527	24297	95	121	108	108
1528	24234	90	121	105	105
1529	24241	89	114	101	101
1533	24246	89	105	97	97
1534	24236	92	113	103	103
1535	24263	94	120	107	107
	Exp Mean	**91**	**117**	**104**	**104**
	C.D. 5%	1	0	1	1
	C.V.%	0.93	0.00	0.58	0.56

Table No. 3.44: Plant Height (cm) of entries in AVT1-L Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		SHR	NWG		
1501	24264	113	113	113	113
1502	24385	142	121	131	131
1503	Local Check	120	126	123	123
1504	24273	132	109	120	120
1505	PA 6444 (HC)	106	123	114	114
1506	24395	119	117	118	118
1507	23765	128	119	123	123
1508	24238	119	109	114	114
1509	Zonal Check	117	99	108	108
1510	24412	127	108	117	117
1511	23725	134	111	123	123
1513	24252	125	104	114	114
1514	Swarna (NC)	100	97	99	99
1516	23742	141	113	127	127
1517	24284	136	126	131	131
1520	23610	118	107	112	112
1521	23752	119	111	115	115
1524	23767	119	98	108	108
1525	24240	112	113	112	112
1526	24365	142	133	138	138
1527	24297	121	114	117	117
1528	24234	122	101	112	112
1529	24241	100	117	109	109
1533	24246	129	128	128	128
1534	24236	97	92	95	95
1535	24263	100	99	100	100
	Exp Mean	**121**	**112**	**116**	**116**
	C.D. 5%			6	6

Table No. 3.43: Days to 50% flowering of entries in AVT1-L Zone 7 Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (8)	Overall Mean (8)
		A.P.	A.P.	A.P.	A.P. (3)	TEL	TN	KA	KA	KA (2)	PUD		
		MTU	RGL	NLR	Mean	WGL	ADT	SRS	PNP	Mean	KRK		
1502	24385	115	106	103	108	113	100	117	114	116	112	110	110
1503	Local Check	121	111	119	117	109	127	129	116	123	121	119	119
1505	PA 6444 (HC)	101	93	110	101	105	88	109	109	109	118	104	104
1506	24395	119	111	107	112	122	92	117	111	114	112	111	111
1509	Zonal Check	92	82	90	88	114	84	97	99	98	121	97	97
1511	23725	102	102	100	101	109	100	119	119	119	124	109	109
1514	Swarna (NC)	115	107	103	108	120	99	121	119	120	118	113	113
1515	24414	102	99	104	102	109	94	115	114	114	116	107	107
1518	24261	98	92	107	99	101	82	106	107	107	116	101	101
1522	24292	116	107	106	110	120	100	116	109	113	120	112	112
1523	24418	103	102	114	106	110	104	106	107	106	116	108	108
1526	24365	109	108	108	108	117	88	116	109	113	120	109	109
1527	24297	115	101	110	109	111	86	109	104	106	115	106	106
1531	24235	103	99	117	106	109	94	112	110	111	116	107	107
	Exp Mean	**108**	**101**	**107**	**105**	**112**	**96**	**114**	**110**	**112**	**118**	**108**	**108**
	C.D. 5%	2	2	0	1	2	9	0	1	1	4	1	1
	C.V.%	0.84	1.27	0.00	0.84	1.30	5.87	0.19	0.77	0.53	1.83	2.13	2.12

Table No. 3.44: Plant Height (cm) of entries in AVT1-L Zone 3&5 Kharif 2015

Entry No.	IET No.	III						Zone III Mean (4)	V	Overall Mean (5)
		OD	OD	OD (2)	W.B	W.B	W.B (2)		CG	
		BBN	CRR	Mean	CHN	KKT	Mean		RPR	
1502	24385	130	128	129	118	110	114	122	132	124
1503	Local Check	125	125	125	117	93	105	115	137	119
1505	PA 6444 (HC)	114	117	116	111	99	105	110	113	111
1506	24395	115	116	116	112	104	108	112	111	112
1509	Zonal Check	110	120	115	105	101	103	109	114	110
1511	23725	105	112	109	110	112	111	110	113	110
1512	24274	107	112	110	110	97	103	106	107	107
1514	Swarna (NC)	107	130	119	105	101	103	111	92	107
1519	24352	122	135	129	125	88	107	118	115	117
1520	23610	108	129	119	115	103	109	114	107	112
1524	23767	103	101	102	108	100	104	103	111	105
1526	24365	119	132	126	140	99	119	122	116	121
1527	24297	113	118	116	128	104	116	116	114	115
1529	24241	110	112	111	110	89	100	105	110	106
1530	24367	129	120	125	120	130	125	125	108	121
1532	24374	131	126	129	122	119	120	124	107	121
	Exp Mean	**116**	**121**	**118**	**116**	**103**	**109**	**114**	**113**	**114**

Table No. 3.44: Plant Height (cm) of entries in AVT1-L Zone 7 Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (8)	Overall Mean (8)
		A.P.	A.P.	A.P.	A.P. (3)	TEL	TN	KA	KA	KA (2)	PUD		
		MTU	RGL	NLR	Mean	WGL	ADT	SRS	PNP	Mean	KRK		
1502	24385	141	145	107	131	124	117	106	71	88	153	120	120
1503	Local Check	132	131	128	130	110	118	110	90	100	129	119	119
1505	PA 6444 (HC)	133	121	102	119	119	110	91	70	81	128	109	109
1506	24395	129	120	103	117	119	109	94	72	83	109	107	107
1509	Zonal Check	122	110	83	105	119	112	89	75	82	101	101	101
1511	23725	131	129	100	120	122	114	99	75	87	85	107	107
1514	Swarna (NC)	114	111	88	105	109	112	76	59	67	76	93	93
1515	24414	135	129	100	121	133	103	86	74	80	82	105	105
1518	24261	145	129	86	120	134	118	91	63	77	97	108	108
1522	24292	139	125	112	125	123	123	88	76	82	96	110	110
1523	24418	139	117	95	117	119	117	84	68	76	101	105	105
1526	24365	147	142	100	130	122	121	96	72	84	97	112	112
1527	24297	131	126	99	119	123	110	89	73	81	102	107	107
1531	24235	118	114	95	109	113	113	85	65	75	109	101	101
	Exp Mean	**133**	**125**	**100**	**119**	**121**	**114**	**92**	**72**	**82**	**105**	**107**	**107**
	C.D. 5%											4	4

Table No. 3.45 : Panicles/ M² of entries in AVT1-L Zone 3&5 Kharif 2015

Entry No.	IET No.	III						Zone III Mean (4)	V	Overall Mean (5)
		OD	OD	OD (2)	W.B	W.B	W.B (2)		CG	
		BBN	CRR	Mean	CHN	KKT	Mean		RPR	
1502	24385	218	267	243	264	333	299	271	204	257
1503	Local Check	224	272	248	231	272	252	250	188	237
1505	PA 6444 (HC)	206	253	229	264	250	257	243	216	238
1506	24395	224	266	245	363	232	298	271	182	253
1509	Zonal Check	225	203	214	330	183	256	235	186	225
1511	23725	179	265	222	297	173	235	229	191	221
1512	24274	230	195	212	363	274	319	266	187	250
1514	Swarna (NC)	191	258	225	396	214	305	265	179	248
1519	24352	221	272	247	231	288	260	253	179	238
1520	23610	218	250	234	264	263	264	249	185	236
1524	23767	210	238	224	330	238	284	254	202	244
1526	24365	205	272	239	231	207	219	229	218	227
1527	24297	225	296	260	264	323	294	277	196	261
1529	24241	234	248	241	264	314	289	265	202	252
1530	24367	222	258	240	231	245	238	239	202	232
1532	24374	222	240	231	330	271	301	266	184	249
	Exp Mean	**216**	**253**	**235**	**291**	**255**	**273**	**254**	**194**	**242**
	C.D. 5%	16	21	14	0	17	9	9	32	9
	C.V.%	4.55	5.00	5.15	0.00	3.91	2.88	4.22	10.05	5.37

Table No. 3.45 : Panicles/ M² of entries in AVT1-L Zone 6 Kharif 2015

Entry No.	IET No.	VI		Zone VI Mean (2)	Overall Mean (2)
		MH	GU		
		SHR	NWG		
1501	24264	210	279	244	244
1502	24385	171	287	229	229
1503	Local Check	168	273	221	221
1504	24273	191	272	231	231
1505	PA 6444 (HC)	220	283	252	252
1506	24395	178	279	229	229
1507	23765	164	286	225	225
1508	24238	194	269	231	231
1509	Zonal Check	189	268	228	228
1510	24412	221	268	244	244
1511	23725	184	270	227	227
1513	24252	193	256	225	225
1514	Swarna (NC)	188	277	233	233
1516	23742	246	264	255	255
1517	24284	191	275	233	233
1520	23610	196	265	231	231
1521	23752	198	267	232	232
1524	23767	226	282	254	254
1525	24240	210	264	237	237
1526	24365	180	282	231	231
1527	24297	189	277	233	233
1528	24234	201	267	234	234
1529	24241	201	293	247	247
1533	24246	203	270	236	236
1534	24236	212	285	248	248
1535	24263	216	274	245	245
	Exp Mean	**198**	**274**	**236**	**236**
	C.D. 5%	18	5	9	9
	C.V.%	5.42	1.06	3.37	3.19

Table No. 3.45: Panicles/ M² of entries in AVT1-L Zone 7 Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (8)	Overall Mean (8)
		A.P.	A.P.	A.P.	A.P. (3)	TEL	TN	KA	KA	KA (2)	PUD		
		MTU	RGL	NLR	Mean	WGL	ADT	SRS	PNP	Mean	KRK		
1502	24385	339	351	371	354	330	254	287	378	332	313	328	328
1503	Local Check	310	387	340	346	374	234	300	457	379	390	349	349
1505	PA 6444 (HC)	286	387	264	313	352	256	271	465	368	287	321	321
1506	24395	312	373	318	334	319	157	231	414	323	350	309	309
1509	Zonal Check	306	304	293	301	341	195	249	508	378	305	313	313
1511	23725	301	348	331	327	352	298	300	392	346	315	330	330
1514	Swarna (NC)	350	411	322	361	297	196	213	545	379	300	329	329
1515	24414	286	318	338	314	275	146	278	472	375	352	308	308
1518	24261	332	306	331	323	330	197	247	399	323	299	305	305
1522	24292	308	362	402	357	330	235	256	494	375	289	334	334
1523	24418	315	408	266	330	319	248	276	450	363	303	323	323
1526	24365	273	341	314	309	308	115	282	523	402	295	306	306
1527	24297	323	399	289	337	330	157	287	407	347	300	311	311
1531	24235	299	394	266	320	330	295	258	414	336	304	320	320
	Exp Mean	**310**	**364**	**318**	**330**	**328**	**213**	**267**	**451**	**359**	**314**	**321**	**321**
	C.D. 5%	27	62	35	25	29	3	69	51	30	14	15	15

Table 3.46: Grain quality characteristics of entries in AVT 1-L Kharif 2015

		IIRR											NRRI		
Entry No..	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**GT**	**Grain Chak**	**ASV**	**AC**	**GC**	**ASV**	**AC**	**GC**
1501	**24264**	**79.3**	**67.0**	**49.9**	**5.52**	**1.87**	**2.95**	**MS**	**A**	**4**	**23.73**	**49**	**3.0**	**17.17**	**43**
1502	**24385**	**81.3**	**69.4**	**50.9**	**6.47**	**2.22**	**2.91**	**LB**	**VOC**	**4**	**25.63**	**39**	**5.0**	**19.35**	**42**
1504	**24273**	**79.1**	**67.4**	**41.2**	**5.68**	**2.13**	**2.66**	**MS**	**VOC**	**4**	**24.25**	**22**	**4.0**	**19.35**	**51**
1505	**PA 6444 (HC)**	**81.5**	**70.5**	**52.7**	**6.05**	**2.22**	**2.72**	**LB**	**VOC**	**4**	**20.76**	**47**	**4.3**	**16.87**	**52**
1506	**24395**	**79.8**	**70.6**	**62.8**	**5.69**	**2.06**	**2.76**	**MS**	**A**	**4**	**25.49**	**22**	**5.0**	**18.30**	**41**
1507	**23765**	**80.7**	**64.7**	**40.0**	**5.55**	**2.49**	**2.22**	**SB**	**OC**	**4**	**25.05**	**40**	**5.0**	**20.25**	**38**
1508	**24238**	**78.1**	**67.8**	**50.5**	**4.73**	**1.93**	**2.45**	**SB**	**A**	**4**	**23.73**	**22**	**3.0**	**18.07**	**64**
1509	**Zonal Check**	**80.0**	**70.6**	**59.5**	**5.95**	**2.1**	**2.83**	**MS**	**VOC**	**4**	**24.72**	**22**	**5.0**	**19.05**	**42**
1510	**24412**	**77.3**	**67.6**	**54.5**	**5.10**	**2.01**	**2.53**	**MS**	**VOC**	**4**	**23.49**	**30**	**4.0**	**18.30**	**50**
1511	**23725**	**79.2**	**69.0**	**53.8**	**5.80**	**2.05**	**2.82**	**MS**	**A**	**4**	**23.81**	**23**	**3.0**	**17.25**	**51**
1512	**24274**	**76.1**	**66.5**	**62.0**	**5.37**	**2.24**	**2.39**	**SB**	**A**	**4**	**25.84**	**43**	**4.0**	**19.50**	**48**
1513	**24252**	**79.0**	**69.9**	**59.8**	**4.78**	**1.95**	**2.45**	**SB**	**A**	**4.4**	**24.55**	**23**	**5.0**	**18.67**	**50**
1514	**Swarna (NC)**	**77.1**	**67.2**	**59.0**	**5.18**	**2.24**	**2.31**	**SB**	**A**	**4**	**24.40**	**23**	**4.0**	**17.77**	**41**
1515	**24414**	**78.4**	**69.0**	**60.0**	**5.22**	**2.22**	**2.35**	**SB**	**VOC**	**4**	**26.37**	**42**	**3.0**	**19.50**	**45**
1516	**23742**	**78.2**	**69.2**	**32.9**	**4.79**	**2.53**	**1.89**	**SB**	**VOC**	**7**	**24.61**	**22**	**7.0**	**19.35**	**42**
1517	**24284**	**78.3**	**67.7**	**52.5**	**6.87**	**2.33**	**2.94**	**LB**	**VOC**	**4**	**25.57**	**44**	**4.0**	**21.45**	**43**
1518	**24261**	**76.7**	**65.7**	**47.0**	**6.73**	**2.49**	**2.70**	**LB**	**VOC**	**4**	**24.25**	**46**	**3.0**	**19.35**	**42**
1519	**24352**	**79.9**	**71.3**	**59.8**	**6.76**	**2.20**	**3.07**	**LS**	**VOC**	**4**	**26.07**	**39**	**4.0**	**17.85**	**48**
1520	**23610**	**79.9**	**69.0**	**62.9**	**5.78**	**2.25**	**2.56**	**MS**	**VOC**	**4**	**24.58**	**38**	**4.0**	**19.50**	**39**
1521	**23752**	**78.1**	**69.3**	**47.2**	**5.31**	**2.44**	**2.17**	**SB**	**VOC**	**7**	**25.72**	**45**	**7.0**	**20.17**	**38**
1522	**24292**	**80.4**	**70.0**	**59.1**	**5.74**	**2.15**	**2.66**	**MS**	**VOC**	**4.9**	**25.43**	**23**	**5.7**	**19.20**	**40**
1523	**24418**	**81.3**	**69.8**	**60.0**	**5.92**	**2.16**	**2.74**	**MS**	**VOC**	**4**	**25.52**	**39**	**4.0**	**20.32**	**39**
1524	**23767**	**81.1**	**67.5**	**31.2**	**5.22**	**2.38**	**2.19**	**SB**	**VOC**	**4**	**25.37**	**41**	**4.0**	**20.70**	**41**
1525	**24240**	**78.0**	**66.4**	**39.5**	**6.76**	**2.21**	**3.05**	**LS**	**A**	**3**	**12,81**	**85**	**6.0**	**11.47**	**67**
1526	**24365**	**79.5**	**71.9**	**50.2**	**6.41**	**2.10**	**3.05**	**LS**	**VOC**	**4.9**	**24.81**	**46**	**4.0**	**20.77**	**32**
1527	**24297**	**79.0**	**68.4**	**59.9**	**5.56**	**2.21**	**2.51**	**MS**	**VOC**	**4**	**23.96**	**25**	**5.0**	**18.82**	**36**
1528	**24234**	**78.2**	**68.0**	**57.7**	**5.25**	**2.14**	**2.45**	**SB**	**VOC**	**4**	**21.79**	**22**	**5.0**	**18.78**	**33**
1529	**24241**	**78.7**	**66.2**	**51.9**	**5.67**	**1.74**	**3.25**	**SS**	**A**	**3**	**20.15**	**51**	**3.0**	**20.17**	**40**
1530	**24367**	**78.5**	**68.8**	**66.0**	**5.04**	**2.37**	**2.12**	**SB**	**A**	**4**	**24.78**	**44**	**4.0**	**18.45**	**52**
1531	**24235**	**80.4**	**69.6**	**51.5**	**4.75**	**1.88**	**2.52**	**MS**	**VOC**	**4**	**20.59**	**23**	**4.0**	**19.35**	**43**
1532	**24374**	**80.5**	**70.1**	**60.4**	**5.85**	**2.13**	**2.74**	**MS**	**VOC**	**4**	**23.20**	**23**	**5.0**	**19.35**	**47**
1533	**24246**	**77.3**	**67.1**	**60.6**	**6.09**	**2.41**	**2.52**	**LB**	**VOC**	**4**	**20.62**	**33**	**4.0**	**19.12**	**51**
1534	**24236**	**80.1**	**68.1**	**57.3**	**4.94**	**1.84**	**2.68**	**MS**	**VOC**	**4**	**22.96**	**22**	**4.0**	**19.72**	**50**
1535	**24263**	**82.4**	**72.1**	**69.7**	**5.11**	**1.81**	**2.82**	**MS**	**A**	**5**	**22.70**	**23**	**4.0**	**19.42**	**53**

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent

Table 3.47: Composition of entries in Initial Variety Trial – Late (IVT -L), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
1601	25228	OR 2427-5	OR 1334-8/Swarna	SS
1602	25229	CN-1957-3-3-9	Selection from CN 1769	MS
1603	25230	CR 3940-21	Improved Lalat/Swarna Sub-1	MS
1604	25231	***CRHR-102***	-	MS
1605	25232	RP 5937- Bio-150-1-4	PR114 *3/O.glaberrima(102526)	LS
1606	25233	AD 13189	ADT 44/Jeeragasamba	SB
1607	25234	KJT 4-12-10-3-14-12-7	PR 106/Indrayani	SB
1608	25235	PAU 2K 10-23-54-14-52-20-0-3	PAU 201/PAU 3699-13-2-3-1//PAU 201	LS
1609	25236	**NK 16531**	-	LS
1610	25237	R1630-33-1-23-1	IR 71703-221-1-5-2 X Laxmibhog	SB
1611	25238	WGL-828	NLR 34449/MTU 1001	MS
1612	25239	HHZ 5-Y4-SAL1-Y1-	Huang-Hua-Zhan*2/0M1723	LS
1613	25240	RP 5364 Bulk-1-3-2	RP Bio 226/ IRGC39050// MTU 1081	LS
1614	25241	MTU 1193 (MTU 2071-13-1-1)	BPT 5204/MTU1064	MS
1615	25242	TTB-281-3-2-14	Borsali/Kushal	MB
1616	25243	HUR-157	PB-1/IR 74285	LS
1617	**NDR 8002 (Eastern), Pushyami (Southern),Salivahana (Western), Ranjeet (North Eastern) –ZC**			
1618	25244	CR 3862-29-15-7	Swarna /Sarasa	MB
1619	25245	NLR 3328	NLR33892/BPT5204	SB
1620	25246	MTU 1189 (MTU II 369-51-1-1)	MTU1075/BM71	MS
1621	25247	RP 4421-111-21-3-1-1-B	JV 42/ Pusa Basmati-1	LS
1622	25248	AAGP-9487	NP 3938/IET 23088	MS
1623	25249	CN-1967-13-4-3	Swarna/Sashi	MS
1624	25250	CR 3697-4-2-4-3-2	CR662-2-2-1-1-1/Sarala//CR780-1937-1-3/DRR1702	LS
1625	25251	RP 5936- Bio-31-2-3	PR114*3/O.glumaepatula(104387)	LS
1626	25252	PNP-9984	NPG 10/NPG 14	MS
1627	25253	RGM-AS-43	Abhaya / Swarna	LS
1628	25254	JKRH 2228	-	LS
1629	25255	MTU 1191 (MTU 2035-18-1-2-1)	MTU 1081/MTU 1064	MS
1630	**Swarna (NC)**			
1631	25256	CR 3960-1 (IR 72158-148-4-2 CR 3960-33-2)	BG 90-2/IR 67962-84-2-2-2	MS
1632	25257	RP 4335-12-1-1-1-1	Tella Hamsa/ Pusa 169	LS
1633	25258	Barhasaal	Selection from Barahsaal	SB
1634	25259	RGM-AS-41	Abhaya /Swarna	LS
1635	25260	PAU 4042-3-1-2-2-2	TDCD3815//PR116/PAU 3048	LS
1636	25261	PNP-9380	NR 116/IET-22461	SB
1637	25262	CR 2 921-6	Khandagiri/Wita 12	SB
1638	25263	CR 3750-1-3-1-1-1-1	Indravati/Vijetha	MS
1639	25264	OR 2436-18	Indravati/Namasagui-19	SB
1640	25039	AD 13113	ADT 40/ Swarna	LB
1641	25266	CR 3981-47-17-5	Swarna/Salkathi	MB
1642	25267	RP 5507 Bulk-3-1-4	Swarna/ IRGC 63248//Swarna Sub-1	LS
1643	25268	PAU 4320-21-1-3-2	PAU3410-104-1/PAU3418-11-10-2	LS
1644	25269	MEPH-126	-	LS

Entry No.	IET No.	Designation	Cross Combination	Grain type
1645	25270	MTU 1201 (MTU 2195-105-1-5)	MTU 7029/PTB33	MS
1646	**PA 6444 (HC)**			
1647	25271	MTU 1194 (MTU 2035-18-1-1)	MTU 1081/MTU 1064	SB
1648	25272	RP 5956-61-9-2-1-2-1	IR 64/ Tella Hamsa// IR 36	SB
1649	25273	NLR 4001	NLR145/MTU5249	LS
1650	25274	TTB-619-76-2	SALIVAHANA/BASAMANIK	MS
1651	25275	BPT 2678	MTU7029/Moroborakam//MTU7029	MS
1652	25276	CN-2063-1	FR 43B/CN 1160-60	LS
1653	25277	CR3862-35-17-2	Swarna/Sarasa	MS
1654	25278	***CRHR-103***	-	LS
1655	25279	RP 5480 Bulk-6-3-1	Swarna/IRGC 48960//RP Bio 226	LS
1656	25280	CURE 106	Selection from land race of Sunderban	LB
1657	25281	WGL-725	MTU-1010/NLR 34449	LS
1658	25282	RP 5507 Bulk-2-2-3	Swarna/ IRGC 63248//Swarna Sub-1	LS
1659	**Local Check**			
1660	25283	RP 5957-80-10-3-1-2-1-1	JV 32/ IR 50400-64-1-2-2-2	LS
1661	25284	WGL-915	SN 22R/IRBBN 39	LB
1662	25285	RP 5507 Bulk -1-2-1	Swarna/ IRGC 63248//Swarna Sub-1	LS
1663	25286	CR 3510-1-12-3-1-11	IR 36/ Pusa 44	MS
1664	25287	VNR-216	VNRF-48/VNRB-412	MB

Table No. 3.48: Grain Yield (kg/ha) of entries in IVT-L 2015 Kharif 2015

Entry No.	IET No.	III										Zone III Mean (3)		V	
		OD		BI		W.B		W.B		W.B (1)				CG	
		BBN		PTN-ICAR		CHN		@KOL		Mean				RPR	
1601	25228	5287	1 * …84% _7%	4769		5750	9 #	2527		5750	9 # 15% **24%**	5269	4 * 34% **10%**	6644	…6% _8%
1602	25229	4828	3 * …68%	5026	_4%	4288		2830	9	4288		4714	* 20%	5875	
1603	25230	4138	7 * …44%	4239		4873		1900		4873	5%	4417	12%	5604	
1604	25231	4598	4 * …60%	6662	3 *#…33% _37%	5848	7 #	3127	1	5848	7 # 17% **26%**	5703	2 *# 45% **19%**	6978	7 …11% _14%
1605	25232	2759		5124	…2% _6%	3314		1277		3314		3732		4075	
1606	25233	1839		1235		5214		2777		5214	4% **13%**	2763		5563	
1607	25234	3218	…12%	5299	9 …6% _9%	2924		1513		2924		3814		5028	
1608	25235	4138	8 * …44%	5329	8 …6% _10%	4483		2463		4483		4650	* 18%	5275	
1609	25236	4598	5 * …60%	4509		6238	3 *#	2683		6238	3 *# 24% **35%**	5115	5 * 30% **6%**	5444	
1610	25237	3563	…24%	4427		3314		2647		3314		3768		3825	
1611	25238	3908	* …36%	4201		3411		2507		3411		3840		5294	
1612	25239	4023	* …40%	5265	…5% _9%	3899		2470		3899		4396	12%	4963	
1613	25240	2759		4581		1949		1963		1949		3096		3903	
1614	25241	2989	…4%	4030		6092	5 *#	2433		6092	5 *# 21% **32%**	4370	11%	7069	6 …13% _15%
1615	25242	2989	…4%	3479		4776		1907		4776	3%	3748		4488	
1616	25243	3448	…20%	4295		3168		2330		3168		3637		3994	
1617	Zonal Check	2874		3645		5019		3007	3	5019	8%	3846			
1618	25244	4138	9 * …44%	5248	…5% _8%	3996		2307		3996		4461	* 13%	5253	
1619	25245			2624		3655		883		3655		3139			
1620	25246	3448	…20%	5919	5 *#…18% _22%	5945	6 #	2697		5945	6 *# 18% **28%**	5104	6 * 30% **6%**	6362	…1% _3%
1621	25247	3103	…8%	4252		3899		2247		3899		3751		4184	
1622	25248	2414		3791		5604	#	2793		5604	# 12% **21%**	3936		6113	
1623	25249	3103	…8%	3064		4630		2603		4630		3599		7125	4 …13% _16%
1624	25250	3793	* …32%	4009		3558		2820		3558		3786		5361	
1625	25251	2184		4094		3021		1990		3021		3100		2683	
1626	25252	3333	…16%	5158	…3% _6%	5848	8 #	2900	6	5848	8 # 17% **26%**	4780	* 21%	6876	9 …9% _12%
1627	25253	3908	* …36%	2868		3996		2417		3996		3591		4853	
1628	25254	4023	* …40%	5671	7 #…13% _17%	3899		2837	8	3899		4531	* 15%	6700	…7% _9%
1629	25255	3218	…12%	4226		5604	#	1983		5604	# 12% **21%**	4350	11%	5056	
1630	Swarna (NC)	2644		5021	_4%	4142		2707		4142		3936		6281	_2%
1631	25256	3563	…24%	5184	…3% _7%	5361		2263		5361	7% **16%**	4703	* 19%	6913	8 …10% _12%
1632	25257	2644		3564		4532		2193		4532		3580		5188	
1633	25258	3908	* …36%	3996		3899		1713		3899		3934		4824	
1634	25259	3563	…24%	4962	_2%	5263		2300		5263	5% **14%**	4596	* 17%	6171	
1635	25260	3908	* …36%	5265	…5% _9%	5750	#	2707		5750	# 15% **24%**	4974	7 * 26% **3%**	4922	
1636	25261	3218	…12%	4983	_3%	5604	#	2720		5604	# 12% **21%**	4602	* 17%	6444	…3% _5%
1637	25262	2529		2709		3704		1460		3704		2981		4336	
1638	25263	4483	6 * …56%	3880		5117		2733		5117	2% **11%**	4493	* 14%	6234	_1%
1639	25264	1954		3470		5458		2517		5458	9% **18%**	3627		7463	2 #…19% _21%
1640	25039	2759		3103		5361		2137		5361	7% **16%**	3741		6206	_1%
1641	25266	2529		4385		5117		2977	5	5117	2% **11%**	4010	2%	7263	3 …16% _18%
1642	25267	2644		3902		4776		1533		4776	3%	3774		4131	
1643	25268	3563	…24%	5774	6 #…15% _19%	4142		2167		4142		4493	* 14%	4891	
1644	25269	3678	* …28%	6487	4 *#…29% _34%	6335	2 *#	2603		6335	2 *# 26% **37%**	5500	3 *# 40% **14%**	7713	1 *#…23% _25%
1645	25270	2989	…4%	3325		4971		2067		4971	7%	3761		6516	…4% _6%
1646	PA 6444 (HC)	4943	2 * …72%	4850		4630		2793		4630		4808	9 * 22%	6147	
1647	25271	2989	…4%	4897	_1%	4873		3030	2	4873	5%	4253	8%	6381	…2% _4%
1648	25272	3333	…16%	4910	_1%	5117		2843	7	5117	2% **11%**	4454	* 13%	6244	_2%
1649	25273	3563	…24%			5019		2813		5019	8%	4291	9%	3028	
1650	25274	2874		3261		4240		2120		4240		3458		6044	
1651	25275	1494		3667		4288		2600		4288		3150		5703	
1652	25276	2989	…4%	4107		4630		2230		4630		3908		5666	
1653	25277	2184		4722		4971		2720		4971	7%	3959	1%	6641	…6% _8%
1654	25278	4023	* …40%	7167	1 *#…43% _48%	6481	1 *#	1710		6481	1 *# 29% **40%**	5890	1 *# 50% **23%**	6206	_1%
1655	25279	2529		2923		3899		2593		3899		3117		4731	
1656	25280	3908	* …36%	3077		4483		1727		4483		3823		4229	
1657	25281	3448	…20%	4397		4532		1990		4532		4126	5%	4913	
1658	25282	3333	…16%	3286		3168		2283		3168		3262		3204	
1659	Local Check	2529		4893	_1%	4386		1970		4386		3936		4616	
1660	25283	2874		4551		4630		2017		4630		4018	2%	4339	
1661	25284	3793	* …32%	6791	2 *#…35% _40%	2924		2197		2924		4503	* 14%	4631	
1662	25285	3103	…8%	3517		3265		3003	4	3265		3295		3891	
1663	25286	2759		5205	…4% _7%	4922		2147		4922	6%	4295	9%	5600	
1664	25287	4023	* …40%	4551		6238	4 *#	2797		6238	4 *# 24% **35%**	4937	8 * 25% **3%**	7109	5 …13% _16%
	Exp Mean	**3332**		**4410**		**4601**		**2363**		**4601**		**4117**		**5474**	
	C.D. 5%	770		816		932		727		923		500		1314	
	C.V.%	11.56		9.26		10.14		15.40		10.04		10.66		12.00	
	Sowing Date	30-Jun		17-Jun		24-Jun		30-Jun						06-Jul	
	Planting Date	30-Jul		27-Jul		06-Aug		24-Jul						27-Jul	
	Local ©	Upahar		Rajendra Mahsuri 1		Kaushalya(IET 19140)		Puspa						Jaldubi	

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.48 Contd.: Grain Yield (kg/ha) of entries in IVT-L 2015 Kharif 2015

Entry No.	IET No.	VI						VII											
		MH		GU		Zone VI Mean (1)		A.P.		A.P.		A.P.		A.P. (3)		TEL	
		SHR		@NWG				MTU		RGL		NLR		Mean		WGL	
1601	25228	5821	2 #...18% _31%	1852		5821	2 * 18% **31%**	5070		7599		5495		6055	1%	4669	
1602	25229	3607		4252	9 #	3607	*	4813		7718		5293		5942		4655	
1603	25230	4571	_3%	4527	5 *#	4571	* **3%**	4077		6806		2364		4416		6291	9
1604	25231	5595	5 ...14% _26%	4321	8 *#	5595	5 * 14% **26%**	4488		8740	5	6687	9 #	6638	10%	3761	
1605	25232	3357		1475		3357	*	1668		4970		2293		2977		3626	
1606	25233	3512		3429		3512	*	5129		6508		6949	4 #	6195	3%	4527	
1607	25234	3369		2058		3369	*	3548		6349		5485		5127		5095	
1608	25235	4024		5281	3 *#	4024	*	5111		5437		4667		5071		3877	
1609	25236	5952	1 #...21% _34%	4252	#	5952	1 * 21% **34%**	5466	8	7857		5394		6239	4%	6325	7
1610	25237	3381		3635		3381	*	2943		4107		3333		3461		4509	
1611	25238	3333		4390	7 *#	3333	*	3924		4980		2899		3934		5323	
1612	25239	3226		6516	1 *#	3226	*	4184		8155		5859		6066	1%	8338	1 #...11% _28%
1613	25240	3571		4527	6 *#	3571	*	3574		4921		3848		4115		3288	
1614	25241	3714		4252	#	3714	*	6955	2 *#	8353		6646	#	7318	3 # 1% **22%**	6644	5 _2%
1615	25242	4440		2332		4440	*	2902		5377		4515		4265		5460	
1616	25243	3595		1920		3595	*	4287		5913		5646		5282		2986	
1617	Zonal Check	3869		3429		3869	*	5989	6	8988	3	6768	8 #	7248	5 # **21%**	6703	4 _3%
1618	25244	4583	_3%	2743		4583	* **3%**	4800		7679		4364		5614		3585	
1619	25245	3893				3893	*	4507		7222		3465		5065			
1620	25246	5595	6 ...14% _26%	3841		5595	6 * 14% **26%**	5300		8383		6667	#	6783	8 **13%**	5061	
1621	25247	4405		1646		4405	*	3329		5119		4192		4213		5040	
1622	25248	5619	4 ...14% _27%	2675		5619	4 * 14% **27%**	5205		8393	9	5525		6374	6%	4626	
1623	25249	4548	_2%	2263		4548	* **2%**	3877		8016		3323		5072		3456	
1624	25250	3321		2469		3321	*	3939		7024		6354		5772		4572	
1625	25251	4167		960		4167	*	3165		3671		5586		4140		3211	
1626	25252	4119		3292		4119	*	6425	5 #	8889	4	6687	#	7333	2 # 1% **22%**	4745	
1627	25253	3917		686		3917	*	3482		4722		2869		3691		5344	
1628	25254	4821	_9%	3429		4821	* **9%**	4683		8294		6939	5 #	6639	10%	4725	
1629	25255	4381		2401		4381	*	7462	1 *#	8135		3424		6340	6%	5953	
1630	Swarna (NC)	4917	_11%	2812		4917	* **11%**	4394		7262		6960	3 #	6205	3%	5243	
1631	25256	5738	3 #...17% _29%	3086		5738	3 * 17% **29%**	4136		7123		5758		5672		5813	
1632	25257	4619	_4%	1372		4619	* **4%**	1750		5298		6394		4481		4392	
1633	25258	4429		1509		4429	*	1361		5952		3798		3704		4486	
1634	25259	4786	_8%	2469		4786	* **8%**	3658		6786		4717		5054		3103	
1635	25260	3726		2743		3726	*	3706		6925		4051		4894		4487	
1636	25261	3679		2606		3679	*	4702		7956		6899	6 #	6519	9%	4970	
1637	25262	4417		1440		4417	*	2689		3611		3434		3245		5515	
1638	25263	3512		3361		3512	*	3072		6627		5384		5028		5479	
1639	25264	4190		2606		4190	*	3999		9048	1	6162		6403	7%	5819	
1640	25039	3345		754		3345	*	6535	4 #	8998	2	6414		7316	4 # 1% **22%**	6015	
1641	25266	4548	_2%	2606		4548	* **2%**	3790				5061		4425		5633	
1642	25267	3869		2195		3869	*	2077		5873		4192		4047		4812	
1643	25268	4452		2675		4452	*	3073		6687		4465		4742		5670	
1644	25269	5583	8 ...14% _26%	5761	2 *#	5583	8 * 14% **26%**	5419	9	8433	8	7727	1 #	7193	6 # **20%**	4667	
1645	25270	5250	9 ...7% _18%	2469		5250	9 * 7% **18%**	5682	7	8274		4566		6174	3%	3623	
1646	PA 6444 (HC)	4440		3224		4440	*	5122		8135		4768		6008		6531	6
1647	25271	4476	_1%	2675		4476	* **1%**	6861	3 #	8512	6	6778	7 #	7384	1 # 2% **23%**	6291	
1648	25272	3560		2606		3560	*	4359		8036		5162		5852		6012	
1649	25273	4083		4801	4 *#	4083	*	4976		7540		6313		6276	4%	3325	
1650	25274	4524	_2%	3155		4524	* **2%**	2610		8155		5818		5528		4847	
1651	25275	4179		1509		4179	*	4701		6865		6364		5977		3465	
1652	25276	3988		4184	#	3988	*	3107		5992		4737		4612		5522	
1653	25277	4119		1852		4119	*	3818		7302		3960		5027		4185	
1654	25278	4536	_2%	4115	#	4536	* **2%**	5286		8204		6545		6679	9 **11%**	8118	2 #...8% _24%
1655	25279	4012		3224		4012	*	1193		5020		4455		3556		6312	8
1656	25280	3417		960		3417	*	2636		5198		5485		4440		4771	
1657	25281	3548		2812		3548	*	3178		6349		4000		4509		4556	
1658	25282	3357		2126		3357	*	3583		7063		4960		5202		4947	
1659	Local Check	4821	_9%	3086		4821	* **9%**	5151		7917		7576	2 #	6881	7 # **15%**	7542	3 _15%
1660	25283	3238		1235		3238	*	2410		4812		5374		4198		3919	
1661	25284	3821		2812		3821	*	4671		7242		6081		5998		4579	
1662	25285	3619		2949		3619	*	1947		6647		4374		4323		3975	
1663	25286	4583	_3%	2263		4583	* **3%**	5025		8452	7	4172		5883		4793	
1664	25287	5595	7 ...14% _26%	1920		5595	7 * 14% **26%**	3893		8036		5323		5751		4479	
	Exp Mean	**4239**		**2870**		**4239**		**4139**		**6963**		**5184**		**5420**		**4989**	
	C.D. 5%	1244		880				872		1571		1803		847		1437	
	C.V.%	14.69		15.34				10.55		11.29		17.40		13.72		14.41	
	Sowing Date	16-Jun		18-Jun				30-Jun		07-Jul		04-Aug				24-Jun	
	Planting Date	20-Jul		23-Jul				03-Aug		09-Aug		09-Sep				28-Jul	
	Local ©	RTN 2		Mahsuri				MTU 1061		RGL 11414 (Vamsadhar a)		NLR 33892				Siddhi(WGL-44)	

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.48 Contd.: Grain Yield (kg/ha) of entries in IVT-L Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (7)		Overall Mean (12)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		TN		KA		KA		KA (1)		PUD								
		ADT		SRS		@PNP		Mean		KRK								
1601	25228	4199		7747	1 *#	3478	7 #	7747	1 *# 63% **51%**	3300		5440	3%	5529	5 # 5% **7%**	115	106	290
1602	25229	3554		6513	4 *#	2050	#	6513	4 *# 37% **27%**	4017	#	5223		5016		104	118	283
1603	25230	3902		3438		1734		3438		3200		4297		4459		101	91	276
1604	25231	4304		4671		1097		4671		3367		5145		5475	8 4% **6%**	107	105	276
1605	25232	3295		2131		1067		2131		2967		2993		3298		97	87	300
1606	25233	5176	# ...3% _18%	1874		1042		1874		4050	#	4888		4298		119	113	311
1607	25234	3074		3226		3221	#	3226		4333	#	4444		4246		98	98	316
1608	25235	3000		4974		3622	5 #	4974	4%	4500	#	4509		4568		101	102	278
1609	25236	2545		6066	5 *	2930	#	6066	5 * 27% **18%**	5583	3 #	5605	6%	5498	7 5% **6%**	106	107	295
1610	25237	3027		3518		1952	#	3518		2917		3479		3572		104	101	281
1611	25238	5167	# ...3% _17%	4458		4209	2 #	4458		3000		4250		4158		103	103	284
1612	25239	3929		4009		2796	#	4009		3717	#	5456	3%	4964		102	111	273
1613	25240	5086	...1% _16%	3463		2451	#	3463		4167	#	4050		3759		95	99	282
1614	25241	5161	# ...3% _17%	5185	8	2465	#	5185	8 9% **1%**	2617		5937	7 # **12%**	5455	9 4% **5%**	118	108	299
1615	25242	1854		4156		988		4156		3083		3907		3960		113	139	303
1616	25243	2435		4098		865		4098		2483		3978		3862		112	119	248
1617	Zonal Check	4458	_1%	4767		4032	3 #	4767		3417		5870	8 # **11%**	5136		113	107	296
1618	25244	3304		4450		2401	#	4450		4850	9 #	4719		4687		108	101	286
1619	25245	3730		3959		563		3959		3300		4364		4039		130	113	251
1620	25246	4149		4999				4999	5%	3583		5449	3%	5451	4% **5%**	112	107	276
1621	25247	2899		5062				5062	6%	3683	#	4189		4097		97	107	275
1622	25248	5021	_14%	6874	3 *#			6874	3 *# 44% **34%**	3133		5540	4%	5193		114	109	277
1623	25249	3690		4002				4002		3733	#	4300		4381		112	93	282
1624	25250	4145		4689				4689		3317		4863		4507		111	136	287
1625	25251	3015		2977				2977		3867	#	3641		3470		104	97	301
1626	25252	4455	_1%	4038				4038		5783	2 *#	5860	9 # **10%**	5530	4 # 5% **7%**	112	106	290
1627	25253	3080		2275				2275		3333		3587		3721		103	105	272
1628	25254	6530	4 *#...30% _48%	4465				4465		4033	#	5667	7%	5399	3% **4%**	108	117	289
1629	25255	5997	6 *#...19% _36%	3059				3059		2983		5288		4958		120	110	278
1630	Swarna (NC)	5030	_14%	3905		3577	6 #	3905		4850	#	5378	1%	5054		112	97	272
1631	25256	5938	7 *#...18% _35%	2255		2989	#	2255		5817	1 *#	5263		5300	1% **2%**	103	105	285
1632	25257	3464		2789		3375	9 #	2789		3483		3939		4010		110	103	265
1633	25258	4173		3777		1566		3777		2750		3757		3946		107	139	245
1634	25259	3833		2108		2297	#	2108		2750		3851		4308		103	103	277
1635	25260	4015		4446		3142	#	4446		3150		4397		4529		107	103	282
1636	25261	7375	2 *#...47% _68%	5006		2510	#	5006	5%	5350	4 #	6037	5 # 1% **14%**	5516	6 # 5% **7%**	114	110	297
1637	25262	3232		2857		2332	#	2857		5317	5 #	3808		3696		103	102	299
1638	25263	3292		1195		2050	#	1195		4950	8 #	4286		4435		107	117	283
1639	25264	5292	9 # ...5% _20%	4130		2283	#	4130		3717	#	5452	3%	5058		120	122	303
1640	25039	6792	3 *#...35% _54%	3994		2836	#	3994		3617		6052	4 # 1% **14%**	5261	2%	120	110	272
1641	25266	4664	_6%	2218		1690		2218		3583		4158		4435		117	96	261
1642	25267	4671	_6%	2125		2149	#	2125		2933		3812		3834		98	96	303
1643	25268	4643	_5%	3491		2337	#	3491		3500		4504		4529		105	100	259
1644	25269	7545	1 *#...50% _71%	6985	2 *#	2456	#	6985	2 *# 47% **36%**	3250		6289	1 # 5% **19%**	6152	1 *# 17% **19%**	113	109	293
1645	25270	3378		1179		430		1179		3200		4272		4413		113	104	319
1646	PA 6444 (HC)	4402		5128	9	1023		5128	9 8%	3050		5305		5179		103	107	299
1647	25271	6283	5 *#...25% _43%	5254	7	2792	#	5254	7 10% **2%**	3933	#	6273	2 # 5% **18%**	5627	3 *# 7% **9%**	119	108	289
1648	25272	3868		3029		2910	#	3029		4683	#	5021		4859		110	118	292
1649	25273	4807	_9%	1091		1803		1091		3517		4510		4297		111	99	295
1650	25274	3571		4163		2762	#	4163		5000	7 #	4881		4592		115	136	281
1651	25275	3946		2236		1428		2236		3367		4421		4190		117	106	284
1652	25276	2854		3512		1601		3512		4133	#	4265		4270		108	118	280
1653	25277	4199		1085		3449	8 #	1085		4267	#	4117		4288		108	105	281
1654	25278	4982	_13%	3811		726		3811				6158	3 # 3% **16%**	5942	2 *# 13% **15%**	109	109	284
1655	25279	3095		1709		1813		1709		2883		3524		3563		97	99	274
1656	25280	3580		3389		2875	#	3389		2500		3937		3889		112	138	295
1657	25281	2592		2326		2866	#	2326		3750	#	3822		3966		104	105	271
1658	25282	1417		985		1191		985		3733	#	3813		3586		99	96	297
1659	Local Check	4985	_13%	3397		3661	4 #	3397		5183	6 #	5964	6 # **12%**	5250	1%	118	117	301
1660	25283	4060		2002		2732	#	2002		3233		3687		3787		109	107	269
1661	25284	5738	8 #...14% _30%	3934		2495	#	3934		2717		4994		4743		105	117	261
1662	25285	1354		1050		3068	#	1050		2800		3164		3295		97	95	292
1663	25286	3801		3100		4985	1 *#	3100		2800		4592		4601		105	105	290
1664	25287	2949		5831	6	1250		5831	6 * 22% **14%**	3050		4794		5090		107	111	286
	Exp Mean	**4125**		**3666**		**2341**		**3666**		**3701**		**4677**		**4565**		**108**	**108**	**284**
	C.D. 5%	723		1090		873		976		572		477		331		1	8	13
	C.V.%	8.77		14.88		18.59		13.33		7.73		13.73		12.78		2.01	0.00	8.85
	Sowing Date	07-Aug		22-Jun		20-Jul				19-Aug								
	Planting Date	05-Sep		17-Jul		26-Aug				21-Sep								
	Local ©			ASHA (IET9926)		Tunga (IET 13901)				KKL(R)1								

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 3.49 : Days to 50% flowering of entries in IVT-L Kharif 2015

Entry No.	IET No.	III					Zone III Mean (4)	V	VI		Zone VI Mean (2)	VII										Zone VII Mean (8)	Overall Mean (15)
		OD	BI	W.B	W.B	W.B (2)		CG	MH	GU		A.P.	A.P.	A.P.	A.P. (3)	TEL	TN	KA	KA	KA (2)	PUD		
		BBN	PTN-ICAR	CHN	KOL	Mean		RPR	SHR	NWG		MTU	RGL	NLR	Mean	WGL	ADT	SRS	PNP	Mean	KRK		
1601	25228	120	121	127	107	117	119	109	117	130	123	118	111	105	111	124	116	114	114	114	100	112	115
1602	25229	105	115	111	94	103	106	98	97	112	104	100	101	99	100	110	119	108	109	108	87	104	104
1603	25230	97	114	108	110	109	107	94	94	106	100	101	93	96	97	101	107	94	109	101	95	99	101
1604	25231	107	116	116	101	109	110	104	105	117	111	105	106	103	105	113	112	111	112	112	85	106	107
1605	25232	92	109	103	87	95	98	89	96	98	97	90	97	97	95	97	107	94	113	103	86	97	97
1606	25233	121	123	128	117	123	122	114	83	132	108	126	125	124	125	125	117	122	115	119	123	122	119
1607	25234	96	113	105	90	98	101	90	94	99	97	93	98	97	96	105	103	94	112	103	85	98	98
1608	25235	95	111	107	94	100	102	89	104	103	103	99	97	100	99	106	110	102	109	105	95	102	101
1609	25236	104	119	114	103	109	110	107	100	125	113	104	101	98	101	113	93	113	109	111	85	102	106
1610	25237	105	119	114	108	111	111	100	118	127	122	102	97	96	98	111	110	102	74	88	82	97	104
1611	25238	100	116	112	89	101	104	96	102	113	107	102	102	100	101	107	97	106	109	107	95	102	103
1612	25239	97	114	106	90	98	102	95	94	101	98	99	102	102	101	104	116	101	107	104	99	104	102
1613	25240	90	110	103	76	89	95	87	96	98	97	93	93	85	90	95	106	100	113	106	81	96	95
1614	25241	126	119	136	117	126	124	115	116	130	123	121	123	86	110	125	119	115	112	113	112	114	118
1615	25242	116	124	120	101	111	115	108	117	120	119	118	106	117	114	120	112	114	112	113	99	112	113
1616	25243	108	119	114	95	104	109	107	104	118	111	114	106	113	111	111	116	114	113	113	123	114	112
1617	Zonal Check	111	123	115	98	106	112		109	126	118	113	106	112	110	115	111	108	112	110	122	112	113
1618	25244	101	118	114	103	109	109	103	101	111	106	100	102	103	102	111	117	113	115	114	111	109	108
1619	25245	155	120	135	118	126	132		129		129	121	141	122	128		124	155	116	136	123	129	130
1620	25246	110	119	115	101	108	111	108	118	119	119	114	106	112	111	121	118	108		108	99	111	112
1621	25247	95	111	105	80	93	98	92	95	93	94	98	97	107	101	104	103	92		92	85	98	97
1622	25248	121	121	127	106	116	119	109	116	125	121	117	111	106	111	116	113	113		113	101	111	114
1623	25249	115	107	122	108	115	113	105	117	129	123	111	102	105	106	116	93	113		113	122	109	112
1624	25250	108	121	118	97	107	111	105	105	121	113	113	106	118	112	111	113	113		113	105	111	111
1625	25251	100	116	109	91	100	104	96	100	110	105	100	101	107	102	106	115	109		109	95	105	104
1626	25252	110	119	123	99	111	113	107	108	118	113	116	106	113	112	115	116	115		115	109	113	112
1627	25253	97	124	113	92	102	106	96	102	109	106	100	102	105	102	109	112	100		100	85	102	103
1628	25254	106	118	116	95	106	109	100	106	117	112	110	104	117	110	111	109	110		110	99	108	108
1629	25255	125	126	130	108	119	122	117	103	130	117	125	120	123	123	125	121	113		113	113	120	120
1630	Swarna (NC)	114	124	120	102	111	115	105	82	118	100	116	106	112	111	114	116	113	112	112	124	114	112
1631	25256	105	112	112	89	100	104	96	96	104	100	100	102	104	102	106	110	106	113	109	99	105	103
1632	25257	107	115	111	89	100	105	106	107	120	114	101	104	103	103	111	113	123	144	134	101	112	110
1633	25258	104	121	112	109	110	111	101	116	119	118	100	94	102	99	108	113	108	112	110	85	103	107
1634	25259	105	118	116	99	108	109	98	105	113	109	103	102	105	103	111	103	107	73	90	86	98	103
1635	25260	104	116	111	108	109	110	98	99	108	103	100	102	111	104	110	114	114	109	112	100	107	107
1636	25261	121	121	129	90	109	115	107	117	110	113	117	116	122	118	123	110	114	110	112	113	116	114
1637	25262	98	113	109	98	103	104	96	98	105	102	94	94	108	99	106	99	114	112	113	98	103	103
1638	25263	101	118	114	115	115	112	99	100	118	109	102	104	110	105	107	113	92	112	102	96	104	107
1639	25264	128	125	130	118	124	125	113	120	131	126	123	120	117	120	123	119	120	97	109	117	117	120
1640	25039	126	120	129	115	122	122	113	119	130	124	125	120	115	120	124	121	120	119	119	115	120	120
1641	25266	117	128	130	116	123	123	107	109	128	119	117		115	116	124	111	114	112	113	115	115	117
1642	25267	90	107	105	81	93	96	87	95	99	97	92	87	118	99	99	109	100	113	106	87	100	98
1643	25268	100	113	110	122	116	111	97	98	106	102	101	102	104	102	109	106	106	107	106	101	104	105
1644	25269	109	121	116	101	109	112	108	107	118	113	114	106	114	111	121	117	113	113	113	113	114	113
1645	25270	114	119	120	108	114	115	106	110	119	114	116	106	113	112	120	115	112	115	113	110	113	113
1646	PA 6444 (HC)	98	114	110	94	102	104	95	95	106	101	101	101	101	101	107	119	100	111	106	97	104	103
1647	25271	127	122	130	116	123	124	113	118	123	120	123	122	116	120	124	125	113	108	111	107	117	119
1648	25272	109	118	112	102	107	110	105	106	117	112	104	106	106	105	115	111	114	114	114	109	110	110
1649	25273	107		118	101	110	109	100	109	118	114	114	106	111	110	113	124	110	112	111	113	113	111
1650	25274	115	123	118	106	112	115	108	117	126	121	117	111	116	115	123	108	112	118	115	107	114	115
1651	25275	117	125	127	108	117	119	112	100	129	114	117	111	118	115	124	124	123	112	117	116	118	117
1652	25276	110	112	114	107	110	111	107	106	119	112	112	106	97	105	112	113	109	120	114	86	107	108
1653	25277	106	118	116	101	109	110	95	107	112	109	112	104	107	108	113	121	111	97	104	100	108	108
1654	25278	99	118	114	102	108	108	100	108	118	113	102	106	113	107	111	107	109	117	113		109	109
1655	25279	90	105	104	82	93	95	85	94	96	95	114	92	92	99	100	112	99	114	106	86	101	97
1656	25280	117	130	127	118	123	123	108	119	124	121	92	106	93	97	115	115	113	109	111	97	105	112
1657	25281	101	117	112	94	103	106	98	103	128	116	103	104	100	102	107	101	103	84	93	103	100	104
1658	25282	93	110	106	78	92	97	86	95	100	98	91	90	90	90	99	117	100	112	106	116	102	99
1659	Local Check	124	125	112	114	113	119	106	117	118	118	119	105	118	114	110	126	144	107	125	126	119	118
1660	25283	103	118	114	98	106	108	97	104	120	112	104	106	103	104	111	121	109	111	110	112	110	109
1661	25284	99	111	108	92	100	102	95	98	112	105	102	99	111	104	104	112	103	107	105	123	107	105
1662	25285	90	110	105	90	97	98	88	94	99	97	92	88	90	90	99	92	100	110	105	118	98	97
1663	25286	100	116	113	95	104	106	100	100	117	109	104	97	102	101	107	101	102	95	99	122	104	105
1664	25287	107	118	116	100	108	110	106	101	122	111	110	102	89	100	115	96	117	111	114	103	105	107
	Exp Mean	**107**	**117**	**116**	**100**	**108**	**110**	**101**	**105**	**116**	**110**	**107**	**105**	**106**	**106**	**112**	**112**	**110**	**110**	**110**	**103**	**108**	**108**
	C.D. 5%	2	2	0	3	1	1	1	2	0	1	3	2	0	1	2	4	4	14	7	5	2	1
	C.V.%	1.02	1.04	0.00	1.35	0.94	1.03	0.31	1.01	0.00	0.68	1.23	1.14	0.00	0.97	1.08	1.68	1.92	6.37	4.51	2.60	2.64	2.01

Table No. 3.50: Plant Height (cm) of entries in IVT-L Kharif 2015

Entry No.	IET No.	III					Zone III Mean (4)	V	VI		Zone VI Mean (2)	VII										Zone VII Mean (8)	Overall Mean (15)
		OD BBN	BI PTN-ICAR	W.B CHN	W.B KOL	W.B (2) Mean		CG RPR	MH SHR	GU NWG		A.P. MTU	A.P. RGL	A.P. NLR	A.P. (3) Mean	TEL WGL	TN ADT	KA SRS	KA PNP	KA (2) Mean	PUD KRK		
1601	25228	119	101	110	102	106	108	126	107	117	112	135	117	76	109	118	109	97	64	80	100	102	106
1602	25229	126	121	130	102	116	120	138	126	123	125	138	125	94	119	127	119	120	80	100	100	113	118
1603	25230	94	93	104	102	103	98	98	105	104	104	115	94	59	89	110	80	77	49	63	75	82	91
1604	25231	104	105	116	102	109	107	127	111	109	110	127	111	89	109	113	107	103	60	81	85	99	105
1605	25232	80	90	90	90	90	88	114	96	81	88	97	79	73	83	109	95	81	54	67	77	83	87
1606	25233	114	98	120	118	119	113	114	113	113	113	123	122	108	117	134	120	98	82	90	125	114	113
1607	25234	89	104	99	100	100	98	107	108	107	107	110	100	79	97	111	99	97	66	81	93	94	98
1608	25235	97	100	104	102	103	101	117	105	99	102	125	99	73	99	110	108	108	69	88	108	100	102
1609	25236	115	107	118	105	112	111	125	118	117	118	129	116	74	107	118	104	93	70	81	102	101	107
1610	25237	108	97	113	102	108	105	113	117	110	113	122	99	59	93	112	99	104	64	84	90	94	101
1611	25238	102	102	112	101	107	104	119	98	107	102	125	108	73	102	116	105	104	66	85	103	100	103
1612	25239	119	118	113	102	108	113	123	114	119	116	130	116	88	111	123	103	112	72	92	111	107	111
1613	25240	95	105	101	100	101	100	108	105	100	102	109	86	70	88	110	99	97	96	96	100	96	99
1614	25241	118	97	114	110	112	110	111	106	110	108	124	106	96	109	122	103	107	68	87	128	107	108
1615	25242	145	138	140	116	128	135	141	161	161	161	154	156	123	145	164	119	130	76	103	156	135	139
1616	25243	120	121	127	101	114	117	128	137	126	131	141	130	93	121	122	99	122	84	103	137	116	119
1617	Zonal Check	111	94	115	103	109	106		112	124	118	127	113	98	113	119	97	96	72	84	119	105	107
1618	25244	100	106	102	90	96	100	108	111	105	108	122	110	79	104	111	105	104	66	85	96	99	101
1619	25245	106	110	122	105	114	111		152		152	134	130	95	120		98	124	73	98	109	109	113
1620	25246	108	103	109	105	107	106	117	109	106	108	112	115	92	106	116	105	95		95	101	105	107
1621	25247	103	98	108	102	105	103	123	121	98	109	111	108	77	99	123	100	124		124	109	107	107
1622	25248	103	95	112	104	108	104	123	124	108	116	132	117	86	112	111	107	99		99	105	108	109
1623	25249	100	81	95	90	93	92	122	103	82	93	101	102	55	86	97	95	97		97	85	90	93
1624	25250	129	140	145	105	125	130	164	141	119	130	155	135	116	135	144	121	135		135	153	137	136
1625	25251	85	86	93	100	97	91	109	95	67	81	104	92	79	91	102	83	100		100	165	104	97
1626	25252	115	100	111	100	106	107	114	119	98	108	118	113	81	104	116	107	95		95	100	104	106
1627	25253	94	105	110	102	106	103	117	112	99	105	132	112	71	105	117	105	93		93	109	105	105
1628	25254	95	115	111	101	106	106	127	131	104	117	126	117	92	112	120	99	109		109	198	123	117
1629	25255	103	121	105	108	107	109	114	132	94	113	133	115	101	116	117	103	94		94	95	108	110
1630	Swarna (NC)	96	113	102	90	96	100	104	96	89	92	101	101	84	95	105	99	77	91	84	108	96	97
1631	25256	91	109	103	102	103	101	119	113	107	110	120	106	95	107	117	103	109	65	87	110	103	105
1632	25257	100	100	112	100	106	103	116	115	86	100	113	104	94	104	112	105	111	71	91	110	102	103
1633	25258	135	161	155	115	135	142	157	176	165	171	182	162	70	138	171	115	151	69	110	107	128	139
1634	25259	96	104	107	100	104	102	107	109	103	106	129	99	75	101	111	107	98	90	94	112	103	103
1635	25260	103	102	109	102	106	104	115	115	92	103	116	108	81	102	106	105	99	69	84	122	101	103
1636	25261	115	109	106	101	104	108	117	121	106	113	137	125	99	120	127	103	113	63	88	106	109	110
1637	25262	98	109	107	101	104	104	105	108	96	102	117	93	81	97	108	98	102	76	89	124	100	102
1638	25263	118	137	118	106	112	120	129	106	120	113	148	127	83	119	136	105	108	66	87	144	115	117
1639	25264	123	113	130	100	115	117	141	150	107	129	124	136	115	125	141	116	133	79	106	125	121	122
1640	25039	105	97	106	95	101	101	112	122	92	107	126	121	105	117	121	119	107	90	99	126	114	110
1641	25266	87	89	103	90	97	92	115	108	85	97	121		81	101	117	99	81	78	80	95	96	96
1642	25267	91	92	104	95	100	96	116	97	93	95	116	105	77	99	116	80	110	57	84	89	94	96
1643	25268	95	100	103	100	102	100	118	100	89	95	116	109	81	102	112	98	104	80	92	98	100	100
1644	25269	100	120	117	105	111	111	121	106	108	107	124	121	97	114	120	113	104	63	83	110	107	109
1645	25270	115	92	112	102	107	105	115	108	95	101	111	118	80	103	120	113	93	64	79	121	103	104
1646	PA 6444 (HC)	105	106	117	106	112	109	131	108	106	107	137	111	79	109	116	110	106	52	79	117	103	107
1647	25271	110	103	108	100	104	105	107	135	82	108	125	114	95	111	125	120	103	71	87	130	110	108
1648	25272	121	104	120	108	114	113	129	131	117	124	133	122	100	118	127	108	144	67	106	133	117	118
1649	25273	95		105	90	98	97	117	100	95	97	111	99	82	97	102	104	85	84	84	113	97	99
1650	25274	125	148	145	120	133	135	150	163	128	145	169	159	120	149	169	95	137	58	98	154	133	136
1651	25275	107	94	110	88	99	100	113	117	90	103	118	111	101	110	115	104	113	93	103	121	109	106
1652	25276	124	120	129	105	117	120	142	130	112	121	127	143	82	117	145	101	132	64	98	114	114	118
1653	25277	103	107	114	104	109	107	122	109	102	105	121	117	79	106	112	100	91	89	90	105	102	105
1654	25278	114	111	110	105	108	110	119	113	108	110	137	115	88	113	118	107	109	70	89		106	109
1655	25279	95	89	105	70	88	90	109	109	93	101	177	101	75	117	117	81	96	70	83	98	102	99
1656	25280	144	157	155	135	145	148	161	188	130	159	106	161	87	118	169	106	174	74	124	124	125	138
1657	25281	93	111	104	101	103	102	114	108	90	99	124	106	65	98	112	120	108	95	102	123	107	105
1658	25282	95	105	103	90	97	98	111	108	92	100	112	106	73	97	112	87	88	58	73	94	91	96
1659	Local Check	122	109	128	115	122	119	183	106	92	99	130	120	122	124	107	110	122	78	100	107	112	117
1660	25283	108	108	116	104	110	109	121	107	87	97	124	115	90	109	113	109	106	84	95	112	107	107
1661	25284	111	125	120	105	113	115	141	138	104	121	132	117	98	116	130	120	118	72	95	120	113	117
1662	25285	101	112	95	82	89	98	107	99	88	93	109	105	75	96	114	85	92	74	83	82	92	95
1663	25286	118	117	102	104	103	110	117	116	100	108	127	114	82	108	116	105	94	71	82	99	101	105
1664	25287	125	109	130	107	119	118	144	118	97	108	139	125	65	110	133	99	113	77	95	88	105	111
	Exp Mean	**108**	**108**	**113**	**102**	**108**	**108**	**122**	**118**	**104**	**111**	**126**	**115**	**86**	**109**	**121**	**104**	**107**	**72**	**91**	**112**	**106**	**108**
	C.D. 5%					0	0				11									0			8

Table No. 3.51 : Panicles/ M² of entries in IVT-L 2015 Kharif 2015

Entry No.	IET No.	III					Zone III Mean (4)	V	VI		Zone VI Mean (2)	VII										Zone VII Mean (8)	Overall Mean (15)
		OD	BI	W.B	W.B	W.B (2)		CG	MH	GU		A.P.	A.P.	A.P.	A.P. (3)	TEL	TN	KA	KA	KA (2)	PUD		
		BBN	PTN-ICAR	CHN	KOL	Mean		RPR	SHR	NWG		MTU	RGL	NLR	Mean	WGL	ADT	SRS	PNP	Mean	KRK		
1601	25228	249	300	297	300	299	286	183	181	262	221	254	434	284	324	380	197	262	443	352	323	322	290
1602	25229	224	288	231	315	273	264	205	130	281	205	284	411	317	337	330	146	290	450	370	340	321	283
1603	25230	205	304	396	480	438	346	189	145	284	214	300	428	160	296	164	122	246	479	363	246	268	276
1604	25231	208	298	297	300	299	276	180	143	282	212	294	413	300	335	281	118	273	443	358	313	304	276
1605	25232	198	325	231	435	333	297	149	186	268	227	320	513	194	342	347	126	365	545	455	300	338	300
1606	25233	222	249	363	570	467	351	170	195	275	235	294	461	297	350	281	198	272	385	328	434	327	311
1607	25234	204	322	231	480	356	309	152	227	265	246	300	499	222	340	297	247	444	457	451	395	358	316
1608	25235	200	230	231	315	273	244	200	131	288	210	284	437	254	325	297	256	353	399	376	296	322	278
1609	25236	220	288	264	510	387	320	184	172	281	227	281	459	257	332	297	273	363	378	370	205	314	295
1610	25237	210	285	264	405	335	291	184	186	277	231	294	451	224	323	297	309	244	341	293	253	301	281
1611	25238	216	297	330	450	390	323	167	175	282	228	291	426	234	317	297	228	327	334	330	205	293	284
1612	25239	215	283	231	300	266	257	181	198	296	247	297	429	287	338	264	204	271	356	313	284	299	273
1613	25240	195	305	231	270	251	250	149	144	284	214	268	536	263	356	347	298	310	348	329	280	331	282
1614	25241	225	292	231	450	341	299	195	167	281	224	287	462	307	352	314	239	361	378	369	294	330	299
1615	25242	255	346	297	405	351	326	179	207	267	237	406	398	254	352	264	206	385	392	389	289	324	303
1616	25243	204	224	198	240	219	216	169	133	264	198	267	401	350	339	248	209	250	312	281	260	287	248
1617	Zonal Check	231	334	198	390	294	288		166	275	221	284	465	343	364	281	185	257	436	346	308	320	296
1618	25244	226	328	231	240	236	256	143	173	270	221	311	446	239	332	330	287	351	407	379	311	335	286
1619	25245		243	330	215	273	263		186		186	287	439	155	294		165	308	131	219	308	256	251
1620	25246	222	264	264	465	365	304	190	147	278	213	284	444	303	344	297	185	228		228	293	290	276
1621	25247	182	320	231	375	303	277	193	181	267	224	281	457	219	319	297	197	313		313	339	300	275
1622	25248	238	204	231	330	281	251	195	216	270	243	334	418	270	340	314	256	294		294	318	315	277
1623	25249	219	258	297	330	314	276	221	172	271	222	301	395	268	321	314	248	336		336	322	312	282
1624	25250	216	247	297	390	344	287	187	166	268	217	281	385	309	325	264	266	412		412	338	322	287
1625	25251	199	315	231	420	326	291	151	175	252	214	277	485	333	365	297	298	489		489	298	354	301
1626	25252	216	306	264	375	320	290	217	205	278	241	297	466	350	371	297	239	294		294	257	314	290
1627	25253	213	246	297	480	389	309	200	176	242	209	297	429	200	309	347	206	197		197	284	280	272
1628	25254	216	334	231	360	296	285	224	190	275	232	284	413	370	356	314	287	263		263	282	316	289
1629	25255	223	259	363	375	369	305	224	159	268	213	281	452	243	325	314	165	303		303	261	288	278
1630	Swarna (NC)	226	261	264	300	282	263	181	168	271	219	291	410	403	368	314	196	213	312	262	278	302	272
1631	25256	217	285	198	330	264	257	206	202	273	237	324	420	260	334	281	255	281	436	358	308	320	285
1632	25257	203	224	264	255	260	237	181	166	256	211	294	434	324	351	297	236	287	356	321	205	304	265
1633	25258	158	233	198	240	219	207	191	135	260	197	320	377	197	298	347	126	305	348	327	236	282	245
1634	25259	233	256	297	315	306	275	176	177	266	221	274	439	300	338	314	198	291	327	309	289	304	277
1635	25260	252	265	264	345	305	282	183	160	262	211	297	433	260	330	314	247	265	378	321	301	312	282
1636	25261	244	323	231	330	281	282	231	169	276	222	281	443	365	363	297	256	283	378	330	354	332	297
1637	25262	212	310	297	330	314	287	207	186	252	219	281	449	255	328	281	248	329	450	390	398	336	299
1638	25263	232	333	231	360	296	289	184	130	275	202	264	424	234	307	330	266	242	436	339	301	312	283
1639	25264	215	246	330	480	405	318	176	186	264	225	281	423	383	362	281	298	274	414	344	304	332	303
1640	25039	193	286	231	315	273	256	176	150	240	195	284	413	333	343	297	236	220	392	306	320	312	272
1641	25266	196	255	264	360	312	269	197	164	269	217	281		294	287	314	196	227	348	288	295	279	261
1642	25267	210	306	264	540	402	330	187	189	266	227	294	476	240	336	314	255	294	428	361	284	323	303
1643	25268	196	254	231	285	258	241	175	133	270	201	277	391	217	295	297	236	279	392	336	251	292	259
1644	25269	252	297	264	315	290	282	178	183	291	237	281	411	347	346	281	269	382	363	372	283	327	293
1645	25270	240	306	396	465	431	352	194	134	268	201	307	467	277	350	330	262	330	530	430	284	348	319
1646	PA 6444 (HC)	229	277	264	405	335	294	178	232	274	253	281	430	304	338	347	296	245	428	337	303	329	299
1647	25271	230	242	231	465	348	292	171	172	270	221	278	395	333	335	297	245	303	385	344	323	320	289
1648	25272	221	250	297	360	329	282	153	153	269	211	294	390	330	338	297	234	351	421	386	360	334	292
1649	25273	227		264	465	365	319	209	196	286	241	284	469	272	341	314	247	242	341	291	325	311	295
1650	25274	197	224	198	300	249	230	203	151	273	212	254	368	359	327	314	256	337	421	379	368	334	281
1651	25275	186	233	231	390	311	260	225	181	260	220	264	441	330	345	281	273	260	436	348	279	320	284
1652	25276	204	333	198	360	279	274	199	147	276	211	284	400	264	316	297	220	295	414	354	315	311	280
1653	25277	224	281	297	360	329	290	186	190	269	229	278	413	232	307	330	223	251	305	278	380	301	281
1654	25278	216	236	231	390	311	268	179	182	280	231	314	401	312	342	314	217	222	479	350		322	284
1655	25279	201	277	198	375	287	263	210	131	274	202	258	373	252	294	281	262	310	421	365	289	305	274
1656	25280	214	262	297	390	344	291	192	164	257	210	287	439	307	344	347	296	354	348	351	273	331	295
1657	25281	194	233	264	255	260	236	187	168	271	220	281	406	243	310	264	366	287	341	314	305	311	271
1658	25282	209	239	330	450	390	307	203	147	265	206	324	509	324	385	314	237	274	327	300	311	327	297
1659	Local Check	247	341	231	240	236	265	190	137	252	195	284	401	404	363	380	273	285	450	368	395	359	301
1660	25283	228	255	264	225	245	243	196	170	251	210	281	411	257	316	297	220	236	399	318	347	306	269
1661	25284	220	283	198	255	227	239	170	97	271	184	284	373	350	336	264	223	182	407	294	343	303	261
1662	25285	218	268	231	375	303	273	251	157	271	214	287	436	277	333	347	217	262	428	345	352	326	292
1663	25286	230	306	231	435	333	301	190	203	267	235	294	464	230	329	297	258	283	363	323	306	312	290
1664	25287	225	229	198	300	249	238	275	148	265	207	297	403	334	344	297	145	332	523	427	320	331	286
	Exp Mean	**216**	**278**	**260**	**365**	**312**	**280**	**190**	**168**	**270**	**219**	**290**	**431**	**284**	**335**	**304**	**232**	**295**	**395**	**341**	**305**	**315**	**284**
	C.D. 5%	22	51	0	92	46	27	19	18	13	8	30	81	75	38	61	9	56	54	38	36	19	13
	C.V.%	5.04	9.17	0.00	12.66	10.43	9.63	5.00	5.42	2.48	2.55	5.15	9.45	13.23	9.91	10.04	1.88	9.43	6.87	7.89	5.92	8.80	8.85

INITIAL VARIETY TRIAL-BORO (IVT-BORO) 2014-2015

Location : 9 **Entries: 13**
Checks : National: (IR 64), Zonal: (Gautam), Hybrid: (Rajalakshmi) and Local **Table: 3.52**

The Initial Variety Trial- Boro (2014-15) was conducted with 9 test entries and 4 checks National (IR -64), Regional (Gautam), Hybrid (Rajalakshmi) and Local. Among the 9 test entries IET 23494 was in 3rd year of testing, IETs 24171, 24172, 24173 and 24177 were in 2nd year of testing and remaining entries were in 1st year of testing (IETs 24898, 24900, 24897 and 24899). The trial was conducted at 8 typical boro locations while data from Arundhatinagar was not included in the mean due to high CV %. The trial was sown either in December or January and transplanted in January or February. The weather data is tabulated below.

The experimental mean grain yield ranged from the minimum 3300 kg/ha at Gerua to a maximum 6861 kg/ha at Pundhibari. The CV % of the experiment ranged from 8.1% (Titabar) to 23.8% (Gerua). Days to 50% flowering ranged from 128 days (Gautam-Regional check) to 146 days (IET 24900). Plant height ranged from 85.79cm (Gautam) to 106.67cm (IET 24173). IET 24171 recorded the minimum 303 panicles per Sq.m. while the maximum 349 panicles per Sq.m was recorded by Local check. Among the checks Hybrid check was the best check (5298 kg/ha) followed by local check (5015 kg/ha), regional check (4461 kg/ha) and national check (4100 kg/ha). The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m and plant height are presented in Tables 3.53, 3.54, 3.55 and 3.56.

Overall performance of promising entries in Initial Variety Trial-Boro (IVT-BORO), 2014-15

Rank	IET No/ Designation Cross Combination	Grain Yield FD/GT	%superiorly Over NC/ZC/LC/HC	% increases over best check (State)			
				Rank	Yield	% BVC	% HC
1	IET 23494 NPH 8899 (Hybrid)	5667 138 SB	38.21 27.03 13.00 ***6.96***	AS-4 BI-2 UP-3	4797 5417 7600	9.69 39.29 4.58	15.75 30.90 39.29
2	IET-24898 HRI 186 (Hybrid)	5657 135 LS	37.97 26.81 12.80 ***6.77***	AS-1 BI-1	5037 5694	15.18 46.41	21.54 46.41
3	IET-24173 UBKVR 15 MTU 7029/Annada	5353 138 SB	30.56 19.99 6.73 ***1.03***	AS-3 UP-1 WB-1	4684 8000 9300	7.11 10.08 10.78	13.00 21.21 36.76
	IR 64(NC)	4100 133					
	Gautam (ZC)	4461 128					
	Local Check (LC)	5015 137					
	Rajalakshmi (HC)	***5298*** ***134***					

Bold Italics: Best check & over the best check; NC- National Check; ZC- Zonal Check; LC- Local Check; HC- Hybrid Check GY: Grain Yield; FD: Days to 50% flowering; GT: Grain Type; BVC- Best Varietal Check

The top ranking entry IET 23494 (NPH 8899), a hybrid from Nuziveedu seeds in its 3rd year of testing recorded mean grain yield of 5667 kg/ha with short bold grains and 138 days to 50% flowering. It out yielded the national, regional, local & hybrid checks with 38.21%, 27.03%, 13% & 6.96% respectively. State wise, the hybrid recorded 2nd rank (4797 kg/ha) in Assam with 9.69% and 15.75% yield advantage over the best inbred and hybrid checks respectively. It ranked 2nd in Bihar (5417 kg/ha) with 39.29% over the best varietal and hybrid checks. Quality wise, it recorded moderate HRR (58.9%), very occasional grain chalkiness, Intermediate (24.84%) amylose content and hard gel consistency of 22mm (Table 3.57).

Summarising, three years performance of IET 23494, it may be noted that this entry established required yield advantage over the best varietal and hybrid checks in all the three years of testing. It exhibited consistent performance in the state of Assam during 2015 (4797 kg/ha) with 9.69% and 15.75% yield advantage and during 2014 it ranked 1st (5889 kg/ha) with 29.26 and 43.67% yield advantage over the best varietal and hybrid checks respectively. **Hence, it is promising in the state of Assam.**

Three Years performance of promising entries in Initial Variety Trial- Boro (IVT-BORO), 2014-15

Rank	IET No/ Designation / Cross Combination	Year	Grain Yield FD/GT	%superiorly Over NC/ZC/ LC/HC	% increases over best check (State)			
					Rank	Yield	% BVC	% HC
1	IET 23494 NPH 8899 (Hybrid) -	2014-15	5667 138 SB	38.21 27.03 13.00 6.96	AS-2 BI-2	4797 5417	9.69 39.29	15.75 39.29
		2013-14	5818 136 SB	30.33 19.76 17.54 7.70	AS-1	5889	29.26	43.67
		2012-13	5499 137 MS	16.38 12.69 10.60	TR-2 WB-1	6353 9500	28.16 102.40	182.85 148.88

The Second ranking entry IET 24898 (HRI 186), a hybrid recorded mean grain yield of 5657 kg/ha with long slender grains and 135 days to 50% flowering. It out yielded all the 4 checks i.e. national, regional, local and hybrid checks with 37.97%, 26.81%, 12.80% and 6.77% respectively. State wise, the hybrid IET 24898 ranked 1st (5037 kg/ha) in Assam with yield superiority of 15.18% and 21.54% over best varietal and hybrid checks respectively. It ranked 1st (5694kg/ha) in Bihar with 46.41% over the best varietal and hybrid checks. Quality wise, it recorded good HRR (67.7%), very occasional grain chalkiness, ASV (5.0) and amylose content (20.94%) and hard GC (22mm)

IET 24173 (UBKVR 15) a cross between MTU 7029/ Annada in its second year of testing registered mean grain yield of 5353 kg/ha with short bold grains and 138 days to 50% flowering. It out yielded the checks national, regional and local checks with 30.56%, 19.99% and 6.73% respectively. State wise, IET 24173 ranked 3rd (4684 kg/ha) in Assam with 7.11% and 13% yield advantage over best varietal and hybrid checks respectively. It ranked 1st in the states of Uttar Pradesh (8000 kg/ha) and West Bengal (9300 kg/ha) with 10.08% and 10.78%

yield advantage over the best varietal checks respectively. Quality wise , this entry recorded moderate HRR (50.3%), intermediate AC (25.34%) and moderate GC (53mm).

Therefore, IETs 24173 and 24898 qualify for promotion to the next year of testing.

Table 3.52: Composition of entries in Initial Variety Trial - Boro (IVT- BORO) 2014-15

Entry No.	IET No.	Designation	Cross combination	Grain Type
2nd Year of testing				
1	24173	UBKVR 15	MTU 7029/ Annada	SB
2	24171	UBKVR 1	MTU 7029/ Gontra Bidhan 1	MS
3	**Gautam (Check)**			
4	24172	CRL 193	Selection from Huanghuazhan	LS
5	24177	CN 1905-8-40-2	Sabita/Dular	LS
3rd Year of testing				
6	23494	NPH 8899 (Hybrid)	-	SB
7	**IR 64 (Check)**			
1st Year of testing				
8	24897	MTU 1179	MTU 2067/WGL 167	LS
9	24898	HRI 186 (Hybrid)	-	LS
10	**Local Check (LC)**			
11	24899	MTU 1185	MTU 1075/MTU1081	LS
12	**Rajalakshmi (Hybrid Check)**			
13	24900	MTU 1174	MTU 1075/ BM 71	LS

Table 3.53: Grain yield (kg/ha) of entries in Initial Variety Trial- Boro (IVT-B) 2014-15

Entry No.	IET No.		TTB			GER			KRG	
1	24173	# * $ @	6395	1	# * $	4364	1	# *	3292	9
2	24171	#	4481	9	# *	3543	7	# * @	4255	4
3	Gautam Check		3827	11		2604	11		1269	12
4	24172		3342	13	#	3443	8	# * $ @	4669	2
5	24177		3635	12	#	2907	10	# *	3001	10
6	23494	# * $ @	5366	4	# *	3845	4	# * $ @	5180	1
7	IR 64 Check		4634	8		3296	9		2332	11
8	24897	# * @	5060	6	# *	3767	6		812	13
9	24898	# * $ @	6301	2	# * $	4206	2	# * $ @	4605	3
10	Local Check		5034	7		3831	5		4255	4
11	24899	# * @	5204	5		1086	13	# *	3837	7
12	Rajalakshmi (HC)		4311	10		4165	3		3957	6
13	24900	# * $ @	5378	3		1842	12	# *	3705	8
	Ex. Mean		**4844**			**3300**			**3475**	
	CV		8.1			23.8			12.33	
	CD(5%)		663			1324			722.34	

^ Not Included in mean; # Superior to Gautam; * Superior to IR 64; @ Superior to Rajalakshmi; $ Superior to Local

Table 3.53 (contd.): Grain yield (kg/ha) of entries in Initial Variety Trial- Boro (IVT-B) 2014-15

Entry No.	IET No.		PSA			CTK			ARD ^			LMB	
1	24173	*	3056	9		3528	10	$	4045	6		4891	9
2	24171	* $	3611	6	*	3858	8	$	3916	8	# *	6035	1
3	Gautam Check		3889	3		4378	7		4554	4		5524	7
4	24172	* $	3472	7	# *	4909	4	$	4510	5		5280	8
5	24177		1667	12		2441	13	$	4021	7		4550	11
6	23494	# * $ @	5417	2	# * $	6436	2		3784	9		5597	5
7	IR 64 Check		2361	11		3505	11		5701	1		5645	4
8	24897	* $	3889	3		3533	9	# $	4997	2		4453	13
9	24898	# * $ @	5694	1	# *	4618	6		3141	12		5572	6
10	Local Check		3056	9		5391	3		3616	11		5986	3
11	24899		1250	13	# *	4668	5		3627	10		4891	9
12	Rajalakshmi (HC)		3889	5		6653	1					6010	2
13	24900	*	3194	8		2997	12	# $	4835	3		4502	12
	Ex. Mean		**3419**			**4378**			**4229**			**5303**	
	CV		19.5			11.4			34.5			17.8	
	CD(5%)		1453			838			2468			1592	

Table 3.53 (contd.): Grain yield (kg/ha) of entries in Initial Variety Trial- Boro (IVT-B) 2014-15

Entry No.	IET No.		VRN			PNB		Overall mean		FD	Pan/ m^2
1	24173	# * $ @	8000	1	# * $ @	9300	1	5353	3	138	321
2	24171	*	5223	11	# * $ @	9130	3	5017	6	134	303
3	Gautam Check		5807	9		8395	4	4461	8	128	321
4	24172	# *	6700	6	# * $ @	9295	2	5139	5	136	325
5	24177	*	5267	10		3895	13	3420	13	133	318
6	23494	# * @	7600	3	$	5895	10	5667	1	138	336
7	IR 64 Check		4600	13		6430	8	4100	11	133	332
8	24897	*	6033	8	$	6165	9	4214	10	130	311
9	24898	# * $ @	7667	2	$	6595	7	5657	2	135	352
10	Local Check		7267	4		5300	11	5015	7	137	349
11	24899	# *	6833	5	* $	6995	5	4346	9	145	323
12	Rajalakshmi (HC)		6600	7		6800	6	5298	4	134	308
13	24900		4633	12		5000	12	3906	12	146	327
	Ex. Mean		**6325**			**6861**		**4738**		**136**	**326**
	CV		8.8			10					
	CD(5%)		940.9			1496					

Table 3.53 (contd.): Grain yield (kg/ha) of entries in Initial Variety Trial- Boro (IVT-B) 2014-15

Entry No.	IET No.	AS (3)	BI (1)	OD (1)	TR (1)	UP (1)	WB (1)	Over all mean
1	24173	4684	3056	3528	4891	8000	9300	5353
2	24171	4093	3611	3858	6035	5223	9130	5017
3	Gautam Check	2566	3889	4378	5524	5807	8395	4461
4	24172	3818	3472	4909	5280	6700	9295	5139
5	24177	3181	1667	2441	4550	5267	3895	3420
6	23494	4797	5417	6436	5597	7600	5895	5667
7	IR 64 Check	3421	2361	3505	5645	4600	6430	4100
8	24897	3213	3889	3533	4453	6033	6165	4214
9	24898	5037	5694	4618	5572	7667	6595	5657
10	Local Check	4373	3056	5391	5986	7267	5300	5015
11	24899	3376	1250	4668	4891	6833	6995	4346
12	Rajalakshmi (HC)	4144	3889	6653	6010	6600	6800	5298
13	24900	3642	3194	2997	4502	4633	5000	3906
	Ex. Mean	**3873**	**3419**	**4378**	**5303**	**6325**	**6861**	**4738**

Table 3.54: Days to 50% flowering of entries in Initial Variety Trial-Boro (IVT-B) 2014-15

Entry No.	IET No.	TTB	GER	KRG	AS Mean	PSA	CTK	ARD	VRN	PNB	Overall Mean
1	24173	136	148	**136**	140	171	93	138	160	121	138
2	24171	135	144	**132**	137	165	97	127	155	116	134
3	Gautam Check	122	139	**126**	129	154	93	132	147	111	128
4	24172	135	150	**133**	139	168	95	131	159	117	136
5	24177	129	148	**130**	136	168	94	128	156	115	133
6	23494	125	158	**137**	140	168	94	133	159	129	138
7	IR 64 Check	125	144	**127**	132	171	91	133	155	114	133
8	24897	129	144	**126**	133	166	94	125	150	110	130
9	27898	135	150	**133**	139	169	92	131	153	116	135
10	Local Check	138	158	**134**	143	157	104	132	159	119	137
11	24899	135	171	**136**	147	186	95	140	164	132	145
12	Rajalakshmi (HC)	131	148	**135**	138	165	98		155	106	134
13	24900	144	171	**137**	151	181	98	140	162	132	146
	Ex.Mean	**132**	**152**	**132**	139	**168**	**95**	**132**	**156**	**118**	**136**

Table 3.55: Plant Height (cm) of entries in Initial Variety Trial –Boro (IVT-B) 2014-15

Entry No.	IET No.	TTB	GER	KRG	Mean	PSA	CTK	ARD	LMC	Mean	VRN	PNB	Overall Mean
1	24173	102	112.53	102	105.52	95	95	**132.00**	103.13	117.57	106.33	112	106.67
2	24171	100	103.93	100	101.44	92	89	**132.67**	105.27	118.97	102.27	101.9	103.05
3	Gautam Check	71	86.53	85	80.97	65	75	**119.33**	92.60	105.97	87.70	89.5	85.78
4	24172	95	91.67	87	91.25	78	77	**127.67**	91.13	109.40	88.93	91.6	92.01
5	24177	93	96.67	85	91.54	86	85	**119.00**	93.93	106.47	90.73	95.5	93.87
6	23494	69	112.00	99	93.18	81	95	**129.33**	102.73	116.03	98.27	98.2	98.23
7	IR 64 Check	77	94.67	84	85.39	81	75	**116.00**	88.20	102.10	79.47	89.2	87.23
8	24897	81	96.67	91	89.42	84	85	**125.67**	95.60	110.63	94.27	97.4	94.46
9	27898	95	98.73	86	93.14	90	80	**124.67**	99.20	111.93	91.70	98.3	95.92
10	Local Check	110	115.13	87	103.96	92	81	**125.00**	108.67	116.83	95.25	98.8	101.40
11	24899	92	112.60	99	101.06	94	84	**130.67**	99.87	115.27	98.55	100.3	101.17
12	Rajalakshmi (HC)	102	118.93	105	108.66	103	91		108.80	108.80	101.67	113.6	105.51
13	24900	103	114.53	94	103.69	90	87	**137.33**	104.27	120.80	98.27	101.7	103.29
	Ex.Mean	**91.54**	**104.20**	**92.54**	96.09	**87**	**84.54**	**126.61**	**99.49**	**113.05**	**94.88**	**99.08**	**97.76**

Table 3.56 : Panicles/m^2 of entries in Initial Variety Trial- Boro (IVT-Boro) 2014-15

Entry No.	IET No.	TTB	GER	KRG	Mean	PSA	CTK	ARD	LMC	Mean	VRN	PNB	Overall Mean
1	24173	486	251	301	346	251	367	387	234	311	290	320	321
2	24171	364	266	395	342	197	331	324	260	292	281	307	303
3	Gautam Check	297	281	354	311	244	380	434	293	363	378	234	321
4	24172	304	273	346	308	246	365	439	313	376	355	286	325
5	24177	320	293	438	350	172	415	401	301	351	359	159	318
6	23494	473	274	349	365	270	478	391	240	316	348	202	336
7	IR 64 Check	319	287	424	343	185	420	382	328	355	432	214	332
8	24897	324	284	287	298	270	400	392	260	326	312	268	311
9	27898	485	285	366	379	338	420	363	270	317	359	283	352
10	Local Check	424	277	364	355	205	437	405	302	353	467	257	349
11	24899	423	275	328	342	171	418	432	280	356	291	288	323
12	Rajalakshmi (HC)	325	268	282	291	275	372		289	289	438	220	308
13	24900	329	280	372	327	244	380	456	286	371	330	268	327
	Ex. Mean	**375**	**277**	**354**	**335**	**236**	**399**	**401**	**281**	**337**	**357**	**254**	**326**

Table 3.57: Grain Quality Characteristics of entries in IVT-Boro 2014-15

Designation	Hull (%)	Mill (%)	HRR (%)	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk	ASV	AC (%)	GC
IET 24173	76.4	66.0	50.3	5.05	2.15	2.34	SB	VOC	4.0	25.34	53
IET 24171	75.0	66.9	53.2	5.47	2.05	2.66	MS	VOC	4.0	17.68	53
Gautam (Check)	79.4	70.6	52.1	5.00	2.26	2.21	SB	VOC	7.0	24.28	22
IET 24172	76.0	69.4	65.2	6.36	1.84	3.45	LS	A	5.0	25.08	60
IET 24177	77.1	67.5	43.2	6.09	1.89	3.22	LS	VOC	4.0	23.40	22
IET 23494	80.4	69.9	58.9	5.06	2.09	2.42	SB	VOC	4.0	24.84	22
IR 64 (Check)	76.1	65.9	51.1	6.17	1.97	3.13	LS	VOC	4.0	23.20	57
IET 24897	81.1	70.9	63.1	6.44	1.98	3.25	LS	VOC	3.0	20.12	58
IET 24898	80.6	72.8	67.7	6.33	1.91	3.31	LS	VOC	5.0	20.94	22
IET 24899	79.6	69.3	59.7	6.19	2.03	3.04	LS	VOC	4.0	26.07	22
Raja Lakshmi (HC)	80.6	71.5	55.6	6.09	1.93	3.15	LS	VOC	7.0	25.52	38
IET 24900	78.9	67.1	53.5	6.06	1.98	3.06	LS	VOC	4.0	26.54	22

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Hybrid Rice

Hybrid rice is the proven technology for increasing rice production & productivity and with good management yield advantage of 1.0 to 1.5 t/ha can be obtained by cultivation of hybrids as compared to the high yielding varieties under the same set of growing conditions. It is playing an important role in increasing the rice production in our country and appreciable progress has been made in the hybrid rice research and development. As a result of intensive research efforts made the last 25 years, 75 hybrids with high yield potential and better grain quality have been released for commercial cultivation. About 25-30 of them are in the active seed production chain and by encouraging the cultivation of these hybrids in the country, rice production and productivity can further be improved. During the year 2015, hybrid rice was planted in an area of about 2.8 m.ha and more than 80% of the total hybrid rice area in the states of Uttar Pradesh, Jharkhand, Bihar, Chhattisgarh, Madhya Pradesh, Gujarat, Odisha and Haryana. During this year three hybrids *viz.*, KPH 460, ADV 8301 and KRH 4 were released and notified by CSCCSN&RV for commercial cultivation in different states of the country.

For identification of high yielding widely adapted hybrids, a national level three-tier system of evaluation is being adopted since 1999. In this system, the hybrids developed by research network centers, including some of the voluntary centers and those developed by the private sector seed agencies having their own R&D are pooled together based on maturity and these are evaluated in the Initial Hybrid Rice Trials (IHRT). These IHRTs are constituted based on maturity groups into early (<120 days), and medium (121-140 days) trials. IHRT's are conducted at 25-35 locations and these trials consist of test hybrids, national varietal check, national hybrid check, zonal and local varietal checks, in the respective maturity groups.

The hybrids are promoted to next stage of testing *i.e.*, Advance Varietal Trial (AVT 1) based on following criterion. A 10% increase over the best varietal check and 5% increase over the best hybrid check, either on over all mean basis or on zonal mean basis [HRR >45%, intermediate to high amylose content (20-27.0) and if amylose content >27.0 with GC >40] qualifies a hybrid to be promoted to AVT 1, where the hybrids are jointly evaluated along with the elite breeding lines promoted from Initial Varietal Trials (IVT). Based on similar criteria, the hybrids are promoted from AVT 1 to AVT 2 stages. In the AVT 2 stage, the hybrids are also evaluated in agronomic trials to assess their response to varying levels of nitrogen. Simultaneously all hybrid entries are tested for resistance to diseases and insect pests and grain quality traits during all the three years. Those hybrids performing consistently well during all the three years are proposed to Varietal Identification Committee (VIC) for consideration.

Since there is an urgent need to develop high yielding hybrids with medium slender (MS) grains on par with the popular variety like Samba Mahsuri (BPT-5204) for Southern India, a separate trail being constituted for hybrids with medium slender grains. This trial is being conducted for the last 11 years with Samba Mahsuri as the national varietal check and DRRH-3 is included as national hybrid check since Kharif 2010. As a result of constitution of a separate trial like this, many promising hybrids with MS grain type *viz.*, TNAU RH CO-4, KRH-4, KPH-199, JKRH-3333, 27P11, 27P63, US 305 were identified and released for commercial cultivation. With the availability of these hybrids, area under hybrid rice in Southern India is likely to increase in the coming years.

During Kharif 2015, three trials were conducted and hybrids were evaluated in these trials (Table 3.58) and details of test locations are given in Table 3.59.

Table 3.58: Details of hybrid rice trials conducted during Kharif 2015

Sl. No	Name of the trial	No. of hybrids evaluated		No. of test locations
		Public	Private	
1.	Initial Hybrid Rice Trial - Early	5	23	34
2.	Initial Hybrid Rice Trial - Medium	11	47	36
3.	Initial Hybrid Rice Trial - MS grain quality	3	15	34

Table 3.59: Zonewise test centers for Initial Hybrid Rice Trials (Kharif 2015)

Zone	No. of Locations	Name of Locations
Zone II (Northern)	6	**Public Sector:** Chatha (CHT), Kaul (KUL), Ludhiana (LDN), Malan (MLN), Pantnagar (PNT) **Private Sector:** Savannah Seeds (SAV)
Zone III (Eastern)	12	**Public Sector:** Allahabad (ALH), Bhubaneswar (BBN), Chinsurah (CHN), Chiplima (CHP), Cuttack (CTK), Hazaribagh (HZB), Masodha (MSD), Ranchi(RCI) **Private Sector:** Bio Seeds (BIO), JK Agri Seeds (JKA), Nuziveedu (NUZ), PAN Seeds (PAN)
Zone IV (North Eastern)	2	**Public Sector:** Arundhatinagar (ARD), Titabar (TTB)
Zone V (Central)	5	**Public Sector:** Jabalpur (JBP), Raipur (RPR), Sakoli (SKL), Sindewahi (SND) **Private Sector:** Advanta (ADV)
Zone VI (Western)	8	**Public Sector:** Dabhoi (DBI), Karjat (KJT), Navsari (NVS), Nawagam (NWG), Radhanagari (RDN), Shirgaon (SHR), Vadgaon Maval (VDG) **Private Sector:** Ankur Seeds (ANK)
Zone VII (Southern)	16	**Public Sector:** Aduthurai (ADT), Bapatla (BPT), Brahmavar (BRM), Coimbatore (CBT), Gudalur (GDL), Jagtial (JGL), Karaikal (KRK), Mandya (MND), Maruteru (MTU), Mugad (MGD), Hyderabad (IIRR), Sirsi (SRS), Warangal (WGL) **Private Sector:** Mahyco (MAH), Bayer (BAY), Rasi Seeds (Rasi)

1. Initial Hybrid Rice Trial - Early (IHRT - E)

Twenty eight hybrids, 23 from private sector and five from public sector were evaluated in 34 locations, along with national hybrid check (US 314), national varietal check (Anjali), zonal varietal check [PR-124 (Northern), NDR-97 (Eastern), Sahbhagidhan (Central & Western), Luit (North Eastern), DRR Dhan-43 (Southern) and local checks of respective locations. A recently released variety Gontra Bidhan-3 was included in the trial, as observational national varietal check (ONCV). This was done to evaluate the performance of this variety (and if it is superior to the existing NCV Anjali) for replacing Anjali. The details about composition of the trial are given in Table 3.60.

Table 3.60: Composition of Initial Hybrid Rice Trial – Early (IHRT-E), Kharif 2015

S. No.	IET No.	Name	Nominating Agency
1	24901	SAVA-200	Savannah Seeds, Gurgaon
2	24902	SVZ-1103	Savannah Seeds, Gurgaon
3	24903	Siri-2266 (Gold)	Siri Seeds, Hyderabad
4	24904	NK-17508	Syngenta, Hyderabad
5	24905	NK-18902	Syngenta, Hyderabad
6	24906	NS-1545	Namdhari Seeds, Hyderabad
7	24907	NS-5149	Namdhari Seeds, Hyderabad
8	24908	PVRH-4017	Pravardhan Seeds, Hyderabad
9	24909	PVRH-4047	Pravardhan Seeds, Hyderabad
10	24910	HN-1	Nath Biogene, Aurangabad
11	24911	SL-8H	Nath Biogene, Aurangabad
12	24912	SL-18H	Nath Biogene, Aurangabad
13	24913	SL-12H	Nath Biogene, Aurangabad
14	24914	JKRH-2154	JK Seeds, Hyderabad
15	24915	ADV-1502	Advanta, Hyderabad
16	24916	IRH-91	IGKVV, Raipur
17	24917	IRH-102	IGKVV, Raipur
18	24918	MEPH-122	Mahyco, Kallakal
19	24919	MEPH-123	Mahyco, Kallakal
20	24920	Bio-648	Bioseed, Hyderabad
21	24921	Bio-4311 BH	Bioseed, Hyderabad
22	24922	KPH-476	Kaveri Seeds, Hyderabad
23	24923	JGLH-2	RARS, Jagtial
24	24924	US-317	Seed Works, Hyderabad
25	24925	US-326	Seed Works, Hyderabad
26	24926	TNTRH-39	TNAU, Coimbatore
27	24927	TNRH-271	TNAU, Coimbatore
28	24928	MR-8181	Metahelix, Bangalore
29	-	US-314 (NCH)	National Check Hybrid
30	-	Anjali (NCV)	National Check Variety
31	-	PR-124/Luit/NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)	Zonal Check Variety
32	-	Local Check Variety	Local Check Variety
33	-	Gontra Bidhan-3 (ONCV)	Observational National Check Variety

Northern: PR-124; North Eastern: Luit; Eastern: NDR-97; Central and Western: Sahbhagidhan; Southern: DRR Dhan-43

The detailed location wise and zone wise performance for grain yield and days to 50% flowering are given in Appendix 1 & 2 respectively. The grain quality traits are given in Appendix-3. The overall DFF in the trial ranged from 80 to 99 days. The national varietal check Anjali had mean DFF of 80 days, observational varietal check Gontra Bidhan-3 had mean DFF of 92 days and the zonal check (91 days), local check (89 days), hybrid check (91 days).

Based on the overall mean, one hybrid SL-8H was found to be superior to the best checks. Based on zonal checks, 10 hybrids *viz.*, NK 17508 (Zone III, V & VII); SAVA-200 (Zone II & III); MEPH-123 (Zone III & V); SVZ-1103, NK-18902, IRH-102, MEPH-122 (Zone V); Siri-2266 (Gold), SL-18H, JKRH-2154 (Zone III) were found to be promising (Table 3.61). For promotion of entries (based on 90 day DFF limit prescribed for this trial), Check's mean of 88±5 days criterion was adapted. As per the criterion, **seven hybrids *viz.*, SL-8H, NK-17508, MEPH-123, SVZ-1103, NK 18902, Siri 2266 (Gold), SL-18H meet the DFF requirement and hence are promoted to AVT-1-ETP irrigated trail.** Two hybrids *viz.*, IRH-102 and JKRH-2154, having exceeded, the DFF criterion, are dropped from further evaluation. Another two hybrids *viz.*, SAVA-200 (low amylose) and MEPH-122 (high amylose) were also dropped, based on quality issues.

Table 3.61: Promising hybrids identified in IHRT-E, Kharif 2015

S. No	Hybrid	DFF	Grain Type	Mean Yield (kg/ha)						Remarks
				Overall	Zone II	Zone III	Zone V	Zone VI	Zone VII	
1.	SL-8H (IET 24911)	93	LB	6147 [6] (21)	7165 [5]	5725 [12] (15)	6442 (24)	5989 (23)	6147 [12] (22)	Promoted to AVT-1-E TP
2.	NK-17508 (IET 24904)	93	MS	6118 (17)	6702	5870 [15] (18)	7071 [9] (36)	5848 (20)	5869 [7] (16)	Promoted to AVT-1-E TP
3.	SAVA-200 (IET 24901)	86	LB	5774 (11)	7950 [16] (13)	5433 [6] (10)	6375 (23)	5374 (11)	5256	Dropped low amylose
4.	MEPH-123 (IET 24919)	93	LB	5862 (15)	7097	5497 [7] (11)	6918 [6] (33)	5823 (20)	5239	Promoted to AVT-1-E TP
5.	SVZ-1103 (IET 24902)	88	LB	5538	7053	5051	6791 [5] (31)	5456 (12)	4886	Promoted to AVT-1-E TP
6.	NK-18902 (IET 24905)	93	LB	5882 (12)	7039	5050	6866 [6] (32)	5971 (23)	5713 (13)	Promoted to AVT-1-E TP
7.	IRH-102 (IET 24917)	95	MS	5560	6765	5245	6833 [5] (31)	5392 (11)	4931	Dropped high DFF
8.	MEPH-122 (IET 24918)	93	SB	5949 (17)	7275	5250	6865 [6] (32)	6244 (29)	5381	Dropped high amylose
9.	Siri-2266 (Gold) (IET 24903)	91	LB	5653	6948	5609 [10] (13)	6230 (20)	5475 (13)	5269	Promoted to AVT-1-E TP
10.	SL-18H (IET 24912)	90	LB	5569	6612	5439 [6] (10)	5969 (15)	5186	5444	Promoted to AVT-1-E TP
11.	JKRH-2154 (IET 24914)	94	LB	5978 (17)	7230	6298 [23] (27)	6721 (29)	5549 (14)	5417	Dropped high DFF
12.	US-314 (NCH)	91	MS	5803	6829	5119	6496	6046	5479	
13.	NCV	80	SB	3845	5664	3941	3133	3548	3886	
14.	PR-124/Luit/ NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)	91	LB	5098	7008	4719	5203	4856	4738	
15.	LCV	89	SB	5028	6610	4957	4661	4792	5052	
16.	ONCV	92	SB	5928	7321	4848	7508	6058	5452	

[] - Yield superiority percent over the hybrid check; () - Yield superiority in percent over the best varietal check;

The observational National Check Variety (ONCV) Gontra Bidhan-3 has shown its superiority over the national check variety (NCV) Anjali across the zones as well as on overall mean basis. **Hence it may be considered to replace Anjali as national variety check in the trial (Table 3.62).**

Table 3.62: Performance of Observational National Varietal Check Gontra Bidhan-3 over Anjali in IHRT-E Kharif 2015

S. No.	Varietal Check	DFF	Yield (Kg/Ha)					
			Over all	Zone II	Zone III	Zone V	Zone VI	Zone VII
1.	Gontra Bidhan-3	92	5928 (54)	7321 (29)	4848 (23)	7508 (140)	6058 (70)	5452 (40)
2.	Anjali	80	3845	5664	3941	3133	3548	3886

(): Yield superiority in percent over Anjali

As per the quality data of IHRT-E hybrids (Appendix-3), the milling percentage ranged from 64.4 to 72.3 and HRR from 47.1 to 68.5. Majority of the hybrids showed intermediate amylose content with the exceptions of SAVA-200, NS 5149 (low amylose); MEPH-122 (high amylose). Regarding grain type, the entries were falling in different grain type categories.

2. Initial Hybrid Rice Trial - Medium (IHRT-M)

In this trial, 58 hybrids (11 from public and 47 from private sector), were evaluated along with national varietal checks *viz.,* NDR-359 (medium), MTU-1010 (mid early); national hybrid checks *viz.,* HRI-174 (medium), US-312 (mid early); zonal varietal checks *viz.,* [PR-113 (Northern); CR Dhan 201 (Eastern); IR 64 (Central); Akshayadhan (Western); Jaya (Southern)]. The trial was conducted at 36 locations. The details about the composition of the trial are given in Table 3.63.

Table 3.63: Composition of Initial Hybrid Rice Trial – Medium (IHRT-M), Kharif 2015

S. No.	IET No.	Name	Nominating Agency
1	24929	Siri-2244 (Gold)	Siri Seeds, Hyderabad
2	24930	NK-17715	Syngenta, Hyderabad
3	24931	RH-9000 Plus	Devgen Seeds, Hyderabad
4	24932	JRH-66	JNKVV, Jabalpur
5	24933	Siri-2277 (Gold)	Siri Seeds, Hyderabad
6	24934	NK-5251 Plus	Syngenta, Hyderabad
7	24935	JRH-68	JNKVV, Jabalpur
8	24936	RH-664 Imp Plus	Devgen Seeds, Hyderabad
9	24937	PRSH-9018	Prabhat Agri Biotech, Hyderabad
10	24938	NPH-2003	Nuziveedu Seeds, Hyderabad
11	24939	UPRH-106	GBPUAT, Pantnagar
12	24940	NPH-2012	Nuziveedu Seeds, Hyderabad
13	24941	NS-5153	Namdhari Seeds, Hyderabad
14	24942	UPRH-122	GBPUAT, Pantnagar
15	24943	NS-5156	Namdhari Seeds, Hyderabad
16	24944	PRSH-9003	Prabhat Agri Biotech, Hyderabad
17	24945	TMRH-104	TriMurthi Seeds, Hyderabad
18	24946	HN-4	Nath Biogene, Aurangabad
19	24947	BLR-101	Bisco Bioscience, Hydreabad
20	24948	TMRH-124	TriMurthi Seeds, Hyderabad
21	24949	BLR-102	Bisco Bioscience, Hydreabad

S. No.	IET No.	Name	Nominating Agency
22	24950	JKRH-2230	JK Seeds, Hyderabad
23	24951	VNR-218	VNR Seeds, Raipur
24	24952	ADV-1503	Advanta, Hyderabad
25	24953	IRH-91-1	IGKV, Raipur
26	24954	VNR-219	VNR Seeds, Raipur
27	24955	MEPH-124	Mahyco, Kallakal
28	24956	IRH-103	IGKV, Raipur
29	24957	GK-5030	Ganga Kaveri Seeds, Hyderabad
30	24958	MEPH-125	Mahyco, Kallakal
31	24959	IIRRH-103	IIRR, Hyderabad
32	24960	IRH-104	IGKV, Raipur
33	24961	SRH-5201	Shakthi Seeds, Hyderabad
34	24962	GK-5036	Ganga Kaveri Seeds, Hyderabad
35	24963	Bio-681	Bioseeds, Hyderabad
36	24964	IIRRH-104	IIRR, Hyderabad
37	24965	KPH-475	Kaveri Seeds, Hyderabad
38	24966	CPH-166	Rohini Seeds, Hyderabad
39	24967	Bio-680	Bioseeds, Hyderabad
40	24968	KPH-484	Kaveri Seeds, Hyderabad
41	24969	MR-8222	Metahelix, Bangalore
42	24970	HRI-188	Bayer Bioscience, Hyderabad
43	24971	IIRRH-105	IIRR, Hyderabad
44	24972	US-330	Seed Works, Hyderabad
45	24973	MR-8333	Metahelix, Bangalore
46	24974	PR-15101	Pioneer Overseas, Hyderabad
47	24975	US-335	Seed Works, Hyderabad
48	24976	SPH-1065	Super Agri Seeds, Hyderabad
49	24977	PR-15103	Pioneer Overseas, Hyderabad
50	24978	RRX-022	Rasi Seeds, Hyderabad
51	24979	US-384	Seed Works, Hyderabad
52	24980	PR-15104	Pioneer Overseas, Hyderabad
53	24981	NPH-242	Nirmal Seeds, Jalgaon
54	24982	SPH-921	Super Agri Seeds, Hyderabad
55	24983	US-337	Seed Works, Hyderabad
56	24984	PR-15107	Pioneer Overseas, Hyderabad
57	24985	RRX-024	Rasi Seeds, Hyderabad
58	24986	TNTRH-55	TNAU, Coimbatore
59	-	US-312 (NCH)	National Check Hybrid
60	-	MTU-1010 (NCV)	National Check Variety
61	-	HRI-174 (NCH)	National Check Hybrid
62	-	NDR-359 (NCV)	National Check Variety
63	-	PR-113/CR Dhan-201/ IR-64/ Akshayadhan/ Jaya (ZCV)	Zonal Check Variety
64	-	Local Check Variety	Local Check Variety

Northern: PR-113; Eastern: CR Dhan-201; Central: IR-64; Western: Akshayadhan; Southern: Jaya

Location wise data on grain yield and DFF are given in Appendix 4&5 respectively. Grain quality traits of the hybrids are given in Appendix 6.

For the purpose of evaluation of hybrids in the trial, test hybrids were classified in two groups based on the data of 50% days to flowering *viz.,* Group I (DFF 91 to 100); Group II (DFF 101 and above); Group I hybrids were compared with the hybrid check US 312, varietal check – MTU 1010 and zonal check mean. Group II hybrids were compared with the hybrid check HRI-174, varietal check – NDR 359 and zonal check means.

The list of promising hybrids with the advantage over the best checks in their respective zones is given in Table 3.64.

Table 3.64: Promising hybrids identified in IHRT-M, Kharif 2015 (Group I)

S. No	Hybrid	DFF	Grain Type	Mean Yield (kg/ha)							Remarks
				Over all	Zone II	Zone III	Zone IV	Zone V	Zone VI	Zone VII	
1	NK-5251 Plus (IET 24934)	98	LS	6225 [11] (23)	5718	6609 [15] (19)	5090 [7] (30)	7420 [11] (29)	5363	6300 [18] (23)	Promoted to AVT-1-IM
2	PR-15101 (IET 24974)	100	LB	6039 [8] (19)	6487 (17)	6409 [11] (16)	4020	7013 (22)	5742 [6] (10)	5690 [6] (11)	Dropped low amylose
3	IRH-104 (IET 24960)	98	LS	5875 [5] (16)	5712	6136 [7] (11)	4648 (19)	7037 [5] (22)	6185 [14] (18)	5331	Promoted to AVT-1-IM
4	Bio-681 (IET 24963)	99	LS	5890 [5] (16)	5265	6829 [19] (23)	4380 (12)	6321 (10)	6030 [11] (15)	5448	Promoted to AVT-1-IM
5	Siri-2277 (Gold) (IET 24933)	99	LS	5880 [5] (16)	5673	5945	4255	6451 (12)	6027 [11] (15)	5928 [11] (16)	Promoted to AVT-1-IM
6	RH-9000 Plus (IET 24931)	98	LS	5853 (16)	6084 [10]	6063 [5] (10)	4955 (26)	6767 (18)	5052	5786 [8] (13)	Promoted to AVT-1-IM
7	NS-5156 (IET 24943)	96	LS	5563 (10)	4785	6104 [6] (10)	4153	5747	5347	5705 [7] (12)	Dropped low amylose
8	IRH-103 (IET 24956)	98	LS	5776 (14)	5798	6080 [6] (10)	4395 (12)	6384 (11)	5278	5777 [8] (13)	Promoted to AVT-1-IM
9	JKRH-2230 (IET 24950)	98	LB	5850 (16)	5810	6332 [10] (14)	4900 (25)	6388 (11)	5844 [7] (12)	5362	Promoted to AVT-1-IM
10	VNR-218 (IET 24951)	98	MS	5829 (15)	5833	6589 [14] (19)	4943 (26)	7307 [9] (27)	5064	5188	Promoted to AVT-1-IM
11	KPH-484 (IET 24968)	94	MS	5756 (14)	5705	6186 [7] (12)	4055	7257 [8] (26)	5311	5351	Promoted to AVT-1-IM
12	PR-15107 (IET 24984)	100	LB	5717 (13)	5500	6004	5105 [8] (30)	6134	5737	5491	Promoted to AVT-1-IM
13	Bio-680 (IET 24967)	97	LB	5764 (14)	5547	6049	4148	6457 (12)	5420	5812 [9] (14)	Promoted to AVT-1-IM
14	SPH-921 (IET 24982)	99	MS	5574 (10)	5559	5920	3798	5995	5142	5672 [6] (11)	Promoted to AVT-1-IM
15	US-337 (IET 24983)	98	LS	5317	5337	5809	3315	5589	5748 [6] (10)	4943	Promoted to AVT-1-IM
16	RRX-024 (IET 24985)	95	LS	5505	5934	5717	4123	5473	6094 [12] (16)	5137	Promoted to AVT-1-IM
17	ADV-1503 (IET 24952)	96	SB	5544	5358	6088 [6] (10)	4268	6093	4887	5493	Promoted to AVT-1-IM
18	IIRRH-105 (IET 24971)	96	MS	5458	5128	6202 [8] (12)	3730	6792 (18)	5377	4771	Promoted to AVT-1-IM
19	US-330 (IET 24972)	98	LS	5494	5315	6095 [6] (10)	4883 (25)	6189	5244	4995	Dropped low amylose
20	RRX-022 (IET 24978)	100	LS	5586	5253	6214 [8] (12)	3893	6825 (19)	5468	5057	Promoted to AVT-1-IM
23	US-312 (NCH-ME)	98	MS	5616	5532	5758	4748	6712	5440	5346	
22	MTU-1010 (NCV-ME)	93	LS	4947	4186	5089	3920	5749	4754	5106	
21	ZCV	98	SB	5064	6028	5535	3240	5163	5240	4492	
Promising hybrids identified in IHRT-M, Kharif 2015 (Group II)											
1	MEPH-125 (IET 24958)	101	MS	5848	6404 [16]	5953	4160	7370 [9] (13)	5863 [7] (12)	5254	Promoted to AVT-1-IM
2	MR-8333 (IET 24973)	102	LS	5572	5513	5846	3910	6495	5925 [8] (13)	5136	Promoted to AVT-1-IM
3	PR-15103 (IET 24977)	101	LS	5900	5451	6125	4523	7442 [10] (14)	5161	5906 (12)	Promoted to AVT-1-IM
4	VNR-219 (IET 24954)	101	MS	5732	5662	5998	3885	7216 [7] (10)	5508	5410	Promoted to AVT-1-IM
7	HRI-174 (NCH-M)	102	LB	6039	5525	6572	4373	6766	5477	6142	
6	NDR-359 (NCV-M)	100	LB	5554	5486	6110	4838	6542	4688	5261	
5	ZCV	98	SB	5064	6028	5535	3240	5163	5240	4492	

Based on the grain quality parameters (Appendix 6), milling percentage of the hybrids in the trial ranged from 64.8 to 72.3 and HRR from 36.6 to 69.8. Majority of the hybrids showed intermediate amylose with few exceptions *viz.*, NPH-2012, NS-5156, IRH-91-1,

SRH-5201, CPH-166, MR-8222, US-330, PR 15101, US 335, PR 15104, NPH-242 (low amylose). The hybrids had different grain types.

Based on overall mean, in Group I, five hybrids *viz.,* NK 5251 Plus, PR 15101, IRH-104, Bio-681, Siri-2277 (Gold) were found promising with more than 10 percent yield advantage over the highest yielding varietal check and 5 percent over the hybrid check. In addition 15 more hybrids *viz.*, RH 9000 Plus, NS-5156, IRH-103 (Zone III & VII); JKRH 2230 (Zone III & VI); VNR-218, KPH-484 (Zone III & V); ADV-1503, IIRRH-105, US-330, RRX-022 (Zone III); PR 15107 (Zone IV); US 337, RRX-024 (Zone VI); Bio 680, SPH-921 (Zone VII) were found to be promising based on the zonal means. Among these promising hybrids, **the following 17 hybrids *viz.*, NK 5251 Plus, Bio 681, Siri 2277 (Gold), RH 9000 Plus, IRH-103, JKRH 2230, KPH-484, IIRRH-105, RRX-022, PR 15107, US-337, RRX-024, Bio 680, SPH-921, IRH-104, VNR-218, ADV-1503 are promoted to AVT-1 irrigated medium trial.** The following three hybrids *viz.*, PR 15101, NS-5156, US-330 (low amylose) were dropped from further evaluation because of certain quality parameters.

In Group II, none of the test hybrids were found promising over the checks on the overall mean basis. However, four hybrids *viz.*, MEPH-125 (Zone V & VI); MR-8333 (Zone VI); PR 15103 and VNR 219 (Zone V) were found to be promising based on Zonal means. **All these four hybrids are promoted to AVT-1 irrigated medium trial.**

3. Hybrid Rice Trial with Medium Slender (MS) grain type (IHRT-MS)

In order to develop and release heterotic MS grain type hybrids with similar grain quality features of popular variety BPT 5204, a separate trial for MS grain type is being constituted for the last 11 years. In this trial, BPT 5204 is used as national varietal check and DRRH-3 is used as hybrid check. A high yielding and popular variety WGL-14 is included in the trial to evaluate its yield performance and its suitability to replace existing national varietal check BPT 5204.

The trial consisting of 18 test hybrids, 15 from the private sector and three from the public sector was conducted at 34 locations. The composition of the trial is given in Table 8. One hybrid 28P09 was evaluated for third year, seven hybrids *viz.*, KPH-459, SPH-6159, PR-14109, HRI-186, PR-14111, PR-14112 and DRRH-92 for second year and rest were tested for the first time.

Table 3.65: Composition of Hybrid Rice Trial – Medium Slender (IHRT-MS), Kharif 2015

S. No.	IET No.	Name	Nominating Agency
1	24987	ADV-15104	Advanta, Hyderabad
2	24988	Bio-633	Bioseed, Hyderabad
3	24989	JGLH-1	RARS, Jagtial
4	24990	MR-8666	Metahelix, Hyderabad
5	24991	HRI-187	Bayer Bio-science, Hyderabad
6	24992	US-353	Seed Works, Hyderabad
7	24993	PR-15108	Pioneer Overseas, Hyderabad
8	24994	SPH-1003	Super Agri Seeds, Hyderabad
9	24995	SRH-5400	Shakthi Seeds, Hyderabad
10	24888	KPH-459*	Kaveri Seeds, Hyderabad
11	24156	28P09**	Pioneer Overseas, Hyderabad

S. No.	IET No.	Name	Nominating Agency
12	24896	SPH-6159*	Super Agri Seeds, Hyderabad
13	24891	PR-14109*	Pioneer Overseas, Hyderabad
14	24887	HRI-186*	Bayer Bio-science, Hyderabad
15	24892	PR-14111*	Pioneer Overseas, Hyderabad
16	24159	DRRH-92*	IIRR, Hydreabad
17	24893	PR-14112*	Pioneer Overseas, Hyderabad
18	24996	TNRH-280	TNAU, Coimbatore
19	-	DRRH-3 (NCH)	National Check Hybrid
20	-	WGL-14 (NCV)	National Check Variety
21	-	BPT-5204 (Old NCV)	National Check Variety

* = 2nd Year of testing; ** = 3rd Year of testing

The location wise mean data on grain yield and DFF are given in Appendix 7&8 respectively. The grain quality traits are given in Appendix 9.

Based on the overall mean, PR 14109, PR 15108, SPH-1003, PR 14112 and 28P09 were found promising with more than 10 percent yield advantage over the varietal check BPT 5204 and more than 5 percent over the hybrid check DRRH-3 (Table 3.66). In addition to these hybrids, remaining all the hybrids *viz.*, JGLH-1, MR 8666, HRI-187, HRI-186, PR-14111, DRRH-92, TNRH-280 (East and West); ADV 15104, Bio 633, US 353, SRH-5400, KPH-459, SPH-6159, (West) were found to be promising based on zonal means.

Based on the grain quality parameters (Appendix 9) the milling percentage of hybrids in the trial ranged from 68.1 to 71.2 and HRR from 60.6 to 68.3. All the hybrids has MS grain type with intermediate amylose content except two hybrids *viz.*, Bio 633 and US 353 which recorded low amylose.

Among the promising hybrids identified in the trial, the hybrids *viz.*, KPH-459, SPH-6159, PR 14109, HRI-186, PR-14111, PR 14112 and DRRH-92 which have completed two years of testing (and are being promoted) may be subjected to agronomy testing during Kharif 2016 season. The hybrids *viz.*, ADV 15104, JGLH-1, MR-8666, HRI-187, PR 15108, SPH-1003, SRH-5400 and TNRH 280 are promoted for second year of testing. Two hybrids *viz.*, Bio-633 and US 353 are discontinued from further testing because of low amylose content.

The hybrid 28P09, which has completed three years of testing, has shown the requisite yield superiority over the checks in the final year of testing also. Its performance for all three years of testing in HRT-MS trial is given in Table 3.67 (zone wise) and Table 3.68 (state wise). The hybrid was found promising in all the three years of testing based on overall mean, as well as East and West zones. However, in Southern Zone, it's performance was not consistent. The hybrid was found promising in Odisha, Maharashtra, Chhattisgarh and Tamil Nadu.

Table 3.66: Promising hybrids identified in IHRT-MS, Kharif 2015

S. No	Hybrid	DFF	Grain Type	Mean Yield (kg/ha)					Remarks
				Overall	Zone III	Zone V	Zone VI	Zone VII	
1.	PR 14109 (IET 24891)	105	MS	6101 [10] (38)	6072 [19] (29)	6908 (33)	4942 [11] (25)	6456 [5] (54)	Promoted to IHRT-MS 3rd year testing
2.	PR 15108 (IET 24993)	105	MS	6026 [8] (36)	5643 [11] (20)	6963 (34)	5421 [22] (37)	6363 (52)	Promoted to IHRT-MS 2nd year testing
3.	SPH-1003 (IET 24994)	100	MS	6009 [8] (36)	5184 (10)	6639 (28)	4961 [11] (25)	6897 [12] (65)	Promoted to IHRT-MS 2nd year testing
4.	PR 14112 (IET 24893)	103	MS	5831 [5] (32)	5682 [11] (20)	6440 (24)	4779 [7] (21)	6289 (50)	Promoted to IHRT-MS 3rd year testing
5.	28P09 (IET 24156)	106	MS	5834 [5] (32)	5968 [17] (26)	6987 (34)	5010 [12] (26)	5818 (39)	Completed three year testing
6.	JGLH-1 (IET 24989)	99	MS	5430 (22)	5568 [9] (18)	5824 (12)	5561 [25] (40)	5230 (25)	Promoted to IHRT-MS 2nd year testing
7.	MR-8666 (IET 24990)	105	MS	5711 (29)	5787 [13] (23)	6671 (28)	4995 [12] (26)	5722 (37)	Promoted to IHRT-MS 2nd year testing
8.	HRI-187 (IET 24991)	101	MS	5703 (29)	5653 [11] (20)	5877 (13)	5330 [20] (34)	6104 (46)	Promoted to IHRT-MS 2nd year testing
9.	HRI-186 (IET 24887)	97	MS	5302 (20)	5451 [7] (16)	5539	4871 [9] (23)	5370 (28)	Promoted to IHRT-MS 3rd year testing
10.	PR 14111 (IET 24892)	104	MS	5388 (22)	5651 [11] (20)	5763 (11)	4821 [8] (22)	5487 (31)	Promoted to IHRT-MS 3rd year testing
11.	DRRH-92 (IET 24159)	103	MS	5478 (24)	5563 [9] (18)	6017 (16)	5000 [12] (26)	5480 (31)	Promoted to IHRT-MS 3rd year testing
12.	TNRH-280 (IET 24996)	100	MS	5515 (24)	5642 [11] (20)	5767 (11)	4814 [8] (21)	5790 (38)	Promoted to IHRT-MS 2nd year testing
13.	ADV 15104 (IET 24987)	97	MS	5178 (17)	5273 (12)	5299	4964 [11] (25)	5195 (24)	Promoted to IHRT-MS 2nd year testing
14.	Bio-633 (IET 24988)	103	MS	5358 (21)	5240 (11)	6390 (23)	5050 [13] (27)	5171 (24)	Dropped due to low amylose
15.	US 353 (IET 24992)	100	MS	5084 (15)	5198 (10)	5234	4686 [5] (18)	5230 (25)	Dropped due to low amylose
16.	SRH 5400 (IET 24995)	97	MS	5430 (22)	5303 (12)	5701 (10)	5223 [17] (32)	5463 (31)	Promoted to IHRT-MS 2nd year testing
17.	KPH-459 (IET 24888)	101	MS	5613 (27)	5305 (12)	5847 (12)	5497 [23] (39)	5795 (39)	Promoted to IHRT-MS 3rd year testing
18.	SPH-6159 (IET 24896)	99	MS	5338 (20)	5070	4931	4853 [9] (22)	6061 (45)	Promoted to IHRT-MS 3rd year testing
19.	DRRH-3 (NCH)	103	MS	5558	5104	6758	4460	6134	
20.	BPT 5204 (NCV)	110	MS	4434	4718	5200	3966	4181	

[] - Yield superiority percent over the hybrid check; () - Yield superiority in percent over the varietal check;

Table 3.67: Summary yield data 28P09 in IHRT-MS trials 2013-15 (Zone Wise)

	Year of testing	No. of trials	Proposed 28P09 (Overall)	Check variety BPT 5204 (overall)	Hybrid check DRRH-3 (overall)	No. of trials	Proposed variety 28P09 (East)	Check variety BPT 5204 (East)	Hybrid check DRRH-3 (East)	No. of trials	Proposed variety 28P09 (West)	Check variety BPT 5204 (West)	Hybrid check DRRH-3 (West)	No. of trials	Proposed variety 28P09 (South)	Check variety BPT 5204 (South)	Hybrid check DRRH-3 (South)
Mean yield (Kg/ha) in regions East, West and South	I Year 2013	26	5422	4325	4986	9	5638	4581	5158	5	4384	3751	3876	12	5537	4299	5153
	II Year 2014	29	6203	4658	5507	9	5755	4389	5003	7	6197	4247	4767	13	6468	5055	6232
	III Year 2015	34	5834	4434	5558	8	5968	4718	5104	7	5010	3966	4460	12	5818	4181	6134
	Wt. Avg.	89	5834	4475	5374	26	5780	4557	5088	19	5283	4013	4419	37	5955	4526	5850
Percentage increase or decrease over the checks	I Year 2013	26		25	9			23	9			17	13			29	7
	II Year 2014	29		33	13			31	14			46	30			28	4
	III Year 2015	34		32	5			26	17			26	12			39	-5
	Wt. Avg.	89		30	9			27	14			32	20			32	2

Table 3.68: Summary yield data 28P09 in IHRT-MS trials 2013-15 (State Wise)

		West Bengal				Jharkhand				Odisha				Uttar Pradesh			
	Year of testing	No. of trials	Proposed 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. Of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3
Mean yield (Kg/ha) in regions East, West and South	I Year 2013	1	7806	6040	6382	1	4333	2750	4083	1	5607	4282	4590	1	4238	5944	4991
	II Year 2014	-	-	-	-	1	4571	4000	6000	1	6699	4364	6338	2	6299	4461	5197
	III Year 2015	1	6333	5619	-	-	-	-	-	3	6466	4327	4601	3	5347	4809	5439
	Wt. Avg.	2	7070	5830	6382	2	4452	3375	5041	5	6341	4325	4946	6	5480	4882	5284
Percentage increase or decrease over the checks	I Year 2013	1		29	22	1		58	6			31	22			-29	-15
	II Year 2014			-	-	1		14	-24			54	6			41	21
	III Year 2015	1		13	-	-		-	-			49	41			11	-17
	Wt. Avg.	2		21	11	2		32	-12			47	28			12	4

*2014 CHN Low CV - not included in the analysis; *2015 RCI Low Yield & High CV - not included in the analysis; *2013 BBN Low plot size - not included in the analysis

Table 3.68(contd): Summary yield data 28P09 in IHRT-MS trials 2013-15 (State Wise)

		Assam				Madhya Pradesh				Maharashtra				Chhattisgarh			
	Year of testing	No. of trials	Proposed 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3
Mean yield (Kg/ha) in regions East, West and South	I Year 2013	1	4950	3533	4817	1	6510	5510	8280	2	5563	4646	4638	2	5831	4293	4062
	II Year 2014	1	4770	3609	3597	-	-	-	-	5	5625	4167	4478	2	5825	4915	4348
	III Year 2015	1	5584	4933	5528	1	9349	5724	9466	6	5470	3965	4399	2	7080	6180	5898
	Wt. Avg.	3	5101	4025	4647	2	7930	5617	8873		5549	4147	4466	6	6245	5129	4769
Percentage increase or decrease over the checks	I Year 2013			40	3			18	-21			20	20			36	44
	II Year 2014			32	33							35	26			19	34
	III Year 2015			13	1			63	63			38	24			15	20
	Wt. Avg.			27	10			41	-11			34	24			22	31

*2014 JBL Low CV- not included in the analysis; *2013 SND Low Yield & high CV- not included in the analysis

Table 3.68 (contd): Summary yield data 28P09 in IHRT-MS trials 2013-15(State Wise)

		Gujarat				Andhra Pradesh				Telangana				Karnataka			
	Year of testing	No. of trials	Proposed 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3
Mean yield (Kg/ha) in regions East, West and South	I Year 2013	1	2026	1961	2353	1	3705	4280	3597	6	6085	4366	5112	3	4824	3695	5227
	II Year 2014	2	7628	4445	5488	2	5531	4753	4095	5	6689	4960	6783	2	6867	4721	6762
	III Year 2015	3	4557	3962	4999	2	5362	3870	4996	5	6070	4690	7060	3	5485	3562	5977
	Wt. Avg.	6	5159	3790	4721	5	5098	4305	4356	16	6269	4653	6243	8	5583	3902	5892
Percentage increase or decrease over the checks	I Year 2013			3	-14			-13	3			39	19			31	-8
	II Year 2014			72	39			16	35			35	-1			45	2
	III Year 2015			15	-9			39	7			29	-14			54	-8
	Wt. Avg.			36	9			18	17			35	0			43	-5

*2013 NWG high CV- not included in the analysis; *2014 BRM Low Yield not included in the analysis

Table 3.68(contd): Summary yield data 28P09 in IHRT-MS trials 2013-15 (State Wise)

		Tamil Nadu				Puducherry			
	Year of testing	No. of trials	Proposed 28P09	Check variety BPT 5204	Hybrid check DRRH-3	No. of trials	Proposed variety 28P09	Check variety BPT 5204	Hybrid check DRRH-3
Mean yield (Kg/ha) in regions East, West and South	I Year 2013	1	6764	4775	5543	1	5000	5250	6333
	II Year 2014	2	6827	5141	6362	1	5727	6628	6435
	III Year 2015	2	6143	4146	5552	-	-	-	-
	Wt. Avg.	5	6541	4670	5874	2	5363	5939	6384
Percentage increase or decrease over the checks	I Year 2013			42	22			-5	-21
	II Year 2014			33	7			-14	-11
	III Year 2015			48	11				
	Wt. Avg.			40	11			-10	-16

The observational national check variety (ONCV) WGL-14 has shown its superiority over the national check variety BPT-5204 in majority of zones (Zone III, Zone VI and Zone VII) as well as on overall mean basis (Table 3.69). It also has requisite quality parameters for MS trial. Hence, it may be considered to replace BPT 5204 as national varietal check in the trial (Table 3.70).

Table 3.69: Performance of Observational National Check Variety WGL-14 over BPT-5204 in IHRT-MS Kharif 2015

S. No.	Varietal Check	DFF	Grain Type	Yield (Kg/Ha)					
				Over all	Zone III	Zone IV	Zone V	Zone VI	Zone VII
1.	WGL-14	104	MS	4798 (8.20)	5113 (8.37)	4776 (-3.18)	5132 (-1.30)	4513 (13.79)	4645 (11.10)
2.	BPT-5204	110	MS	4434	4718	4933	5200	3966	4181

Table 3.70: Quality parameters of WGL14 & BPT-5204

S. No	Varietal Check	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	AC	GC	AROMA
1	WGL-14 (NCV)	78.7	70	67.6	5.24	1.89	2.77	MS	A	4.6	230	8.6	1.64	24.99	22	NS
2	BPT-5204 (Old NCV)	78.8	69.6	65.4	5	1.84	2.71	MS	A	4.8	235	8	1.6	24.34	40	NS

Hull: Hulling (%); Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm);L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; VER: Volume expansion ration; WU: Water uptake (ml); KLAC: Kernel length after cooking (mm); ER: Elongation ratio; AC: Amylose content (%); GC: Gel consistency; MS: Medium slender; VOC: Very occasionally present; A: Absent; NS: No scent; MS: Medium scent; SS: Strong scent;

Appendix 1: Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	Hybrid	ZONE I	ZONE II						ZONE III					
			MLN	KUL	SAV	HA mean	PNT	LDN	Northern Mean	CHN	BBN	RCI	HZB	ALH	MSD
1	24901	SAVA-200	4506	6511	12687	9599	4034	8569	7950	5000	3492	2167	8200	4567	6383
2	24902	SVZ-1103	4074	5800	10653	8227	3271	8487	7053	5524	2698	1500	7500	4800	3484
3	24903	Siri-2266 (Gold)	2685	5711	9977	7844	3139	8967	6948	5524	4762	1100	7267	4533	4234
4	24904	NK-17508	4529	6333	9957	8145	2908	7612	6702	5905	4921	1033	7133	4800	4673
5	24905	NK-18902	3138	6422	10423	8423	2945	8365	7039	5762	4762	300	6867	4633	2962
6	24906	NS-1545	3407	6533	8883	7708	3300	7610	6581	4810	3810	833	6067	4833	4172
7	24907	NS-5149	2995	5933	8277	7105	3090	7641	6235	5571	3333	633	6800	5267	3212
8	24908	PVRH-4017	2844	5733	9317	7525	3367	6371	6197	5619	1746	1833	6917	4700	3671
9	24909	PVRH-4047	2324	6022	9587	7804	3033	6147	6197	4429	2063	1833	6517	4400	3463
10	24910	HN-1	5394	6578	10797	8687	2286	8965	7156	5667	3333	767	9033	4333	2920
11	24911	SL-8H	5623	6600	11060	8830	3351	7649	7165	5667	3968	1900	7917	4700	5841
12	24912	SL-18H	3549	6156	10203	8179	2163	7926	6612	5857	2698	1900	7850	4800	3963
13	24913	SL-12H	3126	5844	10677	8261	2599	8116	6809	5667	3651	1300	8267	4800	4589
14	24914	JKRH-2154	3867	6244	10883	8564	3161	8631	7230	6286	5397	467	8417	4900	5382
15	24915	ADV-1502	2929	5733	9703	7718	2363	6755	6139	4810	2857	933	7917	4867	6195
16	24916	IRH-91	3897	5956	9307	7631	2943	7407	6403	5619	3175	1833	7400	4767	4631
17	24917	IRH-102	3838	6556	11027	8791	3671	5806	6765	5714	4127	1433	8200	4567	3796
18	24918	MEPH-122	5159	5867	11723	8795	3788	7721	7275	5952	4444	1967	7817	4200	3129
19	24919	MEPH-123	5158	5733	10510	8122	2993	9153	7097	5667	4444	1433	9500	4133	3838
20	24920	Bio-648	3784	5733	8450	7092	3245	6364	5948	5714	2540	733	7933	4333	4172
21	24921	Bio-4311 BH	3000	5733	8277	7005	3354	7649	6253	5095	3492	867	6433	4700	3963
22	24922	KPH-476	1784	5756	9280	7518	3583	6586	6301	5000	3016	1500	8400	4633	4255
23	24923	JGLH-2	2813	5200	7290	6245	3294	6791	5644	4952	2222	300	6733	4300	4380
24	24924	US-317	3463	5756	9947	7851	3294	8028	6756	5810	3333	767	8000	4267	4506
25	24925	US-326	4607	5956	10397	8176	3243	8779	7094	5095	3968	2100	8267	4233	3463
26	24926	TNTRH-39	2754	5667	9177	7422	3010	6641	6124	5762	5079	433	6600	4767	4464
27	24927	TNRH-271	2933	4822	6827	5824	2462	4636	4687	4476	1429	1967	4900	4100	4506
28	24928	MR-8181	2842	5000	9760	7380	3001	5639	5850	4762	1905	1100	8383	4233	3129
29	US-314 (NCH)		4679	5889	9407	7648	3004	9016	6829	5143	3492	867	8600	4367	3713
30	Anjali (NCV)		1457	5689	8567	7128	2418	5983	5664	4143	952	1167	5733	4967	3087
31	PR-124/Luit /NDR-97/ Sahbhagidhan/DRR Dhan-43 (ZCV)		4620	5733	10060	7897	3590	8648	7008	4667		700		5167	3129
32	Local Check Variety		3651	6289	9143	7716	2985	8024	6610	5476	3016	2033	8233	4700	3296
33	Gonta Bidhan-3 (ONCV)		4694	5911	9727	7819	3964	9680	7321	4952	3651	733	6333	4100	3671
Exp Mean			3608	5925	9823	7874	3103	7465	6579	5418	3452	1248	7544	4577	4192
CD(0.05)			735.37	342.99	1090.2		445.46	1999.17		659.57	1076.12	912.96	618.32	266.64	482.83
CV			10	3.58	6.91		8.84	16.3		7.65	19.76	46.09	5.1	3.59	7.34
			**	**	**		**	**		**	**	**	**	**	**
D/S			06-06-2015	13-06-2015	17-06-2015		13-06-2015	30-05-2015		02-07-2015	13-07-2015	08-07-2015	04-07-2015	05-06-2015	26-06-2015
D/P			18-07-2015	13-07-2015	15-07-2015		01-07-2015	07-07-2015		05-08-2015	17-08-2015	05-08-2015	25-07-2015	07-08-2015	27-07-2015
Zonal Check			PR 124	PR 124	PR 124		PR 124	PR 124		NDR 97	NDR 97	NDR 97	NDR 97	NDR 97	NDR 97
Local Check			HPR 2143	Govind	PR 124		Govind	PR 115		G.B.1		BVD 111	Sahbhagi Dhan	NDR 359	NDR 97

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 1 (contd): Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	Hybrid	ZONE III (contd)				ZONE IV	ZONE V							
			BIO	JKA	UP mean	Eastern Mean	TTB	JBP	SND	SKL	MH mean	RPR	ADV	CG Mean	Central Mean
1	24901	SAVA-200	6684	3707	5335	5433	4797	9337	1159	5423	3291	5708	10246	7977	6375
2	24902	SVZ-1103	6847	4504	4909	5051	4443	9362	2718	5465	4092	5240	11170	8205	6791
3	24903	Siri-2266 (Gold)	7598	5347	5428	5609	5387	8098	3431	4422	3927	3925	11271	7598	6230
4	24904	NK-17508	6878	6779	5782	5870	6210	9345	4078	6592	5335	4088	11253	7670	7071
5	24905	NK-18902	6889	3474	4490	5050	5887	9453	4345	5590	4968	4537	10406	7472	6866
6	24906	NS-1545	6575	3917	4874	4883	4913	9428	4078	5340	4709	4338	10784	7561	6794
7	24907	NS-5149	5252	3680	4353	4731	4957	6900	2897	4214	3555	3111	9607	6359	5346
8	24908	PVRH-4017	5979	4369	4680	4714	4597	6921	1426	3922	2674	1761	8343	5052	4475
9	24909	PVRH-4047	5309	4124	4324	4329	4663	5836	1671	3755	2713	2200	9131	5666	4519
10	24910	HN-1	7922	4595	4943	5401	5630	9491	3766	4923	4344	3671	9897	6784	6349
11	24911	SL-8H	6575	5408	5631	5725	5013	8999	2094	5632	3863	4265	11221	7743	6442
12	24912	SL-18H	7919	4985	5417	5439	5763	6950	2139	5715	3927	4025	11015	7520	5969
13	24913	SL-12H	7111	3749	5062	5405	5190	6859	3699	5757	4728	5039	11046	8042	6480
14	24914	JKRH-2154	7891	5817	5997	6298	4757	9549	4412	6592	5502	3052	10000	6526	6721
15	24915	ADV-1502	4843	2191	4524	4811	4457	6854	2072	4130	3101	4062	11002	7532	5624
16	24916	IRH-91	6850	3674	4980	5159	4947	9483	2050	5048	3549	3210	9943	6577	5947
17	24917	IRH-102	6684	3629	4669	5245	4960	9408	3008	5632	4320	5708	10411	8060	6833
18	24918	MEPH-122	7640	3569	4635	5250	5097	9487	4300	6091	5196	4534	9914	7224	6865
19	24919	MEPH-123	6571	4325	4717	5497	4720	9391	3988	6091	5040	4272	10848	7560	6918
20	24920	Bio-648	8233	4643	5345	5367	4760	5532	1537	5966	3752	3788	8667	6228	5098
21	24921	Bio-4311 BH	7873	2615	4788	4882	4487	7622	3498	6133	4815	2698	9409	6053	5872
22	24922	KPH-476	7541	4641	5268	5355	4750	5640	1716	4589	3152	4268	8575	6422	4958
23	24923	JGLH-2	6871	4232	4946	4813	4090	6971	2362	4589	3475	3981	10068	7024	5594
24	24924	US-317	6607	4308	4922	5261	5347	6955	3699	5298	4499	3737	9945	6841	5927
25	24925	US-326	6550	5677	4981	5322	4770	7017	3788	5173	4480	3918	10519	7219	6083
26	24926	TNTRH-39	5704	4302	4809	5240	5433	8252	4791	5131	4961	4335	9787	7061	6459
27	24927	TNRH-271	4413	2731	3937	3793	4710	6996	2340	2962	2651	2757	6737	4747	4358
28	24928	MR-8181	6413	4462	4559	4755	4653	3129	1716	4923	3319	4029	7558	5793	4271
29	US-314 (NCH)		6945	3573	4649	5119	5603	9458	2741	5590	4165	4593	10101	7347	6496
30	Anjali (NCV)		6127	2579	4190	3941	3257	3141	1738	4631	3184	2422	3736	3079	3133
31	PR-124/Luit/NDR-97/Sahbhagidhan/ DRR Dhan-43 (ZCV)			5914	4736	4719	3633	6863	2652	4506	3579	3585	8409	5997	5203
32	Local Check Variety		6755	3221	4493	4957	3607	3396	4144	4589	4367	4183	6994	5589	4661
33	Gonta Bidhan-3 (ONCV)		7591	3637	4750	4848	4737	9637	4122	6091	5107	6524	11167	8845	7508
Exp Mean			6722	4266	4939	5168	4978	7831	2956	5182	4069	3938	9956	6947	5973
CD(0.05)			391.9	236.81			750.51	826.01	312.25	450.58		525.01	1303.57		
CV			3.6	3.49			9.56	6.7	6.49	5.39		8.15	6.67		
			**	**			**	**	**	**		**	**		
D/S			26-06-2015	07-06-2015			13-07-2015	10-06-2015	30-06-2015	16-06-2015		15-06-2015	17-06-2015		
D/P			30-07-2015	30-07-2015			05-08-2015	02-07-2015	29-07-2015	13-07-2015		16-07-2015	08-07-2015		
Zonal Check			NDR 97	NDR 97			Luit	Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan		
Local Check				NDR 359			Lachit	JR 201	SYE 1	SKL-6		Indira Barani Dhan-1	Poornima		

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 1 (contd): Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	Hybrid	ZONE VI												
			KJT	VDG	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western Mean	MTU	IIRR	WGL	BAY
1	24901	SAVA-200	4247	5445	4699	4797	4595	6966	6291	5951	5374	3487	5589	6609	6925
2	24902	SVZ-1103	5289	5423	4017	4910	5898	5689	6422	6003	5456	3759	3847	5991	5927
3	24903	Siri-2266 (Gold)	5585	5159	4088	4944	5350	6428	6242	6007	5475	3063	5714	4072	7579
4	24904	NK-17508	5146	5423	4561	5043	6859	6167	6935	6654	5848	4681	6178	5985	7972
5	24905	NK-18902	4953	5291	5185	5143	6379	7168	6853	6800	5971	5267	4963	5364	6980
6	24906	NS-1545	5091	5666	3878	4878	4938	4042	6216	5065	4972	3198	4532	5122	6705
7	24907	NS-5149	3279	5203	3080	3854	5007	6294	7206	6169	5011	2919	6180	3383	6132
8	24908	PVRH-4017	3590	5203	3015	3936	4938	6170	5748	5619	4777	2561	6769	3907	6408
9	24909	PVRH-4047	3333	5600	3471	4135	2743	5351	5239	4444	4290	3952	4719	3606	5824
10	24910	HN-1	3615	5401	5514	4843	6104	8315	6853	7091	5967	4635	4212	4731	6734
11	24911	SL-8H	5383	5842	4764	5330	6653	6376	6918	6649	5989	4292	6388	6829	7770
12	24912	SL-18H	3240	5225	4631	4365	4733	6255	7033	6007	5186	4421	6006	5836	5985
13	24913	SL-12H	5264	5181	4496	4980	7545	7175	7366	7362	6171	3056	6560	5825	8059
14	24914	JKRH-2154	4370	5137	3046	4184	7682	6489	6569	6913	5549	3643	5752	6264	7828
15	24915	ADV-1502	4212	5247	3346	4269	3704	5386	4775	4621	4445	3281	6219	4560	7090
16	24916	IRH-91	4370	5026	3255	4217	5281	4363	6830	5491	4854	4344	5470	5874	6680
17	24917	IRH-102	5432	5026	5752	5403	4115	5581	6448	5381	5392	3905	5710	4121	5909
18	24918	MEPH-122	6316	5313	5165	5598	6447	7343	6879	6890	6244	2725	6966	4473	8194
19	24919	MEPH-123	5126	5423	4265	4938	6790	7208	6127	6709	5823	2057	5557	6003	6327
20	24920	Bio-648	4563	5026	3285	4292	3978	6354	4739	5023	4657	4373	3499	5172	5301
21	24921	Bio-4311 BH	4825	5115	3664	4534	4664	6636	7147	6149	5342	2429	5718	4369	5071
22	24922	KPH-476	4163	5401	3503	4356	4321	7086	7078	6162	5259	2708	7850	4193	6607
23	24923	JGLH-2	5249	4894	3722	4622	3635	5340	5654	4876	4749	2583		4892	5118
24	24924	US-317	4291	5159	3662	4371	5693	6432	6176	6100	5235	4817	5592	5329	6246
25	24925	US-326	6059	5467	4583	5370	5761	6547	5856	6055	5712	2933	6438	4477	6531
26	24926	TNTRH-39	4059	4850	4187	4365	4870	4329	5418	4872	4619	3582	3671	3799	5527
27	24927	TNRH-271	4133	5423	3029	4195	4184	4779	5016	4660	4428	3112	3697	3675	4061
28	24928	MR-8181	5437	5357	4207	5000	4252	5658	5062	4991	4996	3235	5858	5525	4771
29	US-314 (NCH)		5847	5335	5403	5528	5624	7853	6216	6564	6046	2614	5505	6362	7598
30	Anjali (NCV)		3235	4960	2796	3664	3978	3192	3124	3432	3548	1578	3793	4928	5159
31	PR-124/Luit/NDR-97/ Sahbhagidhan/DRR Dhan-43 (ZCV)		3254	5247	3375	3959	4595	6673	5990	5753	4856	3876	5769	4079	6402
32	Local Check Variety		4420	5093	3312	4275	4458	5900	5572	5310	4792	4657	6452	4950	5967
33	Gonta Bidhan-3 (ONCV)		4069	5644	5831	5181	6447	7595	6765	6936	6058	3735	6654	5442	6627
Exp Mean			4665	5283	4074	4674	5254	6140	6253	5883	5278	3536	5543	5000	6438
CD(0.05)			571.05	574.09	588.41		1026.76	1281.2	507.61			342.66	1854.96	1129.7	708.02
CV			7.7	6.73	8.91		9.73	12.87	5.11			6.06	20.68	13.91	6.82
			**	ns	**		**	**	**			**	**	**	**
D/S			20-06-2015	26-06-2015	24-06-2015		18-06-2015	11-06-2015	12-06-2015			03-07-2015	17-06-2015	31-07-2015	17-06-2015
D/P			25-07-2015	22-07-2015	20-07-2015		23-07-2015	02-07-2015	16-07-2015			06-08-2015	14-07-2015	27-08-2015	24-07-2015
Zonal Check			Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan		Sahbhagi Dhan	Sahbhagi Dhan	Sahbhagi Dhan			DRR Dhan 43	DRR Dhan 43	DRR Dhan 43	DRR Dhan 43
Local Check			Karjat-7	Sahyadri	Sakoli-6		GR-7	GR-7	GR-7			MTU 1010	Rasi	Sheethal	Tellahamsa

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 1 (contd): Grain Yield (kg/ha) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	Hybrid	ZONE VII									Overall Mean
			MAH	TS mean	MND	BRM	KA mean	CBT	ADT	TN mean	Southern Mean	
1	24901	SAVA-200	6283	6352	7440	2461	4951	5535	2973	4254	5256	5774
2	24902	SVZ-1103	5003	5192	7160	2458	4809	6501	3329	4915	4886	5538
3	24903	Siri-2266 (Gold)	6943	6077	6255	3477	4866	6866	3451	5159	5269	5653
4	24904	NK-17508	6220	6589	6074	2539	4306	8965	4209	6587	5869	6118
5	24905	NK-18902	6287	5898	5959	3375	4667	9179	4044	6612	5713	5882
6	24906	NS-1545	6893	5813	5844	3130	4487	7555	4387	5971	5263	5454
7	24907	NS-5149	5303	5249	6222	2976	4599	6156	3076	4616	4705	5005
8	24908	PVRH-4017	5147	5558	4741	2875	3808	4490	2656	3573	4395	4722
9	24909	PVRH-4047	5443	4898	5449	3585	4517	3822	3998	3910	4489	4570
10	24910	HN-1	4423	5025	5481	3305	4393	6918	3778	5348	4913	5734
11	24911	SL-8H	6357	6836	6979	3508	5244	8996	4207	6602	6147	6147
12	24912	SL-18H	6043	5968	7111	3806	5459	6302	3484	4893	5444	5569
13	24913	SL-12H	5263	6427	6486	2770	4628	7644	5222	6433	5654	5870
14	24914	JKRH-2154	4850	6173	5432	2388	3910	9033	3562	6298	5417	5978
15	24915	ADV-1502	5473	5836	6930	2514	4722	3430	2760	3095	4695	4929
16	24916	IRH-91	5213	5809	5317	2216	3767	5676	3920	4798	4968	5277
17	24917	IRH-102	5887	5407	6996	2812	4904	5190	3851	4521	4931	5560
18	24918	MEPH-122	5323	6239	7918	3410	5664	6647	2776	4711	5381	5949
19	24919	MEPH-123	5543	5857	7802	3207	5505	6542	4116	5329	5239	5862
20	24920	Bio-648	4817	4697	5926	3491	4708	5717	3120	4419	4602	4993
21	24921	Bio-4311 BH	5213	5093	7029	3470	5249	5874	2351	4113	4614	5140
22	24922	KPH-476	5577	6056	7638	3358	5498	7273	3556	5414	5418	5283
23	24923	JGLH-2	5210	5073	5218	2815	4017	5446	2591	4019	4234	4797
24	24924	US-317	5403	5643	5860	3417	4639	5691	3402	4547	5084	5438
25	24925	US-326	5443	5722	6519	2591	4555	6569	3904	5236	5045	5609
26	24926	TNTRH-39	5670	4667	5021	2976	3998	5801	4391	5096	4493	5146
27	24927	TNRH-271	5297	4182	4148	2405	3277	4407	1867	3137	3630	4060
28	24928	MR-8181	5867	5505	7012	3421	5217	6052	2889	4470	4959	4853
29	US-314 (NCH)		6927	6598	7342	2468	4905	5905	4589	5247	5479	5803
30	Anjali (NCV)		5710	4898	3770	2637	3203	4647	2756	3701	3886	3845
31	PR-124/Luit/NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)		4833	5271	5218	2920	4069	6516	3027	4771	4738	5098
32	Local Check Variety		5770	5785	4494	3603	4048	6156	3422	4789	5052	5028
33	Gonta Bidhan-3 (ONCV)		5403	6032	5844	3302	4573	8030	4031	6031	5452	5928
Exp Mean			5586	5637	6285	3027	4656	6367	3495	4931	5025	5390
CD(0.05)			367.29		1025.12	464.41		1391.24	785.83			
CV			4.05		10.33	9.51		13.55	13.86			
			**		**	**		**	**			
D/S			30-06-2015		06-08-2015	10-06-2015		23-06-2015	19-06-2015			
D/P			30-07-2015		29-08-2015	11-07-2015		22-07-2015	16-07-2015			
Zonal Check			DRR Dhan 43		DRR Dhan 43	DRR Dhan 43		DRR Dhan 43	DRR Dhan 43			
Local Check					Raksha	MO 4		CORH 3	CORH 3			

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 2: Days to 50% flowering (DFF) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	HYBRID	ZONE I	ZONE II						ZONE III										ZONE IV
			MLN	KUL	SAV	HA Mean	PNT	LDN	Northern Mean	CHN	BBN	RCI	HZB	ALH	MSD	BIO	JKA	UP Mean	Eastern Mean	TTB
1	24901	SAVA-200	102	80	91	86	80	96	87	86	85	86	80	81	91	84	77	83	84	89
2	24902	SVZ-1103	106	88	95	92	84	100	92	87	85	99	83	84	98	87	83	88	87	79
3	24903	Siri-2266 (Gold)	107	87	91	89	82	97	89	88	92	99	88	86	98	86	83	88	89	83
4	24904	NK-17508	111	92	94	93	92	104	96	97	93	100	91	83	95	88	87	88	90	91
5	24905	NK-18902	110	92	92	92	82	99	91	91	94	103	91	86	98	85	87	89	90	90
6	24906	NS-1545	111	93	96	94	88	103	95	91	93	100	87	88	96	88	87	90	90	90
7	24907	NS-5149	106	87	92	89	83	96	89	89	89	101	87	82	93	85	83	86	87	81
8	24908	PVRH-4017	97	79	86	82	76	90	83	88	87	86	77	89	99	78	80	86	85	83
9	24909	PVRH-4047	97	79	85	82	76	91	83	81	86	89	76	92	103	78	74	87	84	81
10	24910	HN-1	110	92	95	94	84	101	93	88	88	101	90	85	81	86	86	85	86	79
11	24911	SL-8H	111	91	94	93	95	104	96	91	91	98	89	85	95	90	82	88	89	90
12	24912	SL-18H	106	88	93	90	90	101	93	87	87	99	86	84	95	84	82	86	86	86
13	24913	SL-12H	108	89	93	91	87	104	93	93	91	90	87	81	94	88	83	86	88	90
14	24914	JKRH-2154	112	92	94	93	87	99	93	93	98	113	92	83	91	84	89	87	90	89
15	24915	ADV-1502	96	80	85	82	78	88	83	81	84	87	77	85	81	74	77	79	80	77
16	24916	IRH-91	105	84	90	87	83	95	88	88	87	101	84	88	90	78	87	86	86	88
17	24917	IRH-102	114	94	102	98	99	110	101	93	92	93	91	85	102	89	95	93	92	94
18	24918	MEPH-122	112	93	101	97	92	107	98	91	90	102	90	82	93	86	86	87	88	91
19	24919	MEPH-123	111	94	96	95	89	105	96	91	91	106	91	83	93	88	86	88	89	90
20	24920	Bio-648	97	83	87	85	78	90	85	81	83	92	80	82	95	74	79	83	82	80
21	24921	Bio-4311 BH	106	87	91	89	81	98	89	88	91	91	87	81	93	85	86	86	87	80
22	24922	KPH-476	102	84	90	87	80	94	87	86	86	93	82	84	103	82	81	87	86	82
23	24923	JGLH-2	110	88	92	90	85	98	91	86	60	91	84	85	99	74	82	85	81	82
24	24924	US-317	109	93	100	96	96	107	99	91	89	100	87	84	81	90	86	85	87	95
25	24925	US-326	106	88	91	89	90	96	91	81	88	101	88	85	96	83	83	87	86	79
26	24926	TNTRH-39	118	101	109	105	102	114	107	97	101	113	100	85	93	90	94	90	94	96
27	24927	TNRH-271	102	84	88	86	87	97	89	89	85	93	80	87	101	83	82	88	87	86
28	24928	MR-8181	96	80	82	81	76	87	81	88	78	87	76	89	92	74	74	82	82	76
29	US-314 (NCH)		110	92	94	93	90	104	95	88	86	93	84	84	92	88	83	87	87	92
30	Anjali (NCV)		90	77	80	79	72	84	79	72	77	103	75	82	91	70	69	78	77	75
31	PR-124/Luit/NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)		111	93	99	96	91	110	98	80		93		82	82		100	88	86	75
32	Local Check Variety		100	88	105	96	78	101	93	88	87	75	83	85	102	76	92	89	88	73
33	Gonta Bidhan-3 (ONCV)		110	89	93	91	85	98	91	91	90	102	92	82	81	85	89	84	87	83

Appendix 2 (contd): Days to 50% flowering (DFF) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	HYBRID	ZONE V								ZONE VI												
			JBP	SND	SKL	MH Mean	RPR	ADV	CG Mean	Central Mean	KJT	VDG	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western Mean	MTU	IIRR	WGL	BAY
1	24901	SAVA-200	90	78	80	79	81	79	80	82	84	91	86	87	91	78	93	87	87	88	84	86	96
2	24902	SVZ-1103	95	76	84	80	81	82	82	84	85	93	86	88	93	78	88	87	87	85	86	86	91
3	24903	Siri-2266 (Gold)	97	85	84	85	89	84	86	88	88	95	91	91	93	87	91	90	91	89	94	87	96
4	24904	NK-17508	97	89	88	89	92	85	89	90	95	97	95	96	96	88	95	93	94	95	96	89	99
5	24905	NK-18902	98	91	88	90	90	85	87	90	89	98	93	93	98	89	93	93	93	94	95	89	94
6	24906	NS-1545	97	91	87	89	92	84	88	90	92	96	98	95	103	88	93	95	95	96	94	87	96
7	24907	NS-5149	95	85	86	86	88	84	86	88	94	95	93	94	99	81	88	89	92	89	93	88	96
8	24908	PVRH-4017	89	80	78	79	80	74	77	80	83	89	86	86	91	82	83	85	86	86	81	86	91
9	24909	PVRH-4047	89	82	78	80	81	75	78	81	82	89	84	85	78	78	85	80	83	86	83	86	89
10	24910	HN-1	96	85	87	86	89	85	87	88	90	98	97	95	96	88	92	92	93	86	95	87	97
11	24911	SL-8H	96	85	89	87	92	85	88	89	93	97	98	96	96	89	93	93	94	90	94	89	103
12	24912	SL-18H	96	85	85	85	90	82	86	88	92	98	92	94	93	88	92	91	92	87	93	87	99
13	24913	SL-12H	96	86	86	86	91	85	88	89	92	97	92	94	95	88	93	92	93	89	87	87	91
14	24914	JKRH-2154	98	87	88	88	91	85	88	90	95	98	94	96	97	87	95	93	95	93	100	87	103
15	24915	ADV-1502	87	78	77	78	81	74	78	80	83	88	83	85	75	91	80	82	83	77	85	87	87
16	24916	IRH-91	94	81	82	82	89	82	85	86	88	94	87	89	91	80	102	91	90	86	90	86	92
17	24917	IRH-102	98	90	88	89	93	89	91	92	82	93	90	88	104	87	88	93	91	94	94	88	107
18	24918	MEPH-122	97	88	85	87	93	87	90	90	94	93	98	95	99	76	93	89	92	95	93	87	102
19	24919	MEPH-123	98	91	88	90	91	87	89	91	88	98	98	95	99	85	98	94	94	83	96	87	104
20	24920	Bio-648	91	80	80	80	85	79	82	83	86	91	86	88	78	78	93	83	85	95	86	86	90
21	24921	Bio-4311 BH	88	80	84	82	90	85	88	85	87	98	94	93	95	88	87	90	92	92	93	89	97
22	24922	KPH-476	91	78	81	80	85	80	83	83	86	91	86	88	91	78	88	86	87	89	87	86	101
23	24923	JGLH-2	92	81	82	82	85	82	84	85	87	93	90	90	90	78	90	86	88	88		86	96
24	24924	US-317	89	86	86	86	94	85	90	88	87	94	98	93	103	86	88	92	93	93	92	88	105
25	24925	US-326	98	87	87	87	84	85	84	88	86	93	97	92	98	79	88	88	90	89	90	86	91
26	24926	TNTRH-39	108	93	98	96	102	96	99	99	101	98	99	99	99	89	101	96	98	96	95	91	115
27	24927	TNRH-271	91	85	83	84	81	80	80	84	86	87	86	87	90	81	94	88	88	89	85	86	91
28	24928	MR-8181	88	77	79	78	81	74	78	80	81	87	83	84	95	78	80	84	84	83	82	77	90
29	US-314 (NCH)		88	85	83	84	89	82	85	85	91	91	93	92	99	85	94	93	92	90	88	87	99
30	Anjali (NCV)		88	75	74	75	78	70	74	77	83	89	80	84	78	99	73	83	84	74	77	78	70
31	PR-124/Luit/NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)		95	88	87	88	90	83	86	88	87	94	92	91	95	80	92	89	90	90	93	87	96
32	Local Check Variety		91	87	88	88	81	72	77	84	88	98	92	93	93	78	96	89	91	90	84	97	101
33	Gonta Bidhan-3 (ONCV)		102	92	88	90	93	85	89	92	88	99	97	95	100	89	90	93	94	90	96	88	106

Appendix 2 (contd): Days to 50% flowering (DFF) of hybrids in IHRT-Early, Kharif 2015

S. No	IET No	HYBRID	ZONE VII									Overall Mean
			MAH	TS mean	MND	BRM	KA Mean	CBT	ADT	TN mean	Southern Mean	
1	24901	SAVA-200	97	91	91	86	89	88	84	86	89	86
2	24902	SVZ-1103	97	90	90	94	92	87	89	88	90	88
3	24903	Siri-2266 (Gold)	99	94	104	90	97	99	88	94	94	91
4	24904	NK-17508	82	92	102	85	93	99	93	96	93	93
5	24905	NK-18902	93	93	109	86	98	101	95	98	95	93
6	24906	NS-1545	94	93	105	87	96	100	90	95	94	93
7	24907	NS-5149	95	93	101	95	98	101	94	98	95	91
8	24908	PVRH-4017	101	90	89	84	87	83	93	88	88	85
9	24909	PVRH-4047	96	88	90	90	90	88	88	88	88	85
10	24910	HN-1	92	93	98	82	90	96	94	95	92	91
11	24911	SL-8H	93	95	101	91	96	97	89	93	94	93
12	24912	SL-18H	92	93	94	86	90	95	86	91	91	90
13	24913	SL-12H	96	90	92	87	90	93	90	92	90	91
14	24914	JKRH-2154	93	96	108	97	102	102	90	96	97	94
15	24915	ADV-1502	92	88	90	80	85	84	88	86	86	83
16	24916	IRH-91	91	90	99	83	91	93	87	90	90	89
17	24917	IRH-102	98	97	95	97	96	97	90	94	96	95
18	24918	MEPH-122	99	95	99	97	98	95	92	94	95	93
19	24919	MEPH-123	91	94	100	83	91	100	91	95	93	93
20	24920	Bio-648	89	88	92	81	87	86	86	86	88	85
21	24921	Bio-4311 BH	91	93	106	85	96	101	90	96	94	90
22	24922	KPH-476	96	92	94	84	89	87	85	86	90	87
23	24923	JGLH-2	94	92	89	98	94	86	86	86	90	87
24	24924	US-317	91	94	94	86	90	94	92	93	93	92
25	24925	US-326	94	90	102	100	101	97	91	94	93	90
26	24926	TNTRH-39	90	98	109	82	96	110	94	102	98	99
27	24927	TNRH-271	93	89	89	72	80	90	90	90	87	87
28	24928	MR-8181	93	85	89	98	93	85	83	84	87	83
29	US-314 (NCH)		100	93	91	93	92	87	87	87	91	91
30	Anjali (NCV)		92	79	81	87	84	81	88	84	81	80
31	PR-124/Luit/NDR-97/ Sahbhagidhan/ DRR Dhan-43 (ZCV)		96	93	100	83	91	97	90	94	92	91
32	Local Check Variety		82	91	89	86	88	87	83	85	89	89
33	Gonta Bidhan-3 (Old ONCV)		87	95	109	80	95	102	90	96	94	92

Appendix 3: Quality characteristics of IHRT-Early, Kharif 2015

S. No	Designation	IET No	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	AROMA
1	SAVA-200	24901	80.7	70.3	66.0	6.00	2.10	2.85	LB	VOC	4.8	185	11.1	1.85	3.0	17.88	60	MS
2	SVZ-1103	24902	78.8	66.6	60.3	6.44	2.20	2.92	LB	VOC	5.4	190	10.0	1.55	4.0	25.16	22	NS
3	Siri-2266 (Gold)	24903	80.9	72.2	68.5	6.24	2.22	2.81	LB	VOC	5.6	305	10.4	1.66	6.3	23.02	50	NS
4	NK-17508	24904	77.4	66.4	47.1	5.96	2.24	2.66	MS	VOC	5.6	285	10.2	1.71	5.5	22.00	44	MS
5	NK-18902	24905	80.3	71.4	68.5	6.61	2.33	2.83	LB	VOC	5.3	315	11.0	1.66	7.0	22.73	22	NS
6	NS-1545	24906	77.9	68.4	65.4	6.30	2.22	2.83	LB	VOC	5.2	195	10.7	1.69	4.0	20.50	41	NS
7	NS-5149	24907	78.8	67.2	57.8	7.08	2.03	3.48	LS	VOC	5.4	155	10.9	1.53	4.6	16.01	78	MS
8	PVRH-4017	24908	79.2	69.2	59.9	7.31	1.97	3.71	LS	VOC	5.6	320	13.4	1.83	7.0	23.14	24	MS
9	PVRH-4047	24909	79.1	70.3	65.9	7.28	2.00	3.64	LS	VOC	5.6	330	13.1	1.79	7.0	25.81	23	MS
10	HN-1	24910	79.4	66.7	56.0	6.96	2.51	2.77	LB	VOC	5.4	280	11.1	1.59	4.0	27.01	23	NS
11	SL-8H	24911	79.7	70.4	66.4	6.67	2.25	2.96	LB	VOC	4.7	210	10.0	1.49	4.0	22.23	25	NS
12	SL-18H	24912	80.9	70.9	65.4	6.81	2.33	2.92	LB	VOC	4.0	220	11.8	1.73	4.7	23.55	35	NS
13	SL-12H	24913	80.3	69.8	60.9	6.92	2.34	2.95	LB	VOC	4.7	270	11.4	1.64	4.5	23.55	48	NS
14	JKRH-2154	24914	80.2	70.4	67.5	6.49	2.20	2.95	LB	A	4.1	295	11.8	1.81	3.8	22.90	44	SS
15	ADV-1502	24915	78.4	67.5	57.1	5.75	2.26	2.54	MS	VOC	4.8	210	10.3	1.79	4.0	25.16	30	NS
16	IRH-91	24916	80.1	70.2	64.9	6.95	2.07	3.35	LS	VOC	5.3	250	12.6	1.81	4.6	24.08	44	SS
17	IRH-102	24917	80.8	71.2	67.8	5.93	2.27	2.61	MS	VOC	5.0	325	10.6	1.78	7.0	20.94	35	SS
18	MEPH-122	24918	79.9	64.4	58.4	5.64	2.41	2.34	SB	OC	5.5	295	10.6	1.87	5.1	27.63	36	NS
19	MEPH-123	24919	80.4	72.3	71.1	6.22	2.27	2.74	LB	VOC	4.2	230	10.7	1.72	5.0	20.38	34	NS
20	Bio-648	24920	79.4	68.9	63.9	6.68	2.19	3.05	LS	VOC	5.2	245	10.8	1.61	5.0	21.79	40	NS
21	Bio-4311 BH	24921	78.8	70.1	66.6	7.80	1.99	3.91	LS	VOC	5.1	330	14.3	1.83	7.0	25.02	30	SS
22	KPH-476	24922	81.2	69.3	61.4	6.64	1.94	3.42	LS	VOC	5.3	335	10.9	1.64	4.0	21.56	53	NS
23	JGLH-2	24923																
24	US-317	24924	81.0	69.0	63.4	6.32	1.95	3.24	LS	VOC	4.8	335	11.1	1.75	6.0	25.46	45	NS
25	US-326	24925	79.8	69.7	62.3	7.19	2.11	3.40	LS	VOC	4.1	305	13.2	1.83	7.0	22.79	37	MS
26	TNTRH-39	24926	80.4	70.4	67.4	5.63	2.23	2.52	MS	VOC	4.7	235	10.2	1.81	4.0	25.49	22	NS
27	TNRH-271	24927	79.4	68.5	60.3	6.26	2.00	3.13	LS	VOC	4.5	265	11.1	1.77	4.5	23.93	26	NS
28	MR-8181	24928	80.0	66.1	55.5	5.36	2.29	2.34	SB	VOC	5.0	250	10.5	1.95	5.0	25.87	23	NS
29	US-314 (NCH)	-	79.9	70.6	66.5	5.73	2.22	2.58	MS	VOC	5.0	270	10.2	1.78	4.1	21.47	38	NS
30	Anjali (NCV)	-	77.3	67.8	57.1	5.42	2.53	2.14	SB	OC	4.1	150	8.5	1.56	4.0	23.61	22	NS
31	DRR Dhan 43 (ZCV)	-	77.8	68.6	64.2	6.25	2.31	2.70	LB	VOC	4.7	285	11.1	1.77	7.0	25.63	36	NS
32	Rasi (LCV)	-	77.7	69.3	58.9	5.28	2.27	2.32	SB	VOC	4.1	255	10.2	1.93	7.0	25.81	23	NS
33	Gonta Bidhan-3 (ONCV)	-	79.8	69.7	67.1	5.39	2.25	2.39	SB	VOC	4.6	170	10.0	1.85	4.0	25.34	23	NS

Hull: Hulling (%); Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm);L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; VER: Volume expansion ration; WU: Water uptake (ml); KLAC: Kernel length after cooking (mm); ER: Elongation ratio; AC: Amylose content (%); GC: Gel consistency; MS: Medium slender; LS: Long slender, LB: Long bold; SB: Short bold; VOC: Very occasionally present; A: Absent; NS: No scent; MS: Medium scent; SS: Strong scent;

Appendix 4: Grain Yield (kg/ha) of hybrids in IHRT – Medium, Kharif 2015

S. NO	IET No.	Name	ZONE II					Zone III					
			KUL	PNT	LDN	CHT	Northern	MSD	BIO	JKA	NUZ	ALH	UP mean
Group I													
1	24930	NK-17715	6300	4694	5871	4900	5441	5882	7810	3204	6907	4600	5680
2	24931	RH-9000 Plus	6367	4435	6835	6700	6084	7728	7794	3543	7217	4850	6226
3	24932	JRH-66	5633	4170	5774	5200	5194	7322	7820	2807	6713	5000	5932
4	24933	Siri-2277 (Gold)	6400	4668	5997	5625	5673	7384	7418	2269	7278	4850	5840
5	24934	NK-5251 Plus	6633	4623	6993	4625	5718	7372	7884		7621	4650	6882
6	24935	JRH-68	5100	2517	3269	5350	4059	9199	4603	3851	5907	4650	5642
7	24936	RH-664 Imp Plus	6567	3957	6967	6600	6023	7447	7370	3285	6899	4650	5930
8	24939	UPRH-106	5133	2813	3786	3750	3870	7384	5757		8449	4550	6535
9	24940	NPH-2012	6100	3426	6185	6700	5603	7916	8101	3320	8913	5000	6650
10	24941	NS-5153	5600	4874	6156	3650	5070	6446	7159	3209	8599	5000	6082
11	24942	UPRH-122	3400	2353	2540	2800	2773	6696	3339	1768	7580	5200	4916
12	24943	NS-5156	5667	3844	5580	4050	4785	6170	7762	5155	7281	5200	6314
13	24945	TMRH-104	6167	4134	6027	6650	5745	7572	6392	4268	7765	5100	6219
14	24946	HN-4	6300	4746	7723	4950	5930	4568	8243	4184	7033	5300	5866
15	24947	BLR-101	4900	4260	4553	4700	4603	8417	4280	4244	7800	5200	5988
16	24948	TMRH-124	5767	5440	5900	5150	5564	5319	7365	2999	7430	5100	5642
17	24949	BLR-102	5833	2938	5925	5150	4961	7822	7799	4499	7619	5300	6608
18	24950	JKRH-2230	6433	4415	7440	4950	5810	6446	8180	4967	7286	5100	6396
19	24951	VNR-218	6967	4501	6014	5850	5833	8698	7571		7777	5350	7349
20	24952	ADV-1503	5700	3470	6611	5650	5358	7447	6698	3629	8251	5250	6255
21	24953	IRH-91-1	5067	2257	3904	3250	3619	6884	4614	2500	7633	5100	5346
22	24955	MEPH-124	5967	3808	5096	5900	5193	5257	7471	3020	8081	4450	5656
23	24956	IRH-103	5933	3417	6942	6900	5798	7572	8360	3840	7899	4350	6404
24	24959	IIRRH-103	6567	4077	6021	6900	5891	5663	7005	2734	7964	4650	5603
25	24960	IRH-104	6867	4528	6753	4700	5712	4443	7704	5879	7926	4700	6130
26	24961	SRH-5201	6300	3864	7099	6900	6041	7259	6704	4818	7852	4600	6247
27	24963	Bio-681	7100	3598	6462	3900	5265	7697	9175		7865	4850	7397
28	24964	IIRRH-104	6600	3605	6649	4600	5363	5757	7011	4274	7273	4650	5793
29	24966	CPH-166	7233	3740	5978	5900	5713	6758	7434	2895	6585	4700	5675
30	24967	Bio-680	6867	4951	6968	3400	5547	7509	9989	3138	7510	4550	6539
31	24968	KPH-484	5900	5200	7372	4350	5705	7541	6942	4292	7366	4850	6198
32	24969	MR-8222	6167	3594	6119	5000	5220	6571	8989	3676	7760	4650	6329
33	24970	HRI-188	5667	4461	6198	4000	5081	6946	6624	3507	7810	4950	5967
34	24971	IIRRH-105	5933	4111	6216	4250	5128	7447	7196	5114	8126	5050	6586
35	24972	US-330	5967	4344	6102	4850	5315	7760	7947	4814	7517	5100	6627
36	24974	PR-15101	6800	5042	8754	5350	6487	7822	8778	4251	7192	5200	6648
37	24975	US-335	6333	3915	6706	4250	5301	8073	8942	4654	7149	5150	6793
38	24976	SPH-1065	5633	3907	5564	4450	4888	6414	7794	3145	7448	5200	6000
39	24978	RRX-022	5933	4167	5963	4950	5253	6758	8074	4059	6904	4750	6109
40	24981	NPH-242	6533	3537	5572	4900	5135	6602	5323	2951	6899	4750	5305
41	24982	SPH-921	6600	4708	5878	5050	5559	6884	7402	3852	6622	4600	5872
42	24983	US-337	6700	4212	6034	4400	5337	7572	7619	4725	7061	4550	6305
43	24984	PR-15107	6367	4840	6344	4450	5500	6727	8423	2128	7294	4800	5874

S. NO	IET No.	Name	ZONE II					Zone III					
			KUL	PNT	LDN	CHT	Northern	MSD	BIO	JKA	NUZ	ALH	UP mean
44	24985	RRX-024	5767	4054	7215	6700	5934	7503	7005	3792	6768	4350	5884
45	24986	TNTRH-55	6867	3784	6207	5350	5552	7259	4561	2860	7230	4150	5212
46	US-312 (NCH-ME)		6300	4170	6759	4900	5532	3880	7487	4155	7847	4650	5604
47	MTU-1010 (NCV-ME)		4500	3710	4883	3650	4186	5006	6646	2806	7425	4600	5297
Group II													
1	24929	Siri-2244 (Gold)	6300	3933	5973	5950	5539	4255	8317	3318	5497	4900	5257
2	24937	PRSH-9018	6167	4403	6558	6100	5807	7697	8339		6670	4550	6814
3	24938	NPH-2003	6633	5073	6536	4600	5711	5820	8090		8725	4650	6821
4	24944	PRSH-9003	6733	3813	5745	4650	5235	6665	8360	1501	7401	5150	5815
5	24954	VNR-219	5733	3465	6849	6600	5662	6320	6942	3787	8138	4750	5987
6	24957	GK-5030	6200	3653	5562	6850	5566	6821	7804	4445	6732	4600	6080
7	24958	MEPH-125	7033	4527	5805	8250	6404	6414	7741	4909	7083	4650	6159
8	24962	GK-5036	6600	3831	6808	5150	5597	6821	8058	6004	7842	4650	6675
9	24965	KPH-475	6867	4070	7188	3800	5481	7322	8439	3282	7365	4650	6211
10	24973	MR-8333	6200	4198	6754	4900	5513	6977	8561	2157	7715	5150	6112
11	24977	PR-15103	6700	4348	7106	3650	5451	7259	8794	2017	7671	5300	6208
12	24979	US-384	6500	4127	7263	4450	5585	6758	7180	2923	7073	4700	5727
13	24980	PR-15104	7233	4406	7711	4900	6062	9293	8217	2892	7097	4650	6430
14	HRI-174 (NCH-M)		6733	4510	5658	5200	5525	8698	8937		6714	4650	7250
15	NDR-359 (NCV-M)		6633	3615	6047	5650	5486	9199	8545	2814	7944	5250	6750
16	ZCV		6500	3660	6653	7300	6028	6852	5751	3689	6665	4650	5521
17	LCV		5833	3351	5748	5400	5083	5820	8492	4973	6582	5150	6203
Exp Mean			6199	4066	6209	5129	5401	6971	7436	3641	7432	4844	6134
CD(0.05)			429.73	777.21	1492.63	726.7		791.76	681.38	613.79	1347.24	272.66	
CV			3.51	9.71	12.19	7.13		5.77	4.62	8.43	9.18	2.84	
			**	**	**	**		**	**	**	*	**	
D/S			13-06-2015	01-06-2015	06-02-2015	04-06-2015		26-06-2015	22-06-2015	07-09-2015	10-06-2015	15-06-2015	
D/P			11-07-2015	30-06-2015	07-04-2015	19-07-2015		27-07-2015	19-07-2015	30-07-2015	10-07-2015	07-05-2015	
ZCV			PR-113	PR-113	PR-113	PR-113		CR Dhan-201	CR Dhan-201	CR Dhan-201	CR Dhan-201	CR Dhan-201	

Data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 4 (contd): Grain Yield (kg/ha) of hybrids in IHRT – Medium, Kharif 2015

S. No	IET No.	Name	ZONE III (contd)								Zone IV			Zone V					
			CHN	PAN	WB mean	RCI	CHP	CTK	OD mean	Eastern Mean	TTB	ARD	North eastern Mean	JBP	SND	RPR	ADV	CG mean	Central Mean
Group I																			
1	24930	NK-17715	5820	5225	5523	2500	7051	5473	6262	5775	5785	4125	4955	6777	4011	2837	9179	6008	5701
2	24931	RH-9000 Plus	5971	5600	5786	1650	6624	5238	5931	6063	6135	3775	4955	8179	4378	6476	8035	7256	6767
3	24932	JRH-66	5518	5988	5753	950	5742	4423	5083	5704	4795	3575	4185	9330	4679	4277	7074	5675	6340
4	24933	Siri-2277 (Gold)	6349	5720	6035	1450	5876	6357	6117	5945	5010	3500	4255	9474	4044	3909	8377	6143	6451
5	24934	NK-5251 Plus	6122	6350	6236	1600	7025	5845	6435	6609	5680	4500	5090	9293	4345	6844	9197	8020	7420
6	24935	JRH-68	5820	5295	5558	350	4167	5098	4632	5399	3590	4950	4270	4224	4913	2866	6315	4590	4579
7	24936	RH-664 Imp Plus	5669	6000	5834	1250	6223	4523	5373	5785	3450	4150	3800	8292	3977	4958	10421	7689	6912
8	24939	UPRH-106	5896		5896	650	2511	3725	3118	5467	4330	3125	3728	6834	2774	3478	6686	5082	4943
9	24940	NPH-2012	6274	5085	5679	650	5609	4226	4918	6049	3460	2900	3180	7760	2172	3385	9430	6408	5687
10	24941	NS-5153	5745	5835	5790	950	6864	4940	5902	5977	4675	3225	3950	6646	3643	4027	9411	6719	5932
11	24942	UPRH-122	6198		6198	250	1976	4356	3166	4639	3030	4350	3690	3479	3209	1773		1773	2820
12	24943	NS-5156	6047	5740	5893	850	6197	5389	5793	6104	3955	4350	4153	6952	3108	3121	9808	6464	5747
13	24945	TMRH-104	5896	5000	5448	1550	5903	4140	5021	5782	4815	4850	4833	8079	3910	3645	8955	6300	6147
14	24946	HN-4	5971	4625	5298	1000	5823	5275	5549	5669	3830	2675	3253	7103	4612	2631	9855	6243	6050
15	24947	BLR-101	5971	4875	5423	800	5823	4158	4990	5641	5465	4250	4858	8041	4679	4243	8673	6458	6409
16	24948	TMRH-124	6122	5625	5874	900	6384	4625	5504	5663	5455	3600	4528	9118	3275	2920	8959	5939	6068
17	24949	BLR-102	6122	4500	5311	1100	5556	4304	4930	5947	4595	2900	3748	9293	3409	3023	8551	5787	6069
18	24950	JKRH-2230	5971	5865	5918	1200	7479	5696	6587	6332	5850	3950	4900	9431	2139	3400	10582	6991	6388
19	24951	VNR-218	6198	5515	5857	1300	6036	5567	5802	6589	5635	4250	4943	9330	2908	6917	10072	8494	7307
20	24952	ADV-1503	6198	5675	5937	1300	6998	4645	5821	6088	5260	3275	4268	7046	2473	4164	10688	7426	6093
21	24953	IRH-91-1	5140		5140	500	6303	4286	5295	5307	3950	2650	3300	5444	3910	1876	6300	4088	4383
22	24955	MEPH-124	6274	5675	5974	1600	6384	4006	5195	5624	5300	3725	4513	9155	3376	2910	8761	5836	6050
23	24956	IRH-103	5518	5875	5696	1450	6757	4547	5652	6080	5440	3350	4395	7829	4111	4385	9212	6798	6384
24	24959	IIRRH-103	5820	5800	5810	1000	6651	6241	6446	5836	4365	2850	3608	8229	5548	5105	8742	6923	6906
25	24960	IRH-104	6122	6500	6311	900	7719	4227	5973	6136	5045	4250	4648	8279	4445	6211	9213	7712	7037
26	24961	SRH-5201	5971	5000	5486	1500	5075	4669	4872	5772	4575	3675	4125	7484	4378	3253	8991	6122	6027
27	24963	Bio-681	6425	4935	5680	1300	7612	6074	6843	6829	5160	3600	4380	9487	2473	3282	10041	6661	6321
28	24964	IIRRH-104	6500	6365	6433	1100	6197	4421	5309	5827	4050	3375	3713	6852	2005	5737	8770	7254	5841
29	24966	CPH-166	5971	4875	5423	1250	4300	5556	4928	5453	4790	1950	3370	7972	3877	3194	8185	5689	5807
30	24967	Bio-680	5669	4875	5272	1900	6490	4709	5599	6049	5045	3250	4148	8360	4378	3787	9301	6544	6457
31	24968	KPH-484	5971	6450	6211	1900	7131	5136	6133	6186	4360	3750	4055	9693	2941	6060	10333	8196	7257
32	24969	MR-8222	6198	5560	5879	750	5235	4806	5020	5938	4480	3500	3990	6377	3041	3081	8613	5847	5278
33	24970	HRI-188	6425	5750	6087	1700	6464	5862	6163	6038	4235	3600	3918	9593	2640	4370	9134	6752	6434
34	24971	IIRRH-105	5971	5375	5673	1100	6811	4729	5770	6202	4210	3250	3730	9506	3710	5800	8153	6977	6792
35	24972	US-330	6122	4750	5436	900	5716	5126	5421	6095	5165	4600	4883	8805	3075	3963	8913	6438	6189
36	24974	PR-15101	5820	7225	6523	1650	6410	4985	5697	6409	4740	3300	4020	9368	4412	4272	10002	7137	7013
37	24975	US-335	5896	4335	5115	950	5075	4785	4930	6006	3530	2750	3140	9618	2072	3968	8688	6328	6087

S. No	IET No.	Name	ZONE III (contd)								Zone IV			Zone V					
			CHN	PAN	WB mean	RCI	CHP	CTK	OD mean	Eastern Mean	TTB	ARD	North eastern Mean	JBP	SND	RPR	ADV	CG mean	Central Mean
38	24976	SPH-1065	5593	6125	5859	1050	5636	5626	5631	5887	4625	3850	4238	6702	3643	3160	8565	5862	5518
39	24978	RRX-022	6122	7000	6561	1700	6010	6245	6127	6214	4685	3100	3893	9193	3543	5007	9558	7282	6825
40	24981	NPH-242	5896	5000	5448	1350	5769	5345	5557	5393	3820	3050	3435	6765	3142	3429	7138	5283	5118
41	24982	SPH-921	6122	5250	5686	850	6170	6378	6274	5920	4220	3375	3798	5889	4311	4517	9262	6889	5995
42	24983	US-337	5669	4800	5234	1500	5342	4943	5143	5809	3580	3050	3315	7941	2106	3890	8418	6154	5589
43	24984	PR-15107	5820	6000	5910	1350	6303	6544	6424	6004	5460	4750	5105	6927	2507	5609	9491	7550	6134
44	24985	RRX-024	6425	4500	5462	1350	5823	5285	5554	5717	4745	3500	4123	5469	3643	3674	9104	6389	5473
45	24986	TNTRH-55	5518	5500	5509	1350	6971	5365	6168	5490	4155	3700	3928	6884	2874	4522	8731	6626	5753
46	US-312 (NCH-ME)		6122	5750	5936	1150	6811	5120	5966	5758	4895	4600	4748	8573	3509	4933	9831	7382	6712
47	MTU-1010 (NCV-ME)		4989	4875	4932	650	5475	3983	4729	5089	4340	3500	3920	6627	3175	5565	7629	6597	5749
Group II																			
1	24929	Siri-2244 (Gold)	6122	5638	5880	1700	5556	5058	5307	5407	5700	3725	4713	9262	3443	4198	8620	6409	6381
2	24937	PRSH-9018	6122	5725	5924	1900	6250	6011	6131	6421	6425	3875	5150	9305	2440	5536	9857	7696	6785
3	24938	NPH-2003	5820	5275	5548	1150	6330	5242	5786	6244	3795	4075	3935	8129	1705	3816	10018	6917	5917
4	24944	PRSH-9003	6122	5310	5716	1150	5636	5878	5757	5780	4745	3200	3973	8229	2874	4066	9060	6563	6057
5	24954	VNR-219	5820	6385	6103	1450	6384	5461	5922	5998	4120	3650	3885	9562	4612	4605	10085	7345	7216
6	24957	GK-5030	6047	4625	5336	1500	5769	6070	5919	5879	5030	4600	4815	9318	3509	3836	8875	6356	6385
7	24958	MEPH-125	6047	5125	5586	1900	6517	5088	5803	5953	4570	3750	4160	9330	5414	3699	11036	7367	7370
8	24962	GK-5036	6274	5000	5637	950	5662	5612	5637	6214	4950	3100	4025	9656	3643	4007	9449	6728	6689
9	24965	KPH-475	6122	5625	5874	1000	4808	6153	5480	5974	4925	3350	4138	9869	3844	4355	9176	6766	6811
10	24973	MR-8333	6198	5225	5712	1150	5182	5451	5316	5846	4570	3250	3910	8129	3844	4159	9849	7004	6495
11	24977	PR-15103	6122	5690	5906	1450	6464	5809	6136	6125	5245	3800	4523	9587	3777	6413	9992	8202	7442
12	24979	US-384	6047	4875	5461	1050	5796	6052	5924	5712	4300	3250	3775	9543	2908	4267	9435	6851	6538
13	24980	PR-15104	6198	6185	6192	300	7211	5117	6164	6318	4165	3250	3708	7935	3309	4683	9051	6867	6245
14	HRI-174 (NCH-M)		5442	6580	6011	2050	6651	4903	5777	6572	4845	3900	4373	9218	2640	6197	9010	7604	6766
15	NDR-359 (NCV-M)		6047	4935	5491	900	4861	5392	5126	6110	5050	4625	4838	9506	4412	4223	8029	6126	6542
16	ZCV		5367	5115	5241	850	6490	5239	5864	5535	3630	2850	3240	7991	2206	4056	6398	5227	5163
17	LCV		6047	4375	5211	400	7799	4344	6072	5954	5065	3850	4458	5426	2607	5355	7998	6676	5346
Exp Mean			5999	5504	5758	1222	5996	5188	5592	5919	4674	3603	4138	8110	3520	4165	9059	6550	6187
CD(0.05)			955.5	932.21		845.39	356.71	258.14			900.04	1623.48		998.38	462.5	1246.52	936.38		
CV			8.09	8.5		35.56	2.99	2.53			9.73	22.59		6.23	6.71	14.82	5.27		
			ns	**		**	**	**			**	ns		**	**	**	**		
D/S			29-06-2015	02-07-2015		18-06-2015	15-07-2015	06-06-2015			26-06-2015	31-07-2015		10-06-2015	30-06-2015	16-06-2015	17-06-2015		
D/P			31-07-2015	07-08-2015		12-08-2015	10-08-2015	15-07-2015			24-07-2015	18-08-2015		02-07-2015	27-07-2015	17-07-2015	06-07-2015		
ZCV			CR Dhan-201	CR Dhan-201		CR Dhan-201	CR Dhan-201	CR Dhan-201			CR Dhan-201	CR Dhan-201		IR-64	IR-64	IR-64	IR-64		

Data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 4 (contd): Grain Yield (kg/ha) of hybrids in IHRT – Medium, Kharif 2015

S. No	IET No.	Name	Zone VI								Zone VII					
			KJT	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western mean	MTU	IIRR	WGL	BAY	MAH	TS mean
Group I																
1	24930	NK-17715	3985	4812	4399	5000	4257	6912	5390	4993	4374	3649	4552	10048	6775	6256
2	24931	RH-9000 Plus	3696	5522	4609	5432	3992	6618	5347	5052	4178	4158	5740	9905	6835	6660
3	24932	JRH-66	6296	4282	5289	4383	4070	5735	4729	4953	4431	4596	3794	8402	6665	5864
4	24933	Siri-2277 (Gold)	6644	5503	6074	5370	5509	7108	5996	6027	4836	6234	4161	8930	8605	6982
5	24934	NK-5251 Plus	5978	4429	5204	5247	4503	6657	5469	5363	5381	6029	4326	8471	8730	6889
6	24935	JRH-68	2904	3863	3383	3457	3943	5108	4169	3855	3007	2522	3528	3725	6985	4190
7	24936	RH-664 Imp Plus	6363	4877	5620	4938	4504	7044	5495	5545	2355	4425	3829	8958	6665	5969
8	24939	UPRH-106	4193	4769	4481	2531	3502	4534	3523	3906	2402	3847	4063	6449	6400	5190
9	24940	NPH-2012	5607	4272	4940	4383	5378	6049	5270	5138	3406	5757	3860	7596	6990	6051
10	24941	NS-5153	5556	3924	4740	4321	5240	4907	4823	4790	3295	2926	3745	9024	8260	5988
11	24942	UPRH-122	3104	2134	2619	1667	3827	2255	2583	2597	2126	2363	3937	6558	7055	4978
12	24943	NS-5156	7444	4266	5855	5000	5954	4069	5007	5347	2842	6074	4626	10151	8460	7328
13	24945	TMRH-104	4904	4608	4756	3148	5144	4755	4349	4512	3697	4824	3376	8790	8095	6271
14	24946	HN-4	6170	4244	5207	4198	6041	4657	4965	5062	4629	4206	3522	6133	7995	5464
15	24947	BLR-101	5141	4748	4945	4938	6208	6176	5774	5442	3103	5681	5081	8543	7225	6633
16	24948	TMRH-124	5674	4266	4970	4136	4614	6078	4943	4954	3638	4796	3848	8526	6605	5944
17	24949	BLR-102	5333	3854	4594	4074	5896	5000	4990	4832	4029	5461	3474	8421	5990	5836
18	24950	JKRH-2230	8119	4230	6174	4815	6223	5833	5624	5844	4999	5338		7872	6430	6547
19	24951	VNR-218	7874	4845	6360	2963	3657	5980	4200	5064	2525	6034	3285	8638	7050	6252
20	24952	ADV-1503	5022	4502	4762	4877	3956	6078	4970	4887	4503	6020	3662	8617	7750	6512
21	24953	IRH-91-1	3133	2941	3037	2284	5179	3431	3631	3394	4196	3355	3014	5810	6215	4599
22	24955	MEPH-124	7348	5268	6308	3580	5384	5343	4769	5385	3712	4248	4093	8187	6890	5855
23	24956	IRH-103	6533	4743	5638	4753	5019	5343	5039	5278	3408	5255	4414	8752	6610	6258
24	24959	IIRRH-103	6030	5001	5515	5247	3225	6373	4948	5175	3248	4961	3986	8018	6785	5937
25	24960	IRH-104	7230	6523	6876	6296	4455	6422	5724	6185	3147	5938	5387	8590	6405	6580
26	24961	SRH-5201	6978	5438	6208	4506	4013	6029	4850	5393	1961	4876	3135	7632	7005	5662
27	24963	Bio-681	8622	4142	6382	5494	5959	5931	5795	6030	3355	5541	5918	8578	6380	6604
28	24964	IIRRH-104	4333	4750	4542	5679	5174	6225	5693	5232	3151	4802	3931	8935	6195	5966
29	24966	CPH-166	7726	4412	6069	3827	2772	5735	4112	4895	2066	4605		8927	6655	6729
30	24967	Bio-680	6526	4893	5709	4815	4496	6373	5228	5420	4942	5996	4853	9031	6215	6524
31	24968	KPH-484	5022	4989	5006	5679	5964	4902	5515	5311	1735	6211	4095	8131	7280	6429
32	24969	MR-8222	7785	3324	5555	4259	5491	5098	4950	5192	2344	5587	4344	7189	7035	6039
33	24970	HRI-188	7348	5209	6279	4383	4545	3971	4300	5091	2909	3491	3347	8543	6955	5584
34	24971	IIRRH-105	5570	5135	5352	5617	4338	6225	5394	5377	1565	4447	4146	9320	5995	5977
35	24972	US-330	6207	4075	5141	4815	5338	5784	5312	5244	1991	5639	3461	8778	7160	6260
36	24974	PR-15101	6548	3954	5251	5617	6268	6324	6070	5742	5158	5035	3796	9956	6240	6257
37	24975	US-335	6067	4924	5496	4383	4536	5539	4819	5090	3746	5683	3640	9124	5830	6069
38	24976	SPH-1065	7533	4031	5782	4383	4517	4853	4584	5063	4903	4934	3774	8364	6000	5768
39	24978	RRX-022	6689	4274	5482	4012	5402	6961	5458	5468	3383	4799	3275	8491	6455	5755
40	24981	NPH-242	3830	4026	3928	2840	4401	6373	4538	4294	3614	4336	3345	7229	7745	5664
41	24982	SPH-921	7104	4727	5916	3704	3558	6618	4627	5142	4833	4664	5378	8783	7950	6694
42	24983	US-337	7422	5209	6316	4259	6311	5539	5370	5748	2490	5388	3622	8529	6625	6041
43	24984	PR-15107	6607	5302	5955	4877	4793	7108	5592	5737	5402	4352	4009	9045	6885	6072

S. No	IET No.	Name	Zone VI								Zone VII					
			KJT	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western mean	MTU	IIRR	WGL	BAY	MAH	TS mean
44	24985	RRX-024	7348	4969	6159	5741	5649	6765	6051	6094	3884	4572	4018	9645	6135	6093
45	24986	TNTRH-55	5778	4881	5330	5247	4744	7451	5814	5620	3511	4745	3235	9319	6790	6022
46	US-312 (NCH-ME)		6393	4079	5236	4012	6319	6397	5576	5440	3209	6939	4203	8931	5775	6462
47	MTU-1010 (NCV-ME)		5985	3568	4777	4012	4812	5392	4739	4754	3652	4157	5268	7508	6165	5774
Group II																
1	24929	Siri-2244 (Gold)	6052	4977	5514	4012	4024	6887	4975	5190	3537	4629	4557	9482	7025	6423
2	24937	PRSH-9018	6637	5521	6079	3395	4898	6985	5093	5487	3296	4703	3946	9004	6080	5933
3	24938	NPH-2003	4963	5621	5292	4136	5554	7059	5583	5467	1814	5295	3621	8952	6225	6023
4	24944	PRSH-9003	6156	5330	5743	4321	4068	6520	4969	5279	2992	4769	3299	8758	6550	5844
5	24954	VNR-219	5785	6376	6081	3951	5151	6275	5125	5508	3808	4514	3633	8341	7760	6062
6	24957	GK-5030	7148	4014	5581	4012	4916	5098	4675	5038	3241	5941	4036	8146	6005	6032
7	24958	MEPH-125	9044	5252	7148	5000	3648	6373	5007	5863	2021	5334	3360	8874	6195	5941
8	24962	GK-5036	7222	4394	5808	4753	4153	6127	5011	5330	3590	5112	2959	8786	5720	5644
9	24965	KPH-475	6059	4785	5422	4630	4173	5196	4666	4969	2046	3338	3370	7878	6420	5251
10	24973	MR-8333	6689	5673	6181	5309	5386	6569	5755	5925	3615	4192	3410	8681	6775	5765
11	24977	PR-15103	5259	5018	5139	4938	4805	5784	5176	5161	3684	6490	4460	8982	7445	6844
12	24979	US-384	6756	5431	6094	3827	5657	5147	4877	5364	1782	4391	3695	9224	6800	6028
13	24980	PR-15104	6126	4667	5396	4444	2807	6225	4492	4854	5913	4235	3258	8080	6815	5597
14	HRI-174 (NCH-M)		6319	4948	5633	4198	5593	6328	5373	5477	4580	5414	6393	9714	7055	7144
15	NDR-359 (NCV-M)		3593	3929	3761	3395	7228	5294	5306	4688	3548	5317	3499	8615	6105	5884
16	ZCV		4919	5428	5173	4506	5662	5686	5285	5240	2756	4259	3435	7385	6025	5276
17	LCV		6044	4380	5212	5309	5787	5147	5414	5333	5294	3660	4366	6665	5650	5085
Exp Mean			6125	4692	5408	4447	4779	5836	5021	5176	3444	4851	3933	8446	6859	6045
CD(0.05)			906.84	879.59		433.31	1597.34	1564.38			318.15	1805.35	709.84	916.74	456.38	
CV			7.55	9.53		4.94	16.52	13.57			4.62	18.69	8.98	5.5	3.39	
			**	**		**	**	**			**	**	**	**	**	
D/S			20-06-2015	24-06-2015		18-06-2015	11-06-2015	12-06-2015			03-07-2015	15-06-2015	08-07-2015	18-06-2015	30-06-2015	
D/P			25-07-2015	21-07-2015		23-07-2015	01-07-2015	22-07-2015			06-08-2015	14-07-2015	17-08-2015	17-07-2015	30-07-2015	
ZCV			Akshayadhan	Akshayadhan		Akshayadhan	Akshayadhan	Akshayadhan			Jaya	Jaya	Jaya	Jaya	Jaya	

Data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 4 (contd): Grain Yield (kg/ha) of hybrids in IHRT – Medium, Kharif 2015

S. No	IET No.	Name	Zone VII (contd)								
			MND	BRM	KA mean	CBT	ADT	TN mean	KRK	Southern mean	Overall mean
Group I											
1	24930	NK-17715	5296	2321	3809	7518	2542	5030	4929	5200	5395
2	24931	RH-9000 Plus	5778	2799	4289	6774	5000	5887	6698	5786	5853
3	24932	JRH-66	4593	3151	3872	7839	4583	6211	4304	5236	5381
4	24933	Siri-2277 (Gold)	6148	3445	4797	7881	3292	5586	5751	5928	5880
5	24934	NK-5251 Plus	6185	3125	4655	8405	5200	6802	7144	6300	6225
6	24935	JRH-68	3537	3466	3502	4381	3125	3753	6215	4049	4454
7	24936	RH-664 Imp Plus	4519	2279	3399	8143	4625	6384	4608	5041	5575
8	24939	UPRH-106	3630	2574	3102	6042	3125	4583	5840	4437	4528
9	24940	NPH-2012	4704	2862	3783	6964	3125	5045	6144	5141	5384
10	24941	NS-5153	3963	3235	3599	5405	3875	4640	2500	4623	5173
11	24942	UPRH-122	704	2826	1765	3589	3333	3461		3610	3533
12	24943	NS-5156	5037	2216	3627	7827	2958	5393	6858	5705	5563
13	24945	TMRH-104	4630	3477	4053	4435	2958	3696	3572	4785	5285
14	24946	HN-4	4407	3256	3832	5839	3292	4565	2500	4578	5192
15	24947	BLR-101	6333	2589	4461	8619	3792	6205	3733	5470	5484
16	24948	TMRH-124	4481	2390	3436	6857	2750	4804	6251	5014	5337
17	24949	BLR-102		3057	3057	6559	3125	4842	3393	4834	5236
18	24950	JKRH-2230	2778	2563	2670	8250	4942	6596	5090	5362	5850
19	24951	VNR-218	7333	3099	5216	6690	4542	5616	2679	5188	5829
20	24952	ADV-1503	5556	2164	3860	8184	3292	5738	5179	5493	5544
21	24953	IRH-91-1	2741	3146	2943	5208	3792	4500	6787	4426	4312
22	24955	MEPH-124	6296	2868	4582	9024	5083	7054	4286	5469	5477
23	24956	IRH-103	7259	3508	5384	8619	3333	5976	6608	5777	5776
24	24959	IIRRH-103	6296	2153	4225	7089	4125	5607	4465	5113	5527
25	24960	IRH-104	6111	2610	4361	5411	5250	5330	4465	5331	5875
26	24961	SRH-5201	5000	2705	3852	7744	4625	6185	4465	4915	5429
27	24963	Bio-681	7630	2805	5217	4821	3917	4369	5537	5448	5890
28	24964	IIRRH-104	5481	2143	3812	3792	3450	3621	5179	4706	5233
29	24966	CPH-166	4889	3183	4036	9655	4042	6848	4644	5407	5304
30	24967	Bio-680	8741	2868	5804	7571	3617	5594	4286	5812	5764
31	24968	KPH-484	8074	3057	5565	6613	4917	5765	3393	5351	5756
32	24969	MR-8222	5926	3099	4512	7607	3767	5687	4465	5136	5316
33	24970	HRI-188	7167	3214	5190	7232	3917	5574	3840	5062	5421
34	24971	IIRRH-105	4741	3167	3954	6631	3417	5024	4286	4771	5458
35	24972	US-330	5667	2663	4165	7702	3583	5643	3304	4995	5494
36	24974	PR-15101	5963	2652	4308	9667	3875	6771	4554	5690	6039
37	24975	US-335	7333	2532	4932	8875	4458	6667	3393	5461	5469
38	24976	SPH-1065	6815	3130	4973	6768	4125	5446	3929	5274	5328
39	24978	RRX-022	6000	3162	4581	6637	3458	5048	4912	5057	5586
40	24981	NPH-242	5185	2705	3945	7696	4279	5988	5715	5185	4992
41	24982	SPH-921	5519	2096	3807	8214	5000	6607	4286	5672	5574
42	24983	US-337	6000	2994	4497	6250	4500	5375	3036	4943	5317
43	24984	PR-15107	5815	2757	4286	9232	4375	6804	3036	5491	5717

S. No	IET No.	Name	Zone VII (contd)								
			MND	BRM	KA mean	CBT	ADT	TN mean	KRK	Southern mean	Overall mean
44	24985	RRX-024	5815	2379	4097	6726	2833	4780	5358	5137	5505
45	24986	TNTRH-55	6519	2500	4509	5911	5167	5539	4108	5180	5364
46	US-312 (NCH-ME)		5926	1975	3950	6964	4000	5482	5537	5346	5616
47	MTU-1010 (NCV-ME)		6370	2852	4611	5976	2500	4238	6608	5106	4947
Group II											
1	24929	Siri-2244 (Gold)	5889	2395	4142	8280	3167	5723	4465	5342	5445
2	24937	PRSH-9018	5037	3099	4068	7690		7690	3545	5156	5808
3	24938	NPH-2003	5741	3571	4656	8976	4367	6671	6072	5463	5645
4	24944	PRSH-9003	5889	2815	4352	8167	3333	5750	3893	5046	5353
5	24954	VNR-219	6222	3072	4647	6869	6125	6497	3751	5410	5732
6	24957	GK-5030	6370	2868	4619	8077	4208	6143	6608	5550	5619
7	24958	MEPH-125	6852	4175	5514	9184	3417	6301	3126	5254	5848
8	24962	GK-5036	6370	1975	4173	8917	4513	6715	3929	5187	5636
9	24965	KPH-475	2778	3004	2891	8798	4592	6695	5001	4722	5390
10	24973	MR-8333	5741	3487	4614	8857	3208	6033	3393	5136	5572
11	24977	PR-15103	5333	3162	4248	8661	4417	6539	6430	5906	5900
12	24979	US-384	5778	2773	4275	9143	4375	6759	2858	5082	5444
13	24980	PR-15104	4852	2805	3828	8494	5417	6955	4644	5451	5655
14	HRI-174 (NCH-M)		5444	2505	3975	8286	4708	6497	7323	6142	6039
15	NDR-359 (NCV-M)		4481	2595	3538	8458	5167	6812	4822	5261	5554
16	ZCV		3519	2405	2962	6798	3875	5336	4465	4492	5064
17	LCV		4963	3251	4107	6637	3667	5152	4822	4897	5290
Exp Mean			5534	2865	4178	7362	3992	5709	4622	5195	5460
CD(0.05)			1625.63	384.41		1297.99	501.58		1104.65		
CV			15.09	6.84		8.92	6.35		11.83		
			**	**		**	**		**		
D/S			06-08-2015	10-06-2015		12-06-2015	27-08-2015		20-08-2015		
D/P			31-08-2015	15-07-2015		04-07-2015	29-09-2015		24-09-2015		
ZCV			Jaya	Jaya		Jaya	Jaya	Jaya	Jaya		

Data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 5: Days to 50% flowering of hybrids in IHRT-M, Kharif 2015

S. No	IET No.	Hybrid	ZONE II					Zone III													
			KUL	PNT	LDN	CHT	Northern	MSD	BIO	JKA	NUZ	ALH	UP mean	CHN	PAN	WB mean	RCI	CHP	CTK	OD mean	Eastern Mean
Group I																					
1	24930	NK-17715	92	89	98	103	96	101	87	91	100	101	96	94	93	93	112	97	97	97	95
2	24931	RH-9000 Plus	93	102	107	113	104	100	90	87	87	98	92	91	97	94	116	97	99	98	94
3	24932	JRH-66	98	110	110	121	110	102	94	87	107	99	98	99	101	100	120	99	95	97	98
4	24933	Siri-2277 (Gold)	94	106	106	113	104	97	90	93	103	101	97	94	97	95	120	100	100	100	97
5	24934	NK-5251 Plus	92	96	104	114	101	102	89		106	103	100	94	97	96	119	97	95	96	98
6	24935	JRH-68	81	84	91	93	87	102	80	82	84	104	90	83	87	85	108	88	85	87	88
7	24936	RH-664 Imp Plus	94	106	104	108	103	102	90	91	105	101	98	94	95	95	120	97	96	97	97
8	24939	UPRH-106	87	89	95	101	93	109	86		100	97	98	94	91	93	114	97	92	95	96
9	24940	NPH-2012	88	91	97	101	94	92	88	91	100	101	94	94	88	91	121	97	93	95	94
10	24941	NS-5153	91	96	103	106	99	106	87	87	99	102	96	94	93	94	119	95	97	96	95
11	24942	UPRH-122	91	98	101	108	99	105	91	88	97	102	97	93	89	91	116	91	90	91	94
12	24943	NS-5156	88	91	97	102	94	102	86	92	101	103	97	92	92	92	114	96	95	95	95
13	24945	TMRH-104	91	110	105	106	103	108	90	87	98	103	97	94	91	92	117	93	92	93	95
14	24946	HN-4	92	97	102	105	99	95	90	85	111	104	97	86	88	87	118	93	97	95	94
15	24947	BLR-101	85	88	94	100	92	107	83	84	98	101	94	91	88	90	119	91	88	89	92
16	24948	TMRH-124	89	102	108	103	100	107	87	87	100	101	96	91	95	93	120	96	96	96	95
17	24949	BLR-102	88	94	99	100	95	99	88	92	101	101	96	91	93	92	118	99	96	98	95
18	24950	JKRH-2230	92	96	104	107	100	101	94	92	103	104	99	98	97	97	120	99	103	101	99
19	24951	VNR-218	95	108	111	109	106	105	93		105	103	101	93	97	95	118	95	103	99	99
20	24952	ADV-1503	88	96	99	103	96	101	87	85	103	99	95	92	94	93	119	97	95	96	95
21	24953	IRH-91-1	86	89	97	100	93	101	86	92	101	98	96	91	90	91	116	96	95	96	94
22	24955	MEPH-124	94	110	107	108	105	98	95	93	100	102	97	91	98	95	120	98	100	99	97
23	24956	IRH-103	94	111	111	109	106	102	94	92	101	103	98	91	95	93	120	97	96	97	97
24	24959	IIRRH-103	90	101	106	112	102	105	93	92	100	100	98	94	99	96	119	98	100	99	98
25	24960	IRH-104	94	111	112	115	108	92	94	91	99	102	95	84	98	91	115	94	104	99	95
26	24961	SRH-5201	90	94	99	105	97	102	91	93	103	101	98	95	91	93	119	99	99	99	97
27	24963	Bio-681	95	114	111	121	110	108	98		101	105	103	98	97	97	120	96	99	98	100
28	24964	IIRRH-104	94	106	110	110	105	93	90	87	97	103	94	93	95	94	119	94	95	94	94
29	24966	CPH-166	97	103	107	113	105	97	94	96	106	103	99	94	97	96	122	99	98	99	98
30	24967	Bio-680	90	102	110	118	105	97	89	92	96	102	95	94	94	94	120	95	95	95	95
31	24968	KPH-484	85	91	98	99	93	103	84	82	100	101	94	91	90	91	121	91	92	92	93
32	24969	MR-8222	91	92	97	103	96	99	87	87	102	101	95	96	94	95	121	99	99	99	96

S. No	IET No.	Hybrid	ZONE II					Zone III													
			KUL	PNT	LDN	CHT	Northern	MSD	BIO	JKA	NUZ	ALH	UP mean	CHN	PAN	WB mean	RCI	CHP	CTK	OD mean	Eastern Mean
33	24970	HRI-188	92	107	107	111	104	104	90	92	102	102	98	96	105	101	121	97	98	98	98
34	24971	IIRRH-105	94	106	111	107	105	91	90	92	99	103	95	93	93	93	119	94	95	94	94
35	24972	US-330	94	105	107	105	103	97	93	93	104	103	98	94	94	94	120	97	98	98	97
36	24974	PR-15101	95	110	105	107	104	103	91	94	104	100	98	94	95	95	122	98	98	98	97
37	24975	US-335	92	95	98	106	98	105	87	97	99	99	97	90	90	90	121	96	95	95	95
38	24976	SPH-1065	86	90	95	99	92	101	85	85	96	100	93	85	92	88	121	97	98	98	93
39	24978	RRX-022	97	109	110	112	107	98	92	93	104	101	98	94	98	96	120	100	104	102	98
40	24981	NPH-242	92	104	103	103	101	99	87	87	103	101	95	94	95	95	120	97	92	94	95
41	24982	SPH-921	93	100	105	106	101	104	90	87	99	103	97	91	98	94	119	98	99	99	96
42	24983	US-337	97	105	110	114	106	101	91	92	100	102	97	84	104	94	120	99	95	97	96
43	24984	PR-15107	90	106	105	118	105	99	92	91	105	101	98	96	99	97	119	100	105	103	99
44	24985	RRX-024	97	93	95	101	96	98	86	87	101	101	94	91	88	89	120	97	92	95	93
45	24986	TNTRH-55	99	105	107	107	104	105	88	98	102	101	99	96	98	97	121	103	100	101	99
46	US-312 (NCH-ME)		92	102	104	105	101	104	90	86	98	103	96	91	98	94	118	97	99	98	96
47	MTU-1010 (NCV-ME)		85	94	102	106	97	92	82	83	94	101	90	94	89	91	111	93	86	89	90
Group II																					
1	24929	Siri-2244 (Gold)	99	110	112	115	109	99	96	98	110	101	101	96	101	99	116	103	102	102	101
2	24937	PRSH-9018	99	111	114	115	110	107	96		109	99	103	96	97	96	117	100	104	102	101
3	24938	NPH-2003	93	108	107	113	105	563	90		96	98	212	93	97	95	118	99	100	99	154
4	24944	PRSH-9003	96	124	114	115	112	104	96	97	107	102	101	96	100	98	121	102	104	103	101
5	24954	VNR-219	98	108	111	109	106	99	95	97	109	104	101	85	99	92	120	101	102	102	99
6	24957	GK-5030	98	111	111	107	107	108	98	98	107	105	103	94	110	102	118	100	105	102	103
7	24958	MEPH-125	97	108	117	115	109	103	94	92	103	105	99	91	110	101	122	101	102	102	100
8	24962	GK-5036	96	111	111	118	109	103	98	96	107	103	101	96	100	98	123	104	103	103	101
9	24965	KPH-475	98	100	114	119	108	105	94	97	107	102	101	94	100	97	122	100	99	100	100
10	24973	MR-8333	98	111	112	116	109	97	97	99	111	103	101	96	97	97	121	103	102	102	100
11	24977	PR-15103	97	111	114	116	109	99	92	94	102	103	98	91	98	94	120	101	100	101	98
12	24979	US-384	98	111	110	120	110	95	95	98	106	100	99	101	101	101	122	105	104	105	101
13	24980	PR-15104	100	111	116	118	111	95	96	98	108	102	100	101	101	101	124	105	102	103	101
14	HRI-174 (NCH-M)		99	110	113	118	110	98	97		107	104	101	96	98	97	119	101	102	102	100
15	NDR-359 (NCV-M)		96	106	112	107	105	101	95	96	106	102	100	94	100	97	119	102	100	101	99
16	ZCV		98	109	108	115	107	104	86	93	106	100	98	91	94	92	117	94	98	96	96
17	LCV		99	103	109	110	105	105	93	95	101	104	100	107	98	102	108	95	102	98	100
Exp Mean			93	102	105	109	102	109	91	91	102	101	99	93	96	94	119	98	98	98	98

Appendix 5 (contd): Days to 50% flowering of hybrids in IHRT-M, Kharif 2015

S. No	IET No.	Hybrid	Zone IV			Zone V						Zone VI							
			TTB	ARD	North eastern Mean	JBP	SND	RPR	ADV	CG mean	Central Mean	KJT	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western mean
Group I																			
1	24930	NK-17715	101	88	94	100	88	94	86	90	92	95	101	98	102	88	95	95	96
2	24931	RH-9000 Plus	109	88	98	105	88	96	88	92	94	97	101	99	103	92	103	99	99
3	24932	JRH-66	110	86	98	107	91	101	91	96	97	93	104	99	104	90	108	101	100
4	24933	Siri-2277 (Gold)	111	92	101	105	88	91	87	89	93	94	103	98	104	88	107	100	99
5	24934	NK-5251 Plus	109	92	100	106	92	96	88	92	95	94	104	99	103	89	101	97	98
6	24935	JRH-68	92	90	91	94	76	86	73	80	82	78	88	83	87	75	89	83	83
7	24936	RH-664 Imp Plus	109	90	99	107	92	96	88	92	95	99	100	99	103	89	103	98	98
8	24939	UPRH-106	95	87	91	100	83	99	83	91	91	90	98	94	103	81	95	93	93
9	24940	NPH-2012	97	89	93	104	87	88	86	87	91	96	97	96	102	87	94	94	95
10	24941	NS-5153	104	84	94	100	90	91	84	87	91	95	98	96	103	80	97	93	94
11	24942	UPRH-122	98	89	93	100	81	88	84	86	88	89	97	93	93	77	93	88	90
12	24943	NS-5156	101	90	96	104	91	93	87	90	93	95	102	98	102	86	96	95	96
13	24945	TMRH-104	106	92	99	99	85	90	85	87	90	91	98	94	96	87	93	92	93
14	24946	HN-4	94	91	92	113	91	91	86	89	95	91	97	94	98	82	100	93	93
15	24947	BLR-101	92	86	89	100	89	85	83	84	89	85	97	91	99	77	92	89	90
16	24948	TMRH-124	105	86	95	108	86	89	86	87	92	90	98	94	97	88	102	96	95
17	24949	BLR-102	103	89	96	105	94	90	88	89	94	99	98	98	102	89	94	95	96
18	24950	JKRH-2230	107	90	99	101	96	93	89	91	94	102	98	100	104	89	95	96	98
19	24951	VNR-218	106	87	97	98	93	99	91	95	95	96	102	99	104	93	104	100	100
20	24952	ADV-1503	98	89	93	107	89	91	86	88	93	95	98	96	99	80	105	95	95
21	24953	IRH-91-1	96	87	91	106	86	96	84	90	93	93	97	95	103	77	94	91	93
22	24955	MEPH-124	113	87	100	112	88	92	86	89	94	97	102	99	103	87	108	99	99
23	24956	IRH-103	111	88	99	112	90	92	87	89	95	96	103	100	103	91	110	101	101
24	24959	IIRRH-103	106	87	97	105	97	95	88	91	96	96	98	97	103	89	101	97	97
25	24960	IRH-104	110	86	98	107	86	95	87	91	94	95	101	98	103	87	108	99	98
26	24961	SRH-5201	102	89	96	107	89	94	88	91	94	96	98	97	105	91	94	96	97
27	24963	Bio-681	109	97	103	110	90	94	90	92	96	96	103	100	104	87	107	99	99
28	24964	IIRRH-104	107	92	100	103	86	94	84	89	92	96	98	97	103	82	100	95	96
29	24966	CPH-166	109	86	97	110	95	100	92	96	99	97	103	100	108	93	101	100	100
30	24967	Bio-680	102	87	94	102	86	91	88	89	91	89	103	96	99	101	103	101	99
31	24968	KPH-484	92	86	89	99	86	92	85	88	90	86	94	90	102	81	94	92	91
32	24969	MR-8222	100	88	94	100	91	90	88	89	92	96	98	97	100	89	96	95	96
33	24970	HRI-188	107	92	100	107	93	101	88	94	97	95	97	96	103	90	93	95	95
34	24971	IIRRH-105	109	81	95	104	85	92	87	89	92	88	101	94	103	89	100	97	96
35	24972	US-330	107	81	94	105	90	93	90	91	94	95	98	97	102	91	102	98	97
36	24974	PR-15101	107	87	97	106	93	98	91	94	97	98	100	99	105	98	103	102	101
37	24975	US-335	101	86	93	104	92	92	90	91	94	97	98	97	103	90	93	95	96
38	24976	SPH-1065	98	89	93	102	91	92	85	89	92	95	98	96	99	78	93	90	92
39	24978	RRX-022	111	88	99	108	93	96	90	93	96	96	102	99	104	93	105	100	100

S. No	IET No.	Hybrid	Zone IV			Zone V						Zone VI							
			TTB	ARD	North eastern Mean	JBP	SND	RPR	ADV	CG mean	Central Mean	KJT	ANK	MH mean	NWG	NVS	DBI	GJ mean	Western mean
40	24981	NPH-242	116	86	101	105	87	93	87	90	93	94	102	98	100	90	99	96	97
41	24982	SPH-921	109	92	100	105	93	95	88	91	95	97	102	99	101	89	99	96	97
42	24983	US-337	107	85	96	108	91	91	87	89	94	94	103	98	103	90	100	97	98
43	24984	PR-15107	109	88	98	110	96	100	90	95	99	96	103	99	108	92	102	101	100
44	24985	RRX-024	96	87	91	104	84	94	83	89	91	90	98	94	99	80	99	93	93
45	24986	TNTRH-55	110	89	100	105	94	91	86	88	94	97	104	100	103	89	104	99	99
46	US-312 (NCH-ME)		107	91	99	106	90	96	88	92	95	96	102	99	102	89	99	97	97
47	MTU-1010 (NCV-ME)		99	88	93	98	82	84	82	83	86	87	98	93	88	90	100	93	93
Group II																			
1	24929	Siri-2244 (Gold)	113	93	103	110	94	102	96	99	100	97	108	102	111	98	108	106	104
2	24937	PRSH-9018	113	90	102	112	96	103	93	98	101	96	104	100	109	96	107	104	102
3	24938	NPH-2003	109	88	98	106	89	119	85	102	100	94	103	98	108	87	104	100	99
4	24944	PRSH-9003	112	88	100	112	98	103	89	96	100	97	102	99	108	96	108	104	102
5	24954	VNR-219	110	86	98	107	95	102	93	97	99	93	104	98	108	94	107	103	101
6	24957	GK-5030	114	82	98	106	96	102	93	97	99	95	105	100	108	101	109	106	103
7	24958	MEPH-125	112	89	100	100	91	97	89	93	94	96	104	100	105	92	108	102	101
8	24962	GK-5036	110	88	99	114	95	102	94	98	101	103	108	105	105	93	106	101	103
9	24965	KPH-475	109	84	96	111	94	96	92	94	98	98	101	99	104	92	101	99	99
10	24973	MR-8333	113	85	99	110	98	102	93	97	100	100	103	101	108	90	108	102	102
11	24977	PR-15103	118	85	102	110	91	101	90	95	98	96	104	100	103	87	103	97	98
12	24979	US-384	110	91	100	114	99	103	92	97	102	97	108	103	105	101	109	105	104
13	24980	PR-15104	107	84	96	112	100	105	96	100	103	100	106	103	112	92	110	105	104
14	HRI-174 (NCH-M)		110	90	100	113	96	104	93	99	102	96	107	101	108	97	107	104	103
15	NDR-359 (NCV-M)		107	88	98	106	95	103	93	98	99	103	108	105	108	92	103	101	103
16	ZCV		108	87	97	101	82	86	81	83	87	101	106	103	106	94	110	103	103
17	LCV		120	87	103	104	95	104	96	100	100	98	97	97	94	80	108	94	95
Exp Mean			106	88	97	105	90	95	88	92	95	94	101	97	103	88	101	97	97

Appendix 5 (contd): Days to 50% flowering of hybrids in IHRT-M, Kharif 2015

S. No	IET No.	Name	Zone VII														Overall mean
			MTU	IIRR	WGL	BAY	MAH	TS mean	MND	BRM	KA mean	CBT	ADT	TN mean	KRK	Southern mean	
Group I																	
1	24930	NK-17715	91	101	99	95	100	99	105	92	99	106	105	105	94	99	96
2	24931	RH-9000 Plus	93	100	99	100	97	99	104	99	101	107	97	102	95	99	98
3	24932	JRH-66	100	102	104	99	101	102	104	97	101	107	103	105	96	101	100
4	24933	Siri-2277 (Gold)	98	98	103	96	98	99	102	90	96	107	107	107	94	99	99
5	24934	NK-5251 Plus	95	99	101	98	100	99	104	92	98	107	105	106	93	99	98
6	24935	JRH-68	86	87	94	84	91	89	99	92	95	97	93	95	80	90	87
7	24936	RH-664 Imp Plus	91	98	101	98	99	99	107	98	102	108	100	104	95	99	98
8	24939	UPRH-106	85	95	97	93	100	96	98	91	94	100	95	97	94	95	94
9	24940	NPH-2012	92	98	97	96	99	97	102	101	102	102	100	101	96	98	95
10	24941	NS-5153	94	97	97	94	103	98	102	90	96	101	98	99	96	97	96
11	24942	UPRH-122	83	90	97	88	97	93	93	97	95	96	92	94		92	93
12	24943	NS-5156	94	97	97	97	101	98	105	103	104	106	100	103	93	99	96
13	24945	TMRH-104	98	94	97	93	99	96	98	90	94	101	96	98	83	95	95
14	24946	HN-4	99	101	95	92	101	97	99	103	101	97	92	95	96	97	96
15	24947	BLR-101	84	94	96	92	99	95	102	100	101	105	95	100	88	95	92
16	24948	TMRH-124	95	95	98	96	97	96	102	91	96	100	99	99	96	97	96
17	24949	BLR-102	95	99	98	97	100	99	105	89	97	107	101	104	93	98	96
18	24950	JKRH-2230	97	98		101	97	99	110	86	98	103	97	100	98	99	98
19	24951	VNR-218	92	100	97	101	98	99	99	85	92	99	94	96	95	96	98
20	24952	ADV-1503	94	98	107	97	100	100	109	88	98	103	99	101	94	99	96
21	24953	IRH-91-1	94	95	97	94	98	96	104	96	100	104	94	99	95	97	94
22	24955	MEPH-124	95	97	101	96	101	99	103	90	97	101	96	98	86	97	98
23	24956	IRH-103	96	96	101	96	99	98	100	92	96	101	91	96	95	96	98
24	24959	IIRRH-103	97	98	100	99	102	100	101	93	97	105	97	101	96	99	98
25	24960	IRH-104	92	96	98	99	101	99	99	105	102	97	104	100	98	99	98
26	24961	SRH-5201	96	100	97	101	100	99	105	100	102	106	100	103	96	100	97
27	24963	Bio-681	98	96	99	100	99	98	96	92	94	94	90	92	84	95	99
28	24964	IIRRH-104	97	93	97	94	99	96	98	98	98	98	91	94	95	96	96
29	24966	CPH-166	97	102		104	102	103	110	99	104	107	100	103	96	102	100
30	24967	Bio-680	95	98	98	93	100	97	92	98	95	99	97	98	95	96	97
31	24968	KPH-484	92	98	97	93	110	99	103	103	103	104	100	102	95	99	94
32	24969	MR-8222	97	102	99	96	103	100	109	102	105	107	108	107	95	102	97
33	24970	HRI-188	96	100	100	99	108	101	102	92	97	106	100	103	85	99	99
34	24971	IIRRH-105	95	95	99	94	109	99	99	93	96	99	93	96	93	97	96
35	24972	US-330	95	101	100	101	116	104	102	90	96	107	100	103	90	100	98
36	24974	PR-15101	89	101	101	102	117	105	105	90	97	107	101	104	94	101	100
37	24975	US-335	91	102	99	100	109	102	104	90	97	109	102	105	96	100	97
38	24976	SPH-1065	90	98	98	96	113	101	104	95	99	108	100	104	91	99	95
39	24978	RRX-022	99	105	104	102	107	104	102	103	103	108	95	101	93	102	100
40	24981	NPH-242	94	97	99	97	104	99	101	92	96	107	101	104	95	98	97

S. No	IET No.	Name	Zone VII														Overall mean
			MTU	IIRR	WGL	BAY	MAH	TS mean	MND	BRM	KA mean	CBT	ADT	TN mean	KRK	Southern mean	
41	24982	SPH-921	97	103	97	100	115	104	102	97	99	106	101	104	95	101	99
42	24983	US-337	95	100	99	97	114	102	99	97	98	105	97	101	97	100	98
43	24984	PR-15107	97	105	101	102	113	105	105	90	98	107	100	104	98	102	100
44	24985	RRX-024	92	101	97	93	115	101	101	97	99	105	101	103	92	99	95
45	24986	TNTRH-55	95	99	107	98	101	101	102	100	101	107	98	103	92	100	99
46	US-312 (NCH-ME)		97	100	98	100	119	104	101	92	96	104	99	101	91	100	98
47	MTU-1010 (NCV-ME)		88	93	96	90	105	96	100	104	102	101	93	97	94	96	93
Group II																	
1	24929	Siri-2244 (Gold)	102	105	108	104	102	105	107	95	101	108	101	105	96	103	103
2	24937	PRSH-9018	98	105	102	104	99	102	105	92	99	111		111	96	101	102
3	24938	NPH-2003	94	97	97	97	98	97	102	90	96	107	99	103	93	97	113
4	24944	PRSH-9003	97	103	104	104	106	104	107	90	98	108	99	103	83	100	102
5	24954	VNR-219	98	104	103	103	105	104	107	92	99	105	101	103	91	101	101
6	24957	GK-5030	100	103	108	100	100	102	109	90	99	108	100	104	93	101	102
7	24958	MEPH-125	100	103	107	102	104	104	108	97	102	106	97	101	92	101	101
8	24962	GK-5036	102	103	100	107	106	104	105	97	101	110	101	105	84	101	102
9	24965	KPH-475	99	103	104	102	101	102	109	99	104	108	100	104	95	102	101
10	24973	MR-8333	96	105	107	104	113	107	107	96	101	108	100	104	93	103	102
11	24977	PR-15103	101	100	107	99	116	105	104	98	101	109	105	107	92	103	101
12	24979	US-384	100	107	104	104	111	106	102	91	97	109	100	104	93	102	103
13	24980	PR-15104	104	107	108	104	110	107	110	98	104	111	100	106	98	105	104
14	HRI-174 (NCH-M)		97	103	103	104	102	103	106	83	95	110	102	106	95	100	102
15	NDR-359 (NCV-M)		94	103	100	102	101	101	107	90	98	108	99	103	94	100	100
16	ZCV		92	105	97	103	96	100	110	90	100	112	101	106	90	100	98
17	LCV		113	105	106	109	102	106	104	106	105	109	99	104	94	105	101
Exp Mean			95	99	100	98	103	100	103	95	99	104	98	102	93	99	98

Appendix 6: Quality characteristics of IHRT-Medium, Kharif 2015

S. No	Designation	IET No	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
1	Siri-2244 (Gold)	24929	79.9	68.8	63.8	5.75	2.2	2.61	MS	VOC	5.3	270	10.4	1.8	4.7	24.72	49	NS
2	NK-17715	24930	81.2	70	62.5	6.45	2.22	2.9	LB	VOC	5.3	245	11.4	1.76	4.7	26.19	25	NS
3	RH-9000 Plus	24931	80	70.3	68	6.29	1.94	3.24	LS	VOC	5.6	230	10.7	1.7	4	24.17	27	NS
4	JRH-66	24932	79.3	70.6	67.9	6.41	2.22	2.88	LB	A	4.6	200	9.8	1.52	4.5	26.51	22	NS
5	Siri-2277 (Gold)	24933	81.4	69.5	60	6.53	2	3.26	LS	VOC	4	280	10.1	1.54	4.2	24.75	70	SS
6	NK-5251 Plus	24934	81	70.8	65.8	6.4	1.99	3.21	LS	VOC	4.7	220	10.6	1.65	4	23.96	52	MS
7	JRH-68	24935	78.8	64.8	36.6	6.72	1.94	3.46	LS	VOC	4.2	240	11.3	1.68	5.2	26.42	46	SS
8	RH-664 Imp Plus	24936	80.1	69.6	66.5	6.25	1.91	3.27	LS	VOC	4.8	235	11.2	1.79	5.6	21.03	40	NS
9	PRSH-9018	24937	81.3	72.1	63.4	5.94	2.11	2.81	MS	VOC	4.7	220	10.2	1.71	5.3	21.82	55	NS
10	NPH-2003	24938	81.4	69.6	64.9	6.16	1.98	3.11	LS	VOC	4.7	240	10.5	1.7	4.3	22.17	61	SS
11	UPRH-106	24939	80.7	68.1	54.8	5.58	2.04	2.73	MS	VOC	5.5	315	8.7	1.55	5	23.87	65	SS
12	NPH-2012	24940	81.7	70.1	66.3	6.52	2.11	3.09	LS	A	4.6	330	10	1.53	5	16.48	65	NS
13	NS-5153	24941	79.7	70.1	66.1	6.11	2.14	2.85	LB	VOC	5.6	130	10.7	1.75	4	23.34	39	NS
14	UPRH-122	24942	78.5	67.9	54.9	6.42	1.9	3.37	LS	VOC	5.5	150	10.6	1.65	4	27.33	24	NS
15	NS-5156	24943	81.5	70.3	64.5	6.68	1.95	3.42	LS	A	4.1	240	10.1	1.51	4.2	13.58	90	NS
16	PRSH-9003	24944	80.9	70.1	66.5	5.85	2.09	2.79	MS	VOC	4.6	250	10.4	1.77	4.5	22.05	48	NS
17	TMRH-104	24945	81.4	70.8	59.5	6.68	2.04	3.27	LS	VOC	5.3	295	10.7	1.6	6	23.11	53	MS
18	HN-4	24946	81.5	67.9	45	6.55	2.09	3.13	LS	VOC	5.6	305	10.5	1.6	3.5	24.84	50	MS
19	BLR-101	24947	79.8	70.7	66.3	6.71	2.19	3.06	LS	VOC	5.5	315	12.4	1.84	7	22.82	35	NS
20	TMRH-124	24948	79.6	68.8	65.2	5.71	1.95	2.92	MS	VOC	4.6	270	9.5	1.66	4.3	23.7	52	SS
21	BLR-102	24949	81.5	70.6	67.1	6.14	2.07	2.96	LB	A	4.1	310	9.6	1.56	5.6	19.85	65	SS
22	JKRH-2230	24950	81	69.2	63.1	6.17	2.09	2.95	LB	A	4.6	235	10.3	1.66	3.8	23.87	44	MS
23	VNR-218	24951	81.1	70.4	68.2	5.76	2.07	2.78	MS	A	5.2	310	10.4	1.8	7	26.51	27	SS
24	ADV-1503	24952	79.2	70.1	68.1	5.68	2.32	2.44	SB	VOC	4.1	145	10.1	1.77	3.3	27.01	29	NS
25	IRH-91-1	24953	81.8	69.4	57.4	6.51	1.78	3.65	LS	VOC	4.4	340	10.6	1.62	6	16.98	98	SS
26	VNR-219	24954	82.1	71.3	67.7	5.82	2.08	2.79	MS	VOC	4.8	240	9.5	1.63	4	22.9	56	NS
27	MEPH-124	24955	82.1	70.6	63.4	6.58	2.05	3.2	LS	VOC	5.3	250	10.5	1.59	3.8	22.76	80	MS
28	IRH-103	24956	80.4	70.6	67.1	6.83	2	3.41	LS	VOC	5.3	285	11.3	1.65	5	24.25	44	NS
29	GK-5030	24957	81.2	69.1	50.4	6.64	2.15	3.08	LS	VOC	4.7	285	10.4	1.56	4.4	24.11	87	NS
30	MEPH-125	24958	80.1	69.2	64.8	5.57	2.13	2.61	MS	VOC	4.1	240	10.2	1.83	5	25.49	41	NS
31	IIRRH-103	24959	79.6	70.6	68.2	6.11	2.18	2.8	LB	VOC	4.8	190	10.2	1.66	4.8	21.67	33	SS
32	IRH-104	24960	79.3	67.8	49.0	6.05	2.16	2.8	LS	VOC	5.6	335	11	1.81	7	26.81	22	NS
33	SRH-5201	24961	80.3	69.1	65.3	6.65	2.05	3.24	LS	VOC	5.4	310	10.5	1.57	6	14.49	93	NS
34	GK-5036	24962	82.3	71.6	68.4	5.46	2.09	2.61	MS	VOC	5.6	260	10.4	1.9	4	21.91	53	MS

S. No	Designation	IET No	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
35	Bio-681	24963	80.7	71.8	69.8	6.63	2.18	3.04	LS	A	4.8	295	11	1.65	7	23.52	57	NS
36	IIRRH-104	24964	79.6	69.9	65.5	5.74	2.05	2.8	MS	VOC	4.8	210	11.1	1.93	5.7	25.31	28	NS
37	KPH-475	24965	80.2	70.6	65.4	5.79	2.28	2.53	MS	VOC	4.1	195	9.7	1.67	4	25.13	39	NS
38	CPH-166	24966	82.1	67.6	58.6	5.45	1.97	2.76	MS	VOC	4.1	290	9.3	1.7	4	14.72	100	SS
39	Bio-680	24967	80.5	69	56	6.88	2.32	2.96	LB	VOC	4.7	300	10.5	1.52	4.4	24.31	56	NS
40	KPH-484	24968	80.5	72.3	70.8	5.89	2.27	2.59	MS	OC	4.2	295	10.1	1.71	7	25.46	36	NS
41	MR-8222	24969	80.6	65	48.5	6.73	2	3.36	LS	VOC	5.4	280	10.4	1.54	5	15.84	100	NS
42	HRI-188	24970	80	68.8	63.8	5.29	2.07	2.55	MS	A	5.4	280	8.6	1.62	5	25.84	33	NS
43	IIRRH-105	24971	79.5	68.7	60.4	5.56	1.96	2.83	MS	VOC	4.8	295	10.3	1.85	5.3	26.13	43	NS
44	US-330	24972	79.6	67.9	64.6	6.21	2.05	3.02	LS	VOC	5.3	340	9.6	1.54	6	14.4	97	NS
45	MR-8333	24973	80.9	70.6	66.9	6.33	2.05	3.08	LS	VOC	5.4	290	10.8	1.7	3.9	21.47	68	SS
46	PR-15101	24974	80.9	68.8	62.7	6.19	2.15	2.87	LB	VOC	4.6	275	9.5	1.53	5.5	16.83	67	MS
47	US-335	24975	80.5	68.8	64.5	6.67	2.11	3.16	LS	A	4.6	250	10.5	1.57	4.6	14.1	100	SS
48	SPH-1065	24976	81.6	71.2	67.9	5.68	2.16	2.62	MS	VOC	4.7	245	10.8	1.9	5.9	20.5	46	SS
49	PR-15103	24977	81.9	71.5	67.5	6.51	2.01	3.23	LS	VOC	5.6	260	11.1	1.7	4	21.94	51	NS
50	RRX-022	24978	80.8	70	59.7	6.49	2	3.24	LS	VOC	5.4	310	11.2	1.72	5	22.05	35	NS
51	US-384	24979	80.6	69.5	63.7	5.76	2.29	2.51	MS	VOC	5.6	245	10.4	1.8	4.8	19.62	76	NS
52	PR-15104	24980	80.4	68.7	60.4	6.11	2.29	2.66	LB	VOC	4.6	210	10.5	1.71	4	13.93	71	NS
53	NPH-242	24981	80.1	69.4	60.2	5.76	1.99	2.89	MS	VOC	5.4	250	9.4	1.63	5.5	14.08	90	NS
54	SPH-921	24982	80.5	69.4	67.3	5.72	2.06	2.77	MS	VOC	4.2	245	10	1.74	5.1	21.85	41	MS
55	US-337	24983	80.1	69.3	62.9	6.33	2.05	3.08	LS	VOC	4.7	330	10.4	1.64	7	21.14	53	MS
56	PR-15107	24984	80.5	68.5	52.5	6.29	2.23	2.82	LB	VOC	4.7	335	8.5	1.35	5	22.14	63	MS
57	RRX-024	24985	79.7	66.1	50.2	6.65	1.99	3.34	LS	VOC	4.2	355	8.9	1.33	7	24.08	40	SS
58	TNTRH-55	24986	79.4	69.5	67.7	5.59	2.13	2.62	MS	VOC	5.6	250	9.8	1.75	5.5	26.37	48	NS
59	US-312 (NCH)		80.6	70.7	69.2	5.6	2.04	2.74	MS	VOC	5.6	245	10.3	1.83	5	22.44	46	SS
60	MTU-1010 (NCV)		78	65.6	44.1	6.19	2.01	3.07	LS	VOC	4.7	220	8.5	1.44	4	23.58	65	NS
61	HRI-174 (NCH)		81.5	70.4	62.3	6.18	2.1	2.94	LB	VOC	4.1	265	10.4	1.68	4	25.49	59	NS
62	NDR-359 (NCV)		80.2	72.2	66.7	6.47	2.47	2.64	LB	VOC	4	195	10.3	1.59	4	23.87	58	NS
63	PR-113/CR Dhan-201/ IR-64/ Akshayadhan/ Jaya (ZCV)		80.6	70.3	64.6	5.73	2.45	2.33	SB	VOC	4.8	305	8.9	1.55	7	25.02	22	NS
64	DRR Dhan-38 (LCV)		79.8	69.5	44.6	5.27	2.26	2.33	SB	VOC	4.8	250	10.1	1.91	5	26.48	31	NS

Hull: Hulling (%); Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm);L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; VER: Volume expansion ration; WU: Water uptake (ml); KLAC: Kernel length after cooking (mm); ER: Elongation ratio; AC: Amylose content (%); GC: Gel consistency; MS: Medium slender; LS: Long slender, LB: Long bold; SB: Short bold; VOC: Very occasionally present; A: Absent; NS: No scent; MS: Medium scent; SS: Strong scent;

Appendix 7: Grain Yield (Kg/Ha) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE III											Zone IV			ZONE V			
			CHN	RCI	BBN	CTK	CHP	OD Mean	MSD	ALH	BIO	UP Mean	Eastern Mean	TTB	ARD	NE Mean	JBP	SND	SKL	MH Mean
1	24987	ADV-15104	4571	3194	4444	4918	4067	4476	7635	4433	6843	6304	5273	5200		5200	6863	4635	3880	4257
2	24988	Bio-633	5714	1944	4762	5677	4539	4993	4526	2933	8526	5328	5240	5416		5416	8123	5838	4714	5276
3	24989	JGLH-1	5667	3056	4286	5360	6608	5418	6487	3833	6737	5686	5568	4997	4400	4699	8298	4813	4422	4618
4	24990	MR-8666	5952	2222	4603	5137	6354	5365	6446	4833	7185	6155	5787	5693	5290	5492	6896	5949	5549	5749
5	24991	HRI-187	5810	2194	4603	4817	6645	5355	5403	5233	7062	5899	5653	4339	4347	4343	6900	5793	4297	5045
6	24992	US-353	5619	2556	3651	4422	3758	3944	6404	5267	7263	6311	5198	5035	4624	4830	7009	5303	4422	4863
7	24993	PR-15108	5810	1278	5873	4773	6118	5588	4631	4400	7894	5642	5643	5240	4991	5116	9403	6061	5215	5638
8	24994	SPH-1003	5857	2889	4127	4760	6681	5189	3713	4133	7019	4955	5184	5317		5317	7676	5994	6091	6042
9	24995	SRH-5400	5667	2278	4127	5569	5664	5120	5382	3700	7012	5365	5303	6029		6029	5766	5303	5173	5238
10	24888	KPH-459*	5429	3250	4127	4719	4666	4504	6383	4100	7714	6066	5305	5216		5216	7034	4657	4255	4456
11	24156	28P09**	6333	1444	6667	5924	6808	6466	3484	4767	7792	5347	5968	5584	5336	5460	9349	5793	5632	5713
12	24896	SPH-6159*	5524	2222	4603	4476	4757	4612	4673	4633	6825	5377	5070	5051	4244	4648	5703	4300	3838	4069
13	24891	PR-14109*	6048	3000	5714	5854	6463	6010	6842	4700	6885	6142	6072	6099	6111	6105	9370	6350	5882	6116
14	24887	HRI-186*	5714	2111	3968	4323	5937	4742	6028	4767	7422	6072	5451	5909	4658	5284	5636	3944	4005	3974
15	24892	PR-14111*	5762	2778	4603	5021	5465	5029	7635	4200	6875	6236	5651	4992	4854	4923	5799	5348	4589	4968
16	24159	DRRH-92*	6143	2111	4603	5021	6427	5350	5778	4333	6638	5583	5563	5533	5458	5496	6992	5370	5340	5355
17	24893	PR-14112*	5714	2111	6032	5513	5846	5797	4714	4700	7252	5555	5682	5699		5699	7292	6150	6007	6079
18	24996	TNRH-280	5810	3139	4762	5056	5319	5046	6383	4533	7630	6182	5642	5709	4780	5245	6366	5459	4756	5107
19	DRRH-3 (NCH)			2667	3810	5392		4601	3963	5300	7055	5439	5104	5528		5528	9466	5771		5771
20	WGL-14 (NCV)		5857	1861	5238	4732	4394	4788	4798	4133	6642	5191	5113	4219	5333	4776	4385	4679	4756	4718
21	BPT-5204 (Old NCV)		5619	2722	3333	5019	4630	4327	4068	4667	5693	4809	4718	4933		4933	5724	4078	3838	3958
EXP MEAN			5731	2430	4664	5071	5557	5082	5494	4457	7141	5697	5445	5321	4956	5226	7145	5314	4833	5096
CD(0.05)			523.45	1769.57	883.15	327.46	261.56		248.72	655.13	468.46			595.04	669.3		835.12	267.97	385.46	
CV			5.54	44.13	11.42	3.91	2.85		2.74	8.91	3.98			6.78	8.01		7.08	3.06	4.83	
			**	ns	**	**	**		**	**	**			**	**		**	**	**	
D/S			02-07-15	20-06-15	13-07-15	06-06-15	15-07-15		25-06-15	20-06-15	24-06-15			29-06-15	13-07-15					
D/P			05-08-15	12-0815	17-08-15	15-07-15	10-08-15		28-07-15	15-07-15	24-07-15			27-07-15	07-08-15		10-06-15	30-06-15	16-06-15	
																	02-07-15	28-07-15	14-07-15	

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

.Appendix 7 (contd): Grain Yield (Kg/Ha) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE V (contd)				ZONE VI										ZONE VII		
			RPR	ADV	CH Mean	Central mean	KJT	RDN	SHR	ANK	MH Mean	NWG	NVS	DBI	GJ Mean	West mean	MTU	BPT	AP mean
1	24987	ADV-15104	2447	8670	5558	5299	6644	5183	4488	3177	4873	4847	6011	4401	5086	4964	3016	4413	3714
2	24988	Bio-633	3647	9627	6637	6390	7373	3942	4414	4186	4979	5137	5548	4749	5145	5050	4236	4038	4137
3	24989	JGLH-1	3720	7867	5794	5824	7151	5260	5549	4557	5629	5556	6514	4340	5470	5561	3085	6094	4589
4	24990	MR-8666	4383	10575	7479	6671	6430	4069	4327	4093	4730	5174	6079	4793	5349	4995	5110	6944	6027
5	24991	HRI-187	4183	8212	6198	5877	5185	5562	5691	5332	5443	4357	6325	4856	5180	5330	2988	5747	4367
6	24992	US-353	3177	6258	4717	5234	4896	5192	4963	4805	4964	3377	5333	4233	4314	4686	2760	5681	4220
7	24993	PR-15108	5403	8735	7069	6963	8800	4400	4951	4543	5674	5338	5198	4715	5083	5421	4388	6874	5631
8	24994	SPH-1003	4220	9216	6718	6639	6378	5312	4895	5406	5498	2832	5051	4850	4244	4961	4616	6324	5470
9	24995	SRH-5400	3262	9004	6133	5701	7003	5470	5735	4824	5758	4357	4514	4658	4510	5223	3714	4751	4233
10	24888	KPH-459*	4038	9249	6644	5847	9077	4927	5469	5838	6328	4248	3960	4959	4389	5497	3416	5144	4280
11	24156	28P09**	5207	8954	7080	6987	6602	4459	5358	4978	5349	4521	4616	4536	4557	5010	4712	6011	5362
12	24896	SPH-6159*	4137	6679	5408	4931	6551	4338	5154	4789	5208	3486	4587	5070	4381	4853	2638	6649	4644
13	24891	PR-14109*	5120	7819	6469	6908	7467	4883	5099	4192	5410	3540	4934	4477	4317	4942	5579	4975	5277
14	24887	HRI-186*	4141	9970	7055	5539	6187	4275	6691	4001	5289	3268	4884	4788	4313	4871	3411	5346	4379
15	24892	PR-14111*	4410	8670	6540	5763	7789	4270	4315	4681	5264	3813	4327	4553	4231	4821	5767	4689	5228
16	24159	DRRH-92*	4570	7813	6192	6017	8086	4060	4148	4282	5144	4902	5066	4458	4809	5000	4677	4867	4772
17	24893	PR-14112*	4890	7860	6375	6440	8232	3877	5179	3985	5318	3595	4437	4150	4061	4779	4336	6178	5257
18	24996	TNRH-280	4350	7904	6127	5767	6944	4497	5512	4092	5261	4194	3931	4529	4218	4814	4578	3535	4056
19	DRRH-3 (NCH)		4207	7590	5898	6758	4330	3834	4525	3532	4055	5338	4892	4767	4999	4460		4996	4996
20	WGL-14 (NCV)		4503	7338	5921	5132	7737	3329	4358	3619	4761	4031	4438	4078	4182	4513	4202	4206	4204
21	BPT-5204 (Old NCV)		4157	8203	6180	5200	5430	2847	4389	3210	3969	3268	4386	4231	3962	3966	4468	3272	3870
EXP MEAN			4199	8391	6295	5995	6871	4476	5010	4387	5186	4247	5001	4581	4609	4939	4085	5273	4701
CD(0.05)			934.46	981.48			1077.23	838.37	622.24	609.8		1288.85	514.86	367.22			221.85	1144.54	
CV			13.49	5.61			9.5	11.35	7.53	8.42		14.55	6.24	4.86			3.29	10.41	
			**	**			**	**	**	**		**	**	**			**	**	
D/S			20-06-15	17-06-15			20-06-15	15-06-15	12-06-15	24-06-15		18-06-15	12-06-15	12-06-15			03-07-15	21-08-15	
D/P			18-07-15	08-07-15			25-07-15	16-07-15	04-07-15	20-07-15		27-07-15	18-07-15	16-07-15			06-08-15	24-09-15	

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 7 (contd): Grain Yield (Kg/Ha) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE VII (contd)														Overall mean
			IIRR	WGL	BAY	MAH	RASI	TS mean	MND	BRM	SRS	KA Mean	CBT	GDL	TN mean	southern Mean	
1	24987	ADV-15104	3314	3602	9447	5327	5785	5495	6131	3585	6591	5436	5817	5310	5564	5195	5178
2	24988	Bio-633	2729	3815	5929	5863	5752	4818	6564	3410	6113	5362	6195	7407	6801	5171	5358
3	24989	JGLH-1	4419	5390	6787	4840	7378	5763	6131	3922	5374	5142	5469	3867	4668	5230	5430
4	24990	MR-8666	4206	3502	7377	5383	6918	5477	4171	3782	6380	4777	7303	7591	7447	5722	5711
5	24991	HRI-187	4115	5674	7640	4653	6735	5764	8604	3508	6394	6169	7277	9916	8597	6104	5703
6	24992	US-353	3595	3699	7334	4263	6865	5151	6564	3613	5509	5229	5593	7281	6437	5230	5084
7	24993	PR-15108	3699	6666	7809	5433	7586	6239	8274	3845	5930	6016	7516	8338	7927	6363	6026
8	24994	SPH-1003	4295	6936	9622	5577	8315	6949	9801	3302	6625	6576	7619	9734	8677	6897	6009
9	24995	SRH-5400	3864	6680	7469	4710	8240	6193	5265	3365	4466	4365	6554	6475	6515	5463	5430
10	24888	KPH-459*	4362	6038	9784	5080	7646	6582	5972	3309	6512	5264	7038	5237	6137	5795	5613
11	24156	28P09**	4384	6126	7533	4210	8095	6070	6450	3617	6389	5485	7858	4428	6143	5818	5834
12	24896	SPH-6159*	3854	5453	9199	4913	8132	6310	7430	4373	6529	6111	6698	6865	6781	6061	5338
13	24891	PR-14109*	4109	5194	8346	6107	7466	6244	8912	5385	6528	6942	6603	8272	7437	6456	6101
14	24887	HRI-186*	2478	5309	9622	5557	6907	5975	5128	3246	4796	4390	6212	6430	6321	5370	5302
15	24892	PR-14111*	4308	3866	9077	5297	6379	5785	5835	3466	5774	5025	5037	6342	5690	5487	5388
16	24159	DRRH-92*	3869	6085	7971	5020	7606	6110	5698	3876	5679	5084	6439	3969	5204	5480	5478
17	24893	PR-14112*	3924	5070	9247	6283	7667	6438	8125	2598	7637	6120	5702	8699	7200	6289	5831
18	24996	TNRH-280	3255	4139	9492	7190	7224	6260	7088	4013	7193	6098	5167	6605	5886	5790	5515
19	DRRH-3 (NCH)				7480	5960	7740	7060	7749	3820	6361	5977	5055	6049	5552	6134	5558
20	WGL-14 (NCV)		3775	4259	6584	5093	5576	5058	3920	3225	4617	3921	6137	4148	5142	4645	4798
21	BPT-5204 (Old NCV)		3423	4297	6021	4560	5149	4690	2781	3162	4744	3562	5204	3087	4146	4181	4434
EXP MEAN			3799	5090	8084	5301	7103	5925	6504	3639	6007	5383	6309	6479	6394	5661	5470
CD(0.05)			1022.31	800.95	679.68	649.56	1102.81		1115.09	610.46	537.66		745.95	1086.93			
CV			16.31	9.54	5.09	7.43	9.41		10.39	10.17	5.42		7.16	10.17			
			*	**	**	**	**		**	**	**		**	**			
							ns			*							
D/S			26-06-15	08-07-15	19-06-15	27-06-15	19-06-15		03-08-15	10-06-15	03-07-15		12-06-15	07-07-15			
D/P			12-08-15	27-08-15	24-07-15	24-07-15	10-07-15		28-08-15	04-07-15	01-08-15		06-07-15	03-08-15			

The data of Ranchi (RCI) was not included in the analysis due to low yield and high CV.

Appendix 8: Days to 50% flowering (DFF) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE III											Zone IV			ZONE V				
			CHN	RCI	BBN	CTK	CHP	OD Mean	MSD	ALH	BIO	UP Mean	Eastern Mean	TTB	ARD	NE Mean	JBP	SND	SKL	MH Mean	RPR
1	24987	ADV-15104	87	126	94	95	95	95	105	100	88	98	95	104	86	95	103	90	90	90	91
2	24988	Bio-633	98	132	101	106	100	102	103	98	100	100	101	117		117	85	100	100	100	102
3	24989	JGLH-1	93	124	95	104	95	98	119	100	94	104	100	109	90	99	110	89	93	91	92
4	24990	MR-8666	101	135	102	110	101	104	98	102	103	101	102	117	101	109	90	103	101	102	104
5	24991	HRI-187	93	128	96	100	95	97	111	103	94	103	99	113	90	102	111	95	94	95	98
6	24992	US-353	95	124	95	96	96	96	108	102	94	101	98	111	93	102	110	93	96	95	96
7	24993	PR-15108	102	132	102	108	100	103	108	104	101	105	104	118	98	108	87	102	108	105	107
8	24994	SPH-1003	97	126	95	98	94	96	96	104	93	98	97	112		112	109	93	97	95	96
9	24995	SRH-5400	97	128	95	95	96	95	110	103	93	102	98	109		109	108	87	93	90	94
10	24888	KPH-459*	96	127	98	104	96	99	114	105	99	106	102	116		116	111	95	95	95	102
11	24156	28P09**	103	132	102	112	104	106	103	104	105	104	105	118	101	110	89	103	108	106	107
12	24896	SPH-6159*	91	128	92	98	92	94	104	105	93	101	96	107	90	99	108	94	96	95	92
13	24891	PR-14109*	103	132	101	108	100	103	107	104	98	103	103	117	100	108	87	98	101	100	102
14	24887	HRI-186*	91	128	93	98	105	99	108	103	90	100	98	111	87	99	105	88	89	89	92
15	24892	PR-14111*	108	130	98	104	95	99	104	102	100	102	101	117	89	103	113	99	100	100	100
16	24159	DRRH-92*	93	133	94	100	95	96	112	104	91	102	98	111	91	101	106	95	95	95	92
17	24893	PR-14112*	96	127	97	102	97	99	115	100	101	105	101	114		114	112	97	100	99	99
18	24996	TNRH-280	88	126	95	98	93	95	114	103	95	104	98	113	93	103	107	92	92	92	94
19	DRRH-3 (NCH)			132	95	106		101	104	101	101	102	102	116		116	112	99		99	99
20	WGL-14 (NCV)		106	133	103	84	97	95	91	101	104	99	98	117	101	109	87	102	106	104	105
21	BPT-5204 (Old NCV)		105	132	107	86	106	100	115	105	110	110	105	122		122	94	108	109	109	112
Exp Mean			97	129	98	101	98	99	107	103	98	102	100	114	94	107	102	96	98	97	99

Appendix 8 (contd): Days to 50% flowering (DFF) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE V (contd)			ZONE VI										ZONE VII		
			ADV	CH Mean	Central Mean	KJT	RDN	SHR	ANK	MH Mean	NWG	NVS	DBI	GJ Mean	West mean	MTU	BPT	AP mean
1	24987	ADV-15104	88	89	93	101	103	86	98	97	98	98	92	96	97	95	94	94
2	24988	Bio-633	95	99	97	97	106	93	108	101	108	105	103	105	103	104	93	98
3	24989	JGLH-1	89	90	95	99	103	81	105	97	105	105	98	103	100	96	81	88
4	24990	MR-8666	101	103	100	107	110	97	110	106	114	112	104	110	108	103	95	99
5	24991	HRI-187	90	94	98	100	104	88	103	98	104	104	97	102	100	97	93	95
6	24992	US-353	89	92	97	98	105	89	102	98	103	103	92	100	99	98	88	93
7	24993	PR-15108	98	103	100	104	107	97	111	105	117	114	105	112	108	104	94	99
8	24994	SPH-1003	90	93	97	95	104	90	104	98	108	107	105	107	102	98	79	88
9	24995	SRH-5400	87	91	94	96	100	79	102	94	97	99	98	98	96	97	87	92
10	24888	KPH-459*	93	97	99	101	101	83	104	97	110	109	99	106	101	100	81	91
11	24156	28P09**	100	103	101	101	104	95	111	103	118	114	102	111	106	105	96	101
12	24896	SPH-6159*	88	90	95	100	98	85	103	97	108	105	102	105	100	96	82	89
13	24891	PR-14109*	99	100	97	110	98	93	112	103	113	114	94	107	105	104	107	106
14	24887	HRI-186*	87	89	92	91	99	81	99	92	104	102	103	103	97	96	99	98
15	24892	PR-14111*	98	99	102	102	104	93	108	102	112	114	103	110	105	102	91	96
16	24159	DRRH-92*	91	91	96	101	100	85	102	97	128	109	102	113	104	96	94	95
17	24893	PR-14112*	96	98	101	100	102	94	106	100	113	114	99	109	104	100	93	96
18	24996	TNRH-280	88	91	94	100	101	81	104	97	123	106	104	111	103	117	89	103
19	DRRH-3 (NCH)		98	98	102	103	103	94	107	102	114	114	97	108	105		82	82
20	WGL-14 (NCV)		100	102	100	99	107	97	114	104	124	114	95	111	107	109	99	104
21	BPT-5204 (Old NCV)		109	111	107	111	114	99	119	111	127	115	100	114	112	98	102	100
Exp Mean			94	96	98	101	103	89	106	100	112	108	100	107	103	101	91	95

Appendix 8 (contd): Days to 50% flowering (DFF) of hybrids in HRT-MS trial, Kharif 2015

S. No	IET No	Hybrid	ZONE VII (contd)														Overall mean
			IIRR	WGL	BAY	MAH	Rasi	TS mean	MND	BRM	SRS	KA Mean	CBT	GDL	TN mean	Southern Mean	
1	24987	ADV-15104	107	110	101	95	95	102	102	84	101	96	107	108	108	100	97
2	24988	Bio-633	112	112	116	97	102	108	104	88	106	99	114	108	111	105	103
3	24989	JGLH-1	108	111	106	111	107	109	93	90	97	93	102	99	100	100	99
4	24990	MR-8666	116	115	116	104	106	111	107	85	110	101	114	109	112	107	105
5	24991	HRI-187	110	110	109	111	99	108	100	89	104	97	107	109	108	103	101
6	24992	US-353	110	112	110	106	98	107	103	88	103	98	103	108	106	102	100
7	24993	PR-15108	112	113	115	105	103	110	106	90	108	101	113	109	111	106	105
8	24994	SPH-1003	111	109	106	100	99	105	102	90	104	99	109	107	108	101	100
9	24995	SRH-5400	108	112	108	95	97	104	92	84	95	90	99	98	98	98	97
10	24888	KPH-459*	109	111	113	107	98	108	95	88	98	94	105	101	103	101	101
11	24156	28P09**	116	115	115	104	107	111	109	88	105	101	114	109	111	107	106
12	24896	SPH-6159*	108	110	107	102	99	105	103	96	103	101	108	107	108	102	99
13	24891	PR-14109*	112	114	115	102	105	110	106	104	104	104	116	110	113	108	105
14	24887	HRI-186*	104	109	101	106	93	103	93	94	95	94	100	98	99	99	97
15	24892	PR-14111*	109	113	108	106	101	107	106	100	103	103	108	109	109	105	104
16	24159	DRRH-92*	111	111	108	107	100	107	103	91	99	98	101	101	101	102	100
17	24893	PR-14112*	111	111	110	109	102	109	105	86	107	99	108	108	108	104	103
18	24996	TNRH-280	107	110	111	101	96	105	102	101	99	101	101	100	101	103	100
19	DRRH-3 (NCH)				115	102	100	106	102	97	105	101	108	107	108	102	103
20	WGL-14 (NCV)		113	116	117	103	105	111	110	84	109	101	122	107	114	108	104
21	BPT-5204 (Old NCV)		120	131	120	111	113	119	114	95	112	107	123	113	118	113	110
Exp Mean			111	113	111	104	101	108	103	91	103	99	109	106	107	103	102

Appendix 9: Quality characteristics of HRT – MS trial, Kharif 2015

S. No	Designation	IET No	Hull	Mill	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC	ER	AC	GC	AROMA
1	ADV-15104	24987	80.9	69	61.8	5.32	1.86	2.86	MS	VOC	4.7	245	10.5	1.97	23.58	60	SS
2	Bio-633	24988	80.5	68.8	64.9	5.58	2.09	2.66	MS	VOC	4	290	9.7	1.73	16.39	75	SS
3	JGLH-1	24989	80.1	68.3	61.6	5.33	1.86	2.86	MS	VOC	4.8	305	9.7	1.81	22.76	43	MS
4	MR-8666	24990	80	69.3	67.2	4.97	1.82	2.72	MS	VOC	5.5	295	8.4	1.69	23.96	22	NS
5	HRI-187	24991	80	69.7	65	5.52	1.88	2.93	MS	VOC	5.5	295	9.4	1.7	23.97	47	SS
6	US-353	24992	79.2	69.1	65.1	5.26	1.85	2.84	MS	A	4.1	280	7.3	1.38	16.36	85	MS
7	PR-15108	24993	80.1	68.1	63.7	5.13	1.96	2.61	MS	VOC	5.5	235	8.5	1.65	24.17	22	NS
8	SPH-1003	24994	79.6	68.2	65.5	5.49	1.95	2.81	MS	VOC	4.7	180	10.6	1.93	24.5	48	NS
9	SRH-5400	24995	79.9	70.4	68.3	5.35	1.81	2.95	MS	VOC	4.6	300	8.5	1.58	25.52	22	NS
10	KPH-459*	24888	79	69.6	63.5	5.45	1.92	2.83	MS	VOC	4	290	9.6	1.76	24.81	40	NS
11	28P09**	24156	80	69.3	65.6	5.03	1.92	2.61	MS	VOC	5.3	230	8.2	1.63	24.9	43	NS
12	SPH-6159*	24896	78.5	68.7	66.2	5.13	1.83	2.8	MS	VOC	5.5	210	8	1.55	23.67	45	NS
13	PR-14109*	24891	81.3	71.2	64.1	5.15	1.91	2.69	MS	VOC	4.8	285	7.9	1.53	25.69	23	NS
14	HRI-186*	24887	79	68.1	60.6	5.2	1.97	2.63	MS	A	5.5	250	8.1	1.55	23.52	59	NS
15	PR-14111*	24892	80.1	69.5	61.1	5.24	1.9	2.75	MS	VOC	5.5	225	9.4	1.79	26.25	22	NS
16	DRRH-92*	24159	79.9	69.6	65.8	5.26	1.93	2.72	MS	VOC	5.5	200	8.9	1.69	24.14	43	NS
17	PR-14112*	24893	80.2	69.7	64.6	4.99	1.87	2.66	MS	VOC	4.8	250	8.6	1.72	24.34	47	NS
18	TNRH-280	24996	79.1	69.6	64.5	5.56	1.89	2.94	MS	VOC	4.6	250	10	1.79	21.06	23	MS
19	DRRH-3 (NCH)	-	80.1	70.2	67.3	5.26	2	2.63	MS	A	4.2	210	8.1	1.53	24.75	49	NS
20	WGL-14 (NCV)	-	78.7	70	67.6	5.24	1.89	2.77	MS	A	4.6	230	8.6	1.64	24.99	22	NS
21	BPT-5204 (Old NCV)	-	78.8	69.6	65.4	5	1.84	2.71	MS	A	4.8	235	8	1.6	24.34	40	NS

Hull: Hulling (%); Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm);L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; VER: Volume expansion ration; WU: Water uptake (ml); KLAC: Kernel length after cooking (mm); ER: Elongation ratio; AC: Amylose content (%); GC: Gel consistency; MS: Medium slender; VOC: Very occasionally present; A: Absent; NS: No scent; MS: Medium scent; SS: Strong scent;

ADVANCE VARIETY TRIAL 1- BASMATI (AVT 1-BT)

Locations : 8 **Entries : 17**
Checks : Pusa Basmati-1, Pusa Basmati 1121, Taroari Basmati and Local **Table : 4.1**

Advance Variety Trial 1- Basmati (AVT 1-BT) was constituted with 17 entries including 4 checks: Pusa Basmati-1, Pusa Basmati 1121, Taroari Basmati and Local. The trial was organized at 12 locations. The data from all the test locations was received except from Karnal and Modipuram. At Khudwani, none of the entries flowered and so data could not be generated. In general sowings were taken up during first to second fortnight of June followed by transplanting in July at all the test locations. In AVT 1 BT, 4 cultures viz., IET nos. 24596, 24599, 24600, and 24603 were promoted from IVT BT, 2014 for second year of testing. In addition, 7 NIL entries along with their 4 respective recurrent parents were also included in the trial. The conduct of the trial at all the test locations was satisfactory except at Pantnagar where the experimental mean was less than 3000 kg/ha and hence the data from this location was not included in the final analysis. Incidence of brown spot, false smut, glume discoloration and stem borer was reported from Chatha, while at Kaul nursery was badly affected by floods just after sowing. The general information related to the conduct of the trial with highest yielding check as well as test entry at each location is presented in tabular form.

Location	Highest Yielding check		Highest yielding entry	Yield of the entry (kg/ha)	Experimental mean	Yield range (kg/ha)
	Check	Yield (kg/ha)				
IARI,New Delhi	Pusa Sugandh 5	5714 (3)	24577	6218 (1)	4996	2329-6218
Pantnagar@	Pusa Sugandh 5	3388 (1)	24596	3194 (2)	2359	977-3388
Gurdaspur	Pusa Basmati 1121	4802 (3)	24577	5627 (1)	3822	2605-5627
Ludhiana	Pusa Basmati 6	5273 (2)	24575	5595 (1)	4550	1935-5595
Rauni	Pusa Sugandh 5	5886 (1)	24577	5534 (2)	4505	3394-5586
Kapurtala	Pusa Basmati 1121	4255	24577	4945(1)	4088	2661-4945
Kaul	Pusa Sugandh 5	4542 (2)	24577	4750 (1)	3650	2500-4750
Nagina	Pusa Basmati 6	4354	24596	4621(1)	3893	3018-4621
Chatha	Pusa Sugandh 5	4067	24576	4600 (1)	3775	2956-4600

The experimental mean yield across locations varied from 3650 kg/ha at Kaul to 4996 kg/ha at IARI. The mean grain yield of entries ranged from 2708 kg/ha (Taroari basmati) to 5029 kg/ha (IET 24577). Among the checks and recurrent parents of NILs, Pusa Sugandh 5 exhibited superior performance at 4 out of eight locations followed by Pusa Basmati 1121 and Pusa Basmati 6 at two locations each. Among the yield checks- Pusa Basmati 1121 was the best check on overall and in Zone II with 4328 kg/ha. The CV of the experiment varied from 4.02% (Rauni) to 14.73% (Kaul). The mean number of days to 50% flowering among the test entries ranged from 95 days (IET 24599) to 118 (IET 25473). Among the checks- Taroari Basmati, Pusa Basmati 1 and Pusa Basmati 1121 recorded 115, 111 and 110 days to 50% flowering, respectively on over all basis (Table 4.3). Among the test entries, plant height varied from 92 cm (IET 24596) to 117 cm (IET 24565), while Pusa Basmati-1, Pusa Basmati 1121 and Taroari Basmati recorded 108 cm, 113 cm and 143 cm (Table 4.4), respectively. The panicles/m^2 (Table 4.5) varied from 292 (Pusa Sugandh-5) to 370 (IET 24576).

Quality analysis of the entries was done in the quality lab at the Indian Institute of Rice Research, Hyderabad, IARI, New Delhi and NRRI, Cuttack from the samples of the trial conducted at IARI, New Delhi. Complete complement of physico-chemical characteristics consisting of milling, grain and cooking quality features were analyzed (Tables 4.10, 4.11a & 4.11b). There are slight variations in quality parameters estimated at both labs and the mean of both labs is considered in cases where large differences existed and accordingly the performance of entry is judged. Overall acceptability of the test entries was also assessed through panel tests by the panel lists where each entry was scored for cooked rice appearance, cohesiveness, tenderness on touching and chewing, aroma, elongation and overall acceptability (Tables 4.12 to 4.14). The performance of entries promoted from IVT-BT, kharif 2014 and NIL cultures are discussed here under.

IET Nos. 24596, IET 24599, 24600 and IET 24603 which promoted from IVT BT, 2014 were failed to record the required yield advantage over best check during kharif 2015 and hence are discontinued from further testing.

EVALUATION OF NEAR ISOGENIC LINES (NILS) IN AVT 1- BASMATI TRIAL

Seven NIL cultures along with their respective recurrent parents viz., Pusa Basmati 1121, Pusa Basmati 1, Pusa Basmati 6 and Pusa Sugandh 5 were evaluated in Advance Variety Trial 1- Basmati during kharif 2015. All these NIL cultures were nominated by Indian Agricultural Research Institute (IARI), New Delhi and are in the second year of evaluation. All these NILs were evaluated for the target trait based on multi-location testing in NSN-1 in Basmati and non-Basmati locations. The disease reaction of the susceptible check and resistant check as well as the recurrent parent was considered along with LSI in selections of locations (4.15 & 4.16) . However, the data on the disease reaction of the entire test locations were also furnished. Complete complement of physico-chemical quality characteristics consisting of milling, grain and cooking quality features were analyzed. There are slight variations in quality parameters estimated at both labs (IIRR, ICAR) and accordingly the performance of entry is judged. Overall acceptability of the NIL's was also assessed through panel tests at IIRR were conducted in different sets along with the respective recurrent parent and quality checks of the Basmati trial. The detailed description of NIL entries with respect to yield performance, quality and disease reaction as compared with their respective recurrent parents described below:

NIL's of Pusa Basmati 1121 for BLB resistance

IET 24565 (Pusa 1718-14-2-150), a near isogenic line of Pusa Basmati 1121 derived through backcross: PB 1121/SPS 97//PB 1121* 3 was reported to posses bacterial blight resistance (*xa* 13 + *Xa* 21). This culture recorded an average yield of 4289 kg/ha which is on par (-0.9% over RP) to its recurrent parent (4328 kg/ha) during kharif, 2015. Based on two year performance, IET 24565 is slightly taller (113 cm- 2014; 117cm -2015) as compared to its RP- Pusa Basmati 1121(108 cm-2014; 113-2015); and earlier by 2-5 days in flowering (IET 24565: 106 days 2014; 108 days -2015 ; RP-PB 1121: 107 days- 2014; 110 days-2015). With respect to BLB resistance, IET 24565 exhibited resistance reaction consecutively for two years (SI 2.0 -2014; SI 2.3-2015) as against its recurrent parent (SI 7.0- 2014; SI 7.7-2015) in basmati locations and is moderately resistant to BLB in non-basmati locations (SI 4.6-2014; SI 3.4- 2015) as compared to its recurrent parent (SI 7.0-2014; SI 5.7- 2015).

Quality wise, this culture possessed comparable quality characteristics of its recurrent parents in terms of physico-chemical quality analyzed at both labs as well as in the panel test, where IET 24565 ranked 1st at IIRR.

IET 24566 (Pusa 1718-19-8-152), a sister culture of IET 24565, NIL of Pusa Basmati 1121, a backcross derivative of PB1121/SPS 97//PB 1121*3 was evaluated for bacterial blight resistance possessing genes *xa* 13 and *Xa* 21. Field evaluation of IET 24566 for yield performance exhibited on par performance (+4% over RP) with mean grain yield of 4506 kg/ha as compared with its recurrent parent (4328 kg/ha). IET 24566 is slightly taller in plant stature (112 cm-2014, 116 cm-2015; RP-PB 1121: 108 cm-2014; 113cm -2015) and is of comparable flowering duration (IET 24566: 107 days in 2014 & 111 days- 2015; RP-PB 1121: 107 days- 2014; 110 days-2015). For BLB resistance, IET 24566 exhibited SI 2.0 in 2014 & SI 3.7 in 2015 in Basmati locations indicting resistance reaction and SI 4.4 in 2014 & SI 5.5—2015 in non-basmati location with moderate resistance as compared to its recurrent parent where in PB 1121 recorded SI 7.0 2014 & SI of 7.7 in. 2015 in Basmati locations and SI 7.0- 2014 and 5.7 -2015 in non basmati locations. Quality wise, IET 24566 and RP-PB1121 possessed aromatic long grains with physicochemical quality characters comparable with the recurrent parent. Overall cooking quality of NIL ranked 4th at IIRR as compared to RP exhibited flaky appearance with tenderness on touching and chewing, less taste and optimum aroma and very good elongation and good overall acceptability.

Among the NILs of PB 1121, IET 24565 (Pusa 1718-14-2-150) is consistent for the disease and verified for the target trait.

NILs of Pusa Basmati-6 for BLB and Blast resistance

Three NIL's entries of Pusa Basmati-6 as recurrent parent were evaluated during kharif 2015. The performance of these cultures described below:

IET 24573 (Pusa 1728-23-33-31-56), NIL of Pusa Basmati-6 derived from the back cross PB6/Pusa1460/PB6*3 with *Xa 21* and *xa 13* was evaluated for field performance as well as for BLB resistance. IET 24573 recorded mean grain yield of 3987 kg/ha as compared to its recurrent parent with 4062 kg/ha which is on par yield (-1.84% over RP) on overall (Zone-II) during kharif 2015. This culture is slightly taller (103 cm –2014, 104 cm-2015) as compared to its recurrent parent (91 cm-2014, 97 cm-2015) with a flowering duration of 110 days in 2014 and 118 days in 2015 against its recurrent parent (110 days-2014; 116 days-2015). With respect to BLB resistance, IET 24573 exhibited resistance reaction consecutively for two years (SI 2.0-2014 & SI 3.7-2015) in basmati locations and moderate resistance in non-basmati locations (SI 4.7-2014 & SI 4.8-2015), while its recurrent parent showed a susceptible reaction (Basmati locations: SI 6.3-2014 & SI 7.7-2015) and non-basmati locations (SI 6.2-2014 & SI 4.8-2015). State wise, this culture also exhibited superior performance in Delhi (3.25%-2014 & 6.14% -2015) and Haryana (5.75%-2014; 26.4%-2015) over its recurrent parent. Quality wise, this culture is comparable to its recurrent parent. exhibited more cohesiveness in appearance, moderately soft on touching and chewing with good taste and optimum aroma, very good elongation and good overall acceptability ranked 1st at IIRR.

IET 24575 (Pusa 1884-9-12-14), NIL of Pusa Basmati 6 back cross derivative of Pusa 1726/Pusa 1727 was nominated to evaluate blast resistance possessing *Pi*54 and *Pi*2 genes as well as yield performance. This culture recorded mean grain yield of 4048 kg/ha on overall basis, while it's recurrent parent-Pusa Basmati 6 recorded mean yield of 4062 kg/ha. Based on two years evaluation, IET 24575 was earlier by 2-6 days to 50% of flowering (104 days - 2014, 114 days-2015; RP-Pusa Basmati 6: 110 days – 2014, 116 days-2015), taller than its recurrent parent (98cm-2014 & 102 cm-2015; RP-PB 6: 91 cm-2014 & 97 cm-2015). For blast resistance, IET 24575 recorded resistance reaction (SI 3.2-2014, SI 3.5-2015) as compared to its RP-Pusa Basmati 6 (SI 6.2-2014 & SI 6.4 –2015). Quality wise, there are differences in amylose content analyzed at both the labs (IARI and IIRR) consequently for two year (IIRR: 19.82% AC-2014 & 19.91% AC-2015; IARI: 23.0% AC-2014 and 23.7% AC 2015). In addition, these differences in physico-chemical quality as compared to its recurrent parent in terms of GC, KLAC, VER and HRR. In the panel test during kharif 2014, this culture exhibited sticky appearance as compared to its recurrent parent. During 2015, IET 24575 panel test exhibited sticky, moderately soft on touching and chewing, slightly less taste, optimum aroma, god elongation and good overall acceptability.

IET 24576 (Pusa 1884-3-9-17), a sister culture of IET 24575, NIL of Pusa Basmati 6 developed from Pusa 1726/Pusa 1727 with blast resistance possessing *Pi*54 and *Pi*2 was evaluated for target trait, yield as well as quality in comparison to its recurrent parent- PB 6. IET 24576 recorded the mean grain yield of 4510 kg/ha on overall basis (Zone II) with 11.02% yield advantage over its recurrent parent—Pusa Basmati 6 (4062 kg/ha). This culture also exhibited yield superiority (8.4%) over its RP—PB6 during kharif 2014 with a mean grain yield of 4503 kg/ha. IET 24576 was earlier by 6-7 days as compared to its recurrent parent. with respect to blast resistance, IET 24576 recorded resistant reaction (SI 3.0-2014 and SI 3.8-2015) as compared to its recurrent parent-Pusa Basmati 6 (SI 6.2-2014, SI 6.4-2015). Quality wise, there are differences in amylose content and gel consistency for two year of evaluation from both the labs as compared to its recurrent parent. In the panel test, this culture exhibited flaky appearance, moderately soft on touching and chewing, slightly less taste and aroma, good elongation with acceptable category on overall basis as compared to the recurrent parent – Pusa Basmati 6.

Among the two NIL entries of Pusa Basmati 6 possessing similar resistant genes *Pi* 54 and *Pi* 2, IET 24576 has yield advantage over its recurrent parent as well as over its sister NIL culture IET 24575. Further, there are difference in quality for both NIL cultures as compared to its recurrent parent-Pusa Basmati 6. Considering the quality and target trait, NILs have been verified for the target trait and IET 24573 and IET 24575 were promising.

NIL of Pusa Sugandh 5 for Blast and BLB resistance:

IET 24577 (Pusa 1646-10-705), a NIL entry of Pusa Sugandh 5 developed from Pusa 1592/ Pusa 1612 was reported to possess bacterial blight resistance genes (*Xa* 21 and *Xa*13) and blast resistance genes (*Pi* 54 + *Pi* 2) was field evaluated. This culture exhibited 7.61%, 8.97% yield superiority over its recurrent parent with mean grain yield of 5318 kg/ha and 5029 kg/ha during 2014 and 2015 respectively. With respect to plant stature and days to 50% flowering, IET 24577 is comparable to its recurrent parent. For BLB resistance, IET 24577 recorded resistant reaction with SI of 2.3 consecutively during 2014 and 2015 as compared to the recurrent parent-Pusa Sugandh 5 which showed SI of 6.3 and 7.0 respectively during

2014 and 2015 in basmati locations, where as in non-basmati locations, it recorded SI of 3.5 & 5.5 respectively during 2014 and 2015 and its RP-PS 5 showed SI of 6.4 and 6.5 respectively during 2014 and 2015. With respect to blast resistance, IET 24577 exhibited moderate resistance (SI of 3.8 –2014 & SI of 4.4-2015) as compared to its recurrent parent-PS 5 (SI of 5.3-2014& 6.6- 2015). The target trait has been verified. Quality wise, IET 24577 although comparable to its recurrent parent for physic-chemical quality, in the panel test during kharif 2014, this culture exhibited slightly sticky, moderately hard on touching and chewing at both the labs. In the panel test during 2015, IET 24577 appeared sticky, hard on touching and chewing, less taste and inferior in overall acceptability scores as compared to Recurrent parent as well as quality checks.

NILs of Pusa Basmati 1 for Blast resistance:

IET 24570 (Pusa 1637-12-8-20-5), NIL of Pusa Basmati 1 derived by backcrossing Pusa Basmati 1/ IR BL-9-W // Pusa Basmati 1*3 possessing blast resistance (*Pi* 9) recorded 4207 kg/ha grain yield on overall basis with 3.49% yield superiority over RP-PB1 (4065 kg/ha) during kharif 2015. NIL culture- IET 24570 and PB 1 recorded 107 & 109 and 209 & 111 days to 50% flowering respectively during 2014 and 2015. With respect to plant stature, NIL culture is comparable to its recurrent parent- PB1. IET 24570 exhibited resistant reaction with an SI of 2.7(2014) and 2.9 (2015) as compared with its recurrent parent-PB1 which showed SI of 6.1 (2014) and 6.5 (2015). Quality wise, IET 24570 is comparable to its recurrent parent in physico-chemical characteristics at both labs. In the panel test, IET 24570 exhibited flaky appearance, tenderness on touching and chewing, desirable taste and optimum aroma with good elongation and overall acceptability. Based on yield, quality and disease resistance IET 24570 is found promising consecutive for two years of evaluation and the trait has been verified.

Table 4.1: Composition of entries in Advance Variety Trial 1 - Basmati (AVT 1 – BT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination		Grain type
2nd year of testing					
2501	24596	PAU-6297-1	(Bas 370 & Bas 386/ IET 1794811 *2 Bas 370 & Bas 386) Pusa 1121		LS
2502	24600	UPR 3886-9-1-1	UPR 2724-15-1-1/Basmati 370		LS
2503	24565	Pusa 1718-14-2-150	PB 1121 / SPS 97 // PB 1121 *3	Bacterial blight resistance genes: *xa 13* and *Xa 21*	ELS
2504	**Pusa Basmati 1121 (RP) (Q & YC)**				
2505	24566	Pusa 1718-19-8-152	PB 1121 / SPS 97 // PB 1121 *3	Bacterial blight resistance genes: *xa 13* and *Xa 21*	ELS
2506	**Pusa Sugandh-5 (RP)**				
2507	24577	Pusa 1656-10-705	Pusa 1592 / Pusa 1612	Bacterial blight resistance genes: *xa 13* and *Xa 21* and Blast resistance genes: *Pi 54* and *Pi 2*	*ELS*
2508	24599	Pusa 1485-06-8-10-5-15-11	Pusa 1301/ Pusa Basmati 6		ELS
2509	24570	Pusa 1637-12-8-20-5	Pusa Basmati 1 / IRBL 9-W // Pusa Basmati 1*3	Blast Resistance gene: *Pi 9*	*ELS*
2510	**Pusa Basmati -1 (RP) (YC)**				
2511	**Taroari Basmati (QC)**				
2512	24573	Pusa 1728-23-33-31-56	PB 6/ Pusa 1460 / PB 6*3	Bacterial blight resistance genes: *xa 13* and *Xa 21*	*ELS*

Entry No.	IET No.	Designation	Cross Combination		Grain type
2513	24575	Pusa 1884-9-12-14	Pusa 1726 / Pusa 1727	Blast Resistant genes: *Pi 54* and *Pi 2*	*ELS*
2514	**Pusa Basmati - 6 (RP)**				
2515	24576	Pusa 1884-3-9-175	Pusa 1726 / Pusa 1727	Blast Resistance genes: *Pi 54* and *Pi 2*	*ELS*
2516	24603	UPR 3889-7-1-1	Pusa Basmati 1/ IR 36		LS
2517	**Local Check**				

Table No. 4.2: Grain Yield (kg/ha) of entries in AVT 1- BT 2015 Kharif 2015

Entry No.	IET No.	II																	
		ND		UT		PUN		PUN		PUN		PUN		PUN (4)		HAR	
		IAR		@PNT		GDP		LDH		RUN		KPT		Mean		KUL	
2501	24596	4122		3194	2 *	3100		4677	8	4211		4467	3	4114		3083	
2502	24600	4850		1920		3283		5118	4	4288		4620	2	4327	9	3625	
2503	24565	5299	7 ...4%	1513		4676	4	4073		4253		4345	4	4337	8	3625	
2504	Pusa 1121 (Q&Y) ©	5111	9	2502	9	4802	3	4356		4511	7	4255	7	4481	6	3958	5
2505	24566	5238	8 ...2%	2552	7	5459	2 *	4894	5	5028	4 *	3692		4768	2 * 6%	4292	3 ...8%
2506	Pusa Sugandh-5 (RP)	5714	3 ...12%	3388	1 *	4278	5	4478		5886	1 *	4217		4715	3 5%	4542	2 ...15%
2507	24577	6218	1 * ...22%	2995	4 *	5627	1 *	4892	6	5534	2 *	4945	1	5250	1 * 17%	4750	1 ...20%
2508	24599	5611	5 ...10%	2809	5	2605		3820		4090		3526		3510		4125	4 ...4%
2509	24570	5309	6 ...4%	2504	8	3241		4677	9	4106		4289	6	4078		3958	6
2510	Pusa Basmati 1 (YC) ©	4756		2419		3836	8	4789	7	4032		4246	8	4226		3917	7
2511	Taroari Basmati (QC) ©	2329		977		2382		1935		3394		2661		2593		2500	
2512	24573	5060		1652		3386		4602		3850		3851		3922		3792	9
2513	24575	4851		3192	3 *	3426	9	5595	1 *	4390	9	3963		4344	7	2875	
2514	Pusa Basmati - 6 (RP)	4767		1680		3346		5273	2	4607	6	3751		4244		3000	
2515	24576	5762	2 ...13%	1648		3971	7	5169	3	4946	5 *	4138		4556	4 2%	3917	8
2516	24603	4255		2479		4198	6	4445		5039	3 *	4298	5	4495	5	3458	
2517	Local ©	5683	4 ...11%	2687	6	3356		4554		4416	8	4237	9	4141		2625	
	Exp Mean	**4996**		**2359**		**3822**		**4550**		**4505**		**4088**		**4241**		**3650**	
	C.D. 5%	711		431		337		779		302		768		286		894	
	C.V.%	8.56		10.99		5.31		10.29		4.02		11.29		8.35		14.73	
	Sowing Date	16-Jun		05-Jun		18-Jun		18-Jun		09-Jun		13-Jun				08-Jul	
	Planting Date	14-Jul		20-Jul		20-Jul		14-Jul		21-Jul		18-Jul				01-Aug	
	Local ©	Pusa Sugandh 5		Pant Sugandh Dhan 17		Punjab Basmati-3		Punjab Basmati-3		Punjab Basmati-3		Punjab Basmati-3				CSR 30	

* Superior to Q /Y/Q&Y Check % Superior over Q /Y/ Q&Y Check @ not included in means

Contd... Table No. 4.2: Grain Yield (kg/ha) of entries in AVT 1- BT 2015 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (8)		Overall Mean (8)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		U.P.		J&K								
		NGN		CHT								
2501	24596	4621	1 * ...27%	3333		3952		3952		110	92	355
2502	24600	4407	3 * ...21%	3733	8	4241	7	4241	7	110	108	332
2503	24565	3686	...1%	4356	3	4289	6	4289	6	108	117	324
2504	Pusa 1121 (Q&Y) ©	3606		4022	7	4328	5	4328	5	110	113	356
2505	24566	3846	7 ...6%	3600	9	4506	4 4%	4506	4 4%	111	116	327
2506	Pusa Sugandh-5 (RP)	3739	...3%	4067	5	4615	2 * 7%	4615	2 * 7%	100	106	292
2507	24577	4220	5 * ...16%	4044	6	5029	1 * 16%	5029	1 * 16%	101	104	307
2508	24599	4541	2 * ...25%	2956		3909		3909		95	96	309
2509	24570	3873	6 ...7%	4200	4	4207	9	4207	9	109	103	357
2510	Pusa Basmati 1 (YC) ©	3632		3311		4065		4065		111	108	320
2511	Taroari Basmati (QC) ©	3018		3444		2708		2708		115	143	357
2512	24573	3819	8 ...5%	3533		3987		3987		118	104	338
2513	24575	3686	...1%	3600		4048		4048		114	102	343
2514	Pusa Basmati - 6 (RP)	4354	4 * ...20%	3400		4062		4062		116	97	363
2515	24576	3579		4600	1 *	4510	3 4%	4510	3 4%	109	98	370
2516	24603	3766	...4%	4400	2	4232	8	4232	8	112	107	352
2517	Local ©	3793	9 ...4%	3578		4030		4030		103	109	336
	Exp Mean	**3893**		**3775**		**4160**		**4160**		**109**	**107**	**338**
	C.D. 5%	436		544		220		216		1		14
	C.V.%	6.73		8.66		9.29		9.13		1.28		8.02
	Sowing Date	19-Jun		03-Jun								
	Planting Date	20-Jul		12-Jul								
	Local ©	Vallabh Basmati-21		Basmati 564								

* Superior to Q /Y/Q&Y Check % Superior over Q /Y/ Q&Y Check @ not included in means

Table No. 4.3 : Days to 50% Flowering of entries in AVT 1- BT 2015 Kharif 2015

Entry No.	IET No.	II										Zone II Mean (9)	Overall Mean (9)
		ND	UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		IAR	PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2501	24596		113	125	102	112	111	113	90	121	110	110	110
2502	24600	97	112	126	99	114	112	113	90	120	120	110	110
2503	24565	106	113	121	85	112	111	107	91	116	117	108	108
2504	Pusa 1121 (Q&Y) ©	106	114	121	101	112	110	111	91	120	119	110	110
2505	24566	106	115	120	102	112	110	111	91	121	120	111	111
2506	Pusa Sugandh-5 (RP)	94	105	115	89	101	105	102	81	111	100	100	100
2507	24577	95	104	116	89	104	106	104	83	114	101	101	101
2508	24599	83	100	112	84	98	98	98	76	104	95	95	95
2509	24570	102	113	106	102	113	116	109	94	116	118	109	109
2510	Pusa Basmati 1 (YC) ©	102	111	124	103	113	114	114	94	122	117	111	111
2511	Taroari Basmati (QC) ©	114	126	128	107	114	112	115	89	118	126	115	115
2512	24573	113	127	131	108	121	116	119	100	121	126	118	118
2513	24575	108	126	125	102	116	115	115	98	120	120	114	114
2514	Pusa Basmati - 6 (RP)	112	120	128	107	117	116	117	98	121	122	116	116
2515	24576	101	114	121	99	111	110	110	98	114	116	109	109
2516	24603	102	116	128	102	114	115	115	92	120	118	112	112
2517	Local ©	92	112	102	103	110	110	106	92	100	104	103	103
	Exp Mean	**102**	**114**	**121**	**99**	**111**	**111**	**111**	**91**	**116**	**115**	**109**	**109**
	C.D. 5%	3	5	1	2	1	2	1	1	1	1	1	1
	C.V.%	1.99	2.64	0.52	1.00	0.60	0.87	0.80	0.50	0.40	0.56	1.30	1.28

Table No. 4.4 : Plant Height (cm) of entries in AVT 1- BT 2015 Kharif 2015

Entry No.	IET No.	II										Zonal II Mean (9)	Overall Mean (9)
		ND	UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		IAR	PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2501	24596	90	91	94	96	84	92	92	96	89	94	92	92
2502	24600	110	107	105	118	99	106	107	109	97	123	108	108
2503	24565	119	127	132	113	111	113	117	107	106	121	117	117
2504	Pusa 1121 (Q&Y) ©	115	114	120	126	106	105	115	116	99	119	113	113
2505	24566	118	111	132	126	116	112	121	111	104	114	116	116
2506	Pusa Sugandh-5 (RP)	103	112	106	112	107	103	107	103	100	110	106	106
2507	24577	106	98	108	107	96	100	103	106	100	114	104	104
2508	24599	88	95	103	104	94	100	100	98	93	90	96	96
2509	24570	100	116	106	113	94	98	103	101	92	107	103	103
2510	Pusa Basmati 1 (YC) ©	107	125	117	115	96	102	107	107	98	109	108	108
2511	Taroari Basmati (QC) ©	145	143	139	159	133	148	145	137	129	150	143	143
2512	24573	98	106	115	115	93	100	106	102	94	112	104	104
2513	24575	102	111	107	107	94	93	100	111	82	110	102	102
2514	Pusa Basmati - 6 (RP)	95	109	99	105	88	92	96	91	96	99	97	97
2515	24576	91	95	104	103	90	91	97	97	94	114	98	98
2516	24603	102	124	110	111	109	103	108	100	90	115	107	107
2517	Local ©	105	109	104	109	95	98	102	115	106	136	109	109
	Exp Mean	**106**	**111**	**112**	**114**	**100**	**103**	**107**	**106**	**98**	**114**	**107**	**107**

Table No. 4.5: Panicles/ M² of entries in AVT 1- BT 2015 Kharif 2015

Entry No.	IET No.	II										Zonal II Mean (9)	Overall Mean (9)
		ND	UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		IAR	PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2501	24596	515	349	430	337	284	326	344	360	317	275	355	355
2502	24600	500	316	327	323	290	306	311	350	292	289	332	332
2503	24565	559	307	365	246	246	308	291	346	253	285	324	324
2504	Pusa 1121 (Q&Y) ©	554	383	378	332	279	343	333	366	281	285	356	356
2505	24566	537	354	357	264	248	286	289	334	296	271	327	327
2506	Pusa Sugandh-5 (RP)	402	282	325	213	219	304	265	363	254	261	292	292
2507	24577	367	335	360	242	249	306	289	350	278	281	307	307
2508	24599	406	312	318	249	287	310	291	352	275	273	309	309
2509	24570	626	311	390	310	345	310	339	344	288	290	357	357
2510	Pusa Basmati 1 (YC) ©	465	281	372	310	238	343	316	314	270	283	320	320
2511	Taroari Basmati (QC) ©	612	477	342	310	269	301	306	318	302	281	357	357
2512	24573	614	257	360	328	282	321	323	325	280	272	338	338
2513	24575	605	331	310	317	292	323	311	327	287	296	343	343
2514	Pusa Basmati - 6 (RP)	538	392	512	295	296	293	349	372	296	273	363	363
2515	24576	682	332	452	308	280	328	342	365	286	297	370	370
2516	24603	542	406	327	341	289	326	320	363	288	289	352	352
2517	Local ©	416	275	407	328	356	321	353	365	267	287	336	336
	Exp Mean	**526**	**335**	**372**	**297**	**279**	**315**	**316**	**348**	**283**	**282**	**338**	**338**
	C.D. 5%	86	73	67	50	69	37	28	37	16	30	18	14
	C.V.%	9.84	13.04	10.75	10.03	14.75	7.08	10.92	6.42	3.31	6.45	9.68	8.02

Table 4.6: Performance of NIL entries of PB 1121 for BLB resistance in Advance Variety Trial 1- Basmati (AVT 1-BT), *Kharif* 2014 and 2015

Entry No.	IET No/	Year	GY/ FD/	% imp. over RP	State	% over RP	Region	%over RP	Target Gene	SI in Basmati locations	SI in Non-Basmati locations	Over all SI
2507	24565 Pusa 1718-14-2-150	2014	4992 106	11.5 8	DE PU HA UP	6.31 8.78 4.05 27.00	R2 R3	7.43 27.0	Bacterial blight resistance genes: *xa 13* and *Xa 21*	2.0	4.6	3.9
2503	PB 1121 / SPS 97 // PB 1121 *3	2015	4289 108	-0.9	DE	3.6	--	--		2.3	3.4	3.8
2508	24566 Pusa 1718-19-8-152	2014	4748 107	6.12	DE PU HA UP	5.19 2.26 3.03 18.01	R2 R3	2.93 18.02	Bacterial blight resistance genes: *xa 13* and *Xa 21*	2.0	4.4	3.9
2505	PB 1121 / SPS 97 // PB 1121 *3	2015	4506 111	4.0	DE UT PU HA UP	2.4 1.9 6.4 8.4 6.6	--	--		3.7	5.5	5.0
2509	PB 1121	2014	4474 107						Bacterial blight score	7.0	7.0	--
2504		2015	4358 110							7.7	5.7	5.4

Table 4.7: Performance of NIL entries of Pusa Basmati 6 in Advance Variety Trial 1- Basmati (AVT 1-BT), *Kharif* 2014 & 2015

Entry No.	Year	GY/ FD/	% imp. Over RP	State	% over RP	Region	%over RP	Target Gene	SI in Basmati locations	SI in Non-Basmati locations	Overall SI
IET 24573 (Pusa 1728-23-33-31-56) PB 6/ Pusa 1460 / PB 6*3											
2522	2014	4376 110	5.34	DE PU HA	3.25 9.01 5.75	R2 R3	2.60 -1.01	Bacterial blight resistance genes: *xa 13* and *Xa 21*	2.0	4.7	4.2
2512	2015	3987 118	-1.84	DE HA JK	6.14 26.4 3.91	--	--		3.7	4.8	4.2
IET 24575 (Pusa 1884-9-12-14) Pusa 1726 / Pusa 1727											
2525	2014	4740 104	14.11	PU HA UP	12.39 23.57 28.01	R2 R3	9.90 28.01	Blast Resistance genes: *Pi 54* and *Pi 2*	3.2		3.8
2513	2015	4048 114	-0.3	DE UT PU JK	1.76 90.0 2.35 5.88	--	--		3.5		4.1
IET 24576 (Pusa 1884-3-9-175) Pusa 1726 / Pusa 1727											
2526	2014	4503 104	8.40	DE PU HA UP	4.37 2.36 26.17 12.20	R2 R3	7.24 12.21	Blast Resistance genes: *Pi 54* and *Pi 2*	3.0		3.8
2515	2015	4510 109	11.2	DE PU HA JK	20.87 7.35 30.56 35.29	--	--		3.8		4.1
Pusa Basmati 6											
2514	2014	4154 110						BLB	6.3	6.2	5.8
								BLAST	6.2	--	5.1
2514	2015	4062 116						BLB	7.7	4.8	5.2
								BLAST	6.4	--	5.8

Table 4.8: Performance of NIL entries of Pusa Basmati 1 in Advance Variety Trial 1- Basmati (AVT 1-BT), *Kharif* 2014-2015

Entry No.	Year	GY/ FD/	% imp. Over RP	State	% over RP	Region	%over RP	Target Gene	SI in Basmati locations	Overall SI
IET 24570 (Pusa 1637-12-8-20-5) Pusa Basmati 1 / IRBL 9-W // Pusa Basmati 1*3										
2513	2014	4246 107	-0.45	DE	2.44	R2 R3	-1.06 1.40	Blast Resistance gene: *Pi 9*	2.7	3.4
2509	2015	4207 109	3.49	DE UT PU HA JK UP	11.6 3.51 -3.5 1.04 26.8 6.6	--	--		2.9	3.9
Pusa Bas1 (RP)										
2514	2014	4265 108							6.1	3.5
2510	2015	4062 116							6.5	5.8

Table 4.9: Performance of NIL entries of Pusa Sugandh 5 in Advance Variety Trial 1- Basmati (AVT 1-BT), *Kharif* 2014-2015

Entry No.	Year	GY/ FD/	Yield adv (%) over RP	State	% over RP	Region	%over RP	Target Gene	Bacterial blight score			Blast score	
									SI in Basmati locations	SI in Non-Basmati locations	Overall SI	SI in Basmati locations	Overall SI
IET 24577 (Pusa 1656-10-705) Pusa 1592 / Pusa 1612													
2527	2014	5318 101	7.61	DE PU HA	1.45 11.45 23.89	R2 R3	11.52 -3.14	Bacterial blight resistance genes: *xa 13* and *Xa 21* and Blast resistance genes: *Pi 54* and *Pi 2*	2.3	3.5	3.9	3.8	3.8
	2015	5029 101	8.97	DE UT PU HA JK UP	8.82 - 11.59 11.34 4.57 -0.56 12.86				2.3	5.5	5.1	4.4	4.3
2528	PS-5	4942 100							6.3	6.4	5.7	5.3	4.5
		4615 100							7.0	6.5	5.8	6.6	5.5

Table 4.10: Summary of grain quality characteristics of entries in Advance Variety Trial 1- Basmati (AVT 1– BT) conducted at IARI, New Delhi and analyzed at IIRR, Hyderabad kharif 2015

Ent.No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
2501	24596	76.8	67.4	49.1	7.47	1.89	3.95	LS	VOC	5	295	15.3	2.04	7	21.85	26	SS
2502	24600	79.3	69.7	54.6	6.74	1.87	3.6	LS	VOC	4.1	305	13	1.92	7	23.84	22	SS
2503	24565	75.5	65.3	45.7	8.2	1.88	4.36	LS	VOC	4.7	350	17.3	2.1	7	21.5	44	SS
2504	PB1121	77.1	67.4	51.3	8.36	1.81	4.61	LS	VOC	5	340	17.9	2.14	7	21.14	23	SS
2505	24566	77.4	68.1	51.3	8.19	1.96	4.17	LS	OC	4.7	350	16.8	2.05	7	19.21	27	SS
2506	PS 5	78.4	70.1	59.5	7.76	1.84	4.21	LS	VOC	4	300	13.2	1.7	7	21.88	23	SS
2507	24577	78.3	68.3	54	7.9	1.85	4.27	LS	VOC	4.4	310	14.8	1.87	7	21.06	43	SS
2508	24599	75.8	65	44.8	8.07	1.74	4.63	LS	VOC	4.7	310	16.8	2.08	6	20.32	45	SS
2509	24570	77	67.6	44.3	7.04	1.58	4.45	LS	VOC	4.5	345	13.7	1.94	7	22.52	22	SS
2510	PB1	76.7	67.2	52.3	7.15	1.69	4.23	LS	VOC	4.8	345	14.6	2.04	7	23.9	22	SS
2511	TRBAS	76.3	64.5	37.5	6.77	1.75	3.86	LS	A	4.8	180	12.5	1.84	5	23.37	51	SS
2512	24573	75.2	67.6	42.3	7.5	1.7	4.41	LS	VOC	4.5	315	16.1	2.14	7	23.46	22	SS
2513	24575	79	69	47.5	8.15	1.7	4.79	LS	VOC	4.6	380	15.5	1.9	7	19.91	31	SS
2514	PB-6	75.5	61.6	41.7	7.21	1.69	4.26	LS	VOC	4.8	385	16	2.21	7	24.2	22	SS
2515	24576	78.4	69.4	44.7	8.08	1.75	4.61	LS	VOC	5.2	345	15.7	1.94	7	20.12	22	SS
2516	24603	77.8	68.2	50.4	7.25	1.69	4.28	LS	VOC	4.8	340	14.6	2.01	7	22.99	23	SS
2517	LC	78.7	69.7	58.4	7.81	1.81	4.31	LS	VOC	4.5	290	13.4	1.71	7	23.23	27	SS
Acceptable range			**65**	**45**	**>6.61**	**<2.0**	**3.5**	**LS**	**<10%**	**>3.5**	**>250**	**12**	**1.7**		**20-25**	**>40**	**SS/ MS**

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 4.11a: Summary of grain quality characteristics of entries in Advance Variety Trial 1- Basmati (AVT 1– BT) conducted and analyzed at IARI, New Delhi, kharif 2015

Ent.No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
2501	24596	76.5	68.7	57.5	7.60	1.76	4.32	ELS	VOC	5.7	310.0	14.30	1.88	7.0	22.6	54.0	SS
2502	24600	78.0	70.1	62.2	6.70	1.70	3.94	LS	VOC	5.0	357.5	12.10	1.81	7.0	23.2	29.0	SS
2503	24565	73.8	65.2	57.8	8.23	1.70	4.84	ELS	OC	5.5	365.0	18.00	2.19	7.0	22.8	49.0	SS
2504	PB1121	72.5	64.2	57.1	8.15	1.76	4.63	ELS	VOC	5.5	345.0	17.50	2.15	7.0	23.7	41.0	SS
2505	24566	75.2	68.7	58.8	8.13	1.66	4.90	ELS	VOC	4.7	365.0	17.90	2.20	7.0	21.2	50.0	SS
2506	PS 5	77.1	70.2	58.5	7.70	1.70	4.53	ELS	VOC	4.7	316.2	13.25	1.72	7.0	24.3	40.0	SS
2507	24577	77.5	70.8	59.2	7.66	1.66	4.61	ELS	VOC	4.3	267.5	14.20	1.85	7.0	23.8	42.0	SS
2508	24599	72.3	64.4	51.5	8.40	1.70	4.94	ELS	VOC	5.5	252.5	16.30	1.94	7.0	22.3	45.0	SS
2509	24570	72.5	65.5	55.8	7.35	1.66	4.43	LS	VOC	4.6	355.0	14.30	1.95	7.0	23.8	24.5	SS
2510	PB1	72.9	65.4	57.0	7.30	1.66	4.40	LS	VOC	4.7	385.0	14.40	1.97	7.0	23.6	27.0	MS
2511	TRBAS	71.2	64.1	43.3	6.76	1.60	4.23	LS	VOC	5.3	117.5	13.80	2.04	5.0	24.3	56.0	SS
2512	24573	73.6	64.8	51.5	7.50	1.66	4.52	LS	VOC	4.7	357.5	14.80	1.97	7.0	23.9	21.0	SS
2513	24575	75.1	68.1	51.0	7.90	1.66	4.76	ELS	VOC	6.0	417.5	15.70	1.99	7.0	24.9	40.0	SS
2514	PB-6	72.9	64.7	53.1	7.43	1.66	4.48	LS	VOC	5.2	360.0	15.60	2.10	7.0	24.8	22.0	SS
2515	24576	74.5	66.3	51.3	7.76	1.70	4.56	ELS	VOC	6.2	387.5	15.65	2.02	7.0	23.8	58.0	SS
2516	24603	72.7	65.6	51.9	7.33	1.66	4.42	LS	VOC	5.0	377.5	13.91	1.90	7.0	23.9	26.0	SS
2517	LC	77.0	69.8	59.1	7.60	1.73	4.39	ELS	VOC	5.0	312.5	13.10	1.72	7.0	24.2	51.0	SS
Acceptable range			**65**	**45**	**>6.61**	**<2.0**	**3.5**	**LS**	**<10%**	**>3.5**	**>250**	**12**	**1.7**		**20-25**	**>40**	**SS/ MS**

Table 4.11b: Summary of grain quality characteristics of entries in Advance Variety Trial 1- Basmati (AVT 1– BT) conducted at IARI, New Delhi and analyzed at NRRI, Cuttack, kharif 2015

Entry No.	IET No.	Hull %	Mill %	HRR %	KL	KB	L/B	ASV	VER	KLAC	ER	AC %	WU
2501	24596	77.00	64.77	49.82	6.68	1.75	3.82	7.00	4.50	10.40	1.56	18.90	175.00
2502	24600	77.00	67.97	58.76	6.56	1.64	4.00	7.00	4.75	11.20	1.71	19.42	260.00
2503	24565	78.00	65.44	56.64	7.67	1.74	4.41	7.00	4.75	12.70	1.66	19.90	265.00
2504	Pusa Basmati 1121	76.56	65.76	56.07	7.40	1.66	4.46	7.00	5.25	12.20	1.65	18.90	105.00
2505	24566	77.00	65.01	56.61	7.52	1.76	4.27	7.00	5.25	11.90	1.58	18.60	255.00
2506	Pusa Sugandh-5	78.50	69.25	59.91	7.20	1.67	4.31	7.00	4.75	10.70	1.49	19.05	200.00
2507	24577	77.50	67.33	59.64	7.48	1.71	4.37	7.00	4.50	10.80	1.44	19.07	240.00
2508	24599	77.50	69.97	58.10	7.59	1.66	4.57	7.00	4.50	12.20	1.61	18.02	100.00
2509	24570	77.00	63.50	55.84	6.54	1.43	4.57	6.00	5.00	11.40	1.74	19.57	300.00
2510	Pusa Basmati -1	76.00	65.89	58.67	6.55	1.47	4.46	7.00	5.00	12.00	1.83	18.82	295.00
2511	Taroari Basmati	76.00	64.37	54.32	6.67	1.53	4.36	5.00	4.50	10.90	1.63	18.62	70.00
2512	24573	76.00	64.89	57.05	7.00	1.56	4.49	7.00	4.75	11.20	1.60	19.87	325.00
2513	24575	77.00	65.26	55.91	7.50	1.51	4.97	7.00	5.25	12.60	1.68	18.45	335.00
2514	Pusa Basmati - 6	77.50	64.92	56.02	7.00	1.54	4.55	7.00	5.25	11.40	1.63	20.17	285.00
2515	24576	77.80	66.65	56.16	7.21	1.49	4.84	7.00	5.25	12.30	1.71	18.45	275.00
2516	24603	76.00	65.90	54.91	6.46	1.47	4.39	7.00	5.00	11.90	1.84	21.07	320.00
2517	LC	78.50	67.81	58.03	7.00	1.63	4.29	7.00	5.00	11.90	1.70	19.35	255.00

Table 4.12: Panel test scores of NILs of Pusa Basmati 1121 & Pusa Basmati 1 in Advanced Variety Trial -Basmati (AVT 1-BT), IIRR Hyderabad *Kharif* 2015

Entry No	IET No	Appearance	Cohesiveness	Tenderness on		Taste	Aroma	Elongation	Overall Acceptability	Mean	Rank
				Touching	chewing						
2503	24565	4.75	4.50	4.83	4.66	4.33	3.83	4.50	3.83	4.40	I
2505	24566	4.75	4.00	4.66	4.50	4.16	3.75	4.33	3.41	4.19	IV
2509	24570	4.41	4.58	4.66	4.50	4.16	3.66	3.91	3.25	4.14	VI
2510	PB1	4.83	4.50	4.75	4.66	4.25	3.75	4.16	3.83	4.34	II
2511	T.R. Bas	4.75	4.66	4.33	4.33	4.00	3.83	3.66	3.75	4.16	V
2504	PB 1121	4.75	4.33	4.41	4.16	4.16	4.16	4.58	4.00	4.31	III
--	BPT 5204	4.91	4.58	4.16	4.00	3.58	1.58	2.16	2.41	3.42	VII
	Range	4.0-4.9 Creamish white 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4.0 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9 No scent	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable		

Table 4.13 : Panel test scores of NILs of Pusa Basmati 6 and Pusa Sugandh 5 in Advanced Variety Trial -Basmati (AVT 1-BT), IIRR Hyderabad *Kharif* 2015

Entry No	IET No.	Appearance	Cohesiveness	Tenderness on		Taste	Aroma	Elongation	Overall Acceptability	Mean	RANK
				Touching	chewing						
2512	24573	4.00	4.83	4.50	4.50	4.00	3.83	4.33	3.75	4.21	I
2513	24575	5.00	4.00	4.33	4.58	3.25	3.33	3.66	3.08	3.90	VI
2515	24576	3.66	4.41	4.25	4.33	2.91	2.91	3.25	2.66	3.54	VII
2507	24577	4.50	4.08	4.08	3.83	2.75	3.08	2.83	1.91	3.38	IX
2514	PB 6	4.91	4.25	4.58	4.50	3.50	3.16	3.91	3.25	4.00	III
2506	PS 5	4.00	4.00	4.08	3.91	2.83	3.08	2.83	2.16	3.36	X
2510	PB-1	4.33	4.41	4.41	4.41	3.50	3.41	3.66	3.25	3.92	V
2511	T.R.Bas	4.91	4.66	4.33	4.41	3.66	3.16	3.33	3.00	3.93	IV
2504	PB1121	4.16	4.41	4.58	4.66	3.83	3.91	4.41	3.91	4.10	II
	BPT 5204	4.33	4.75	4.16	4.08	3.66	1.58	2.16	2.50	3.40	VIII
	Range	4.0-4.9 Creamish white 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4.0 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9 No scent	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable		

Table 4.14 : Panel test scores of entries in Advanced Variety Trial -Basmati (AVT 1-BT), IARI, New Delhi *Kharif* 2015

Entry No	IET NO	Appearance	Cohesiveness	Tenderness on		Taste	Aroma	Elongation	Overall Acceptability
				Touching	Chewing				
2501	24596	4.5	4.3	3.8	3.5	3.8	3.5	3.3	3.0
2502	24600	4.5	3.5	3.0	3.3	3.3	3.0	1.8	1.5
2503	24565	4.5	4.3	4.5	5.0	4.7	4.0	4.8	4.4
2504	PB1121	4.5	4.3	4.3	4.5	4.7	3.7	4.7	4.2
2505	24566	5.0	4.2	4.5	4.8	4.7	3.8	4.7	4.3
2506	P S 5	4.3	4.3	3.7	3.7	3.8	3.5	3.4	3.7
2507	24577	4.8	3.8	4.0	4.0	3.8	3.5	3.5	3.8
2508	24599	4.5	4.3	4.4	4.5	4.3	4.0	4.2	4.2
2509	24570	4.3	4.6	4.5	4.3	4.0	3.8	4.0	4.3
2510	PB1	4.3	4.4	4.5	4.3	3.8	3.5	3.8	4.0
2511	TRBAS	4.8	4.5	4.8	4.3	4.0	4.0	3.8	4.0
2512	24573	4.5	4.5	4.8	4.8	4.3	4.1	4.2	4.3
2513	24575	4.3	4.5	4.8	4.8	4.3	4.2	4.1	4.3
2514	PB-6	4.2	4.5	4.8	4.8	4.2	4.2	4.2	4.2
2515	24576	4.5	4.4	4.5	4.8	4.3	4.0	4.3	4.3
2516	24603	4.5	3.0	4.3	4.3	3.3	3.3	3.5	3.5
2517	LC	4.2	4.3	3.8	3.8	3.8	3.6	3.2	3.7

Table 4.15: Reaction of NILs of Basmati against Bacterial blight resistance at multiple locations under NSN1 in AVT 1 BT, Kharif, 2014 & 2015

Year	Entry No	IET No	Basmati locations considered- BLB				Non Basmati locations considered for trait verification- BLB												
			PNT	KUL	LUD	SI	MTU	DRR	ADT	CRR	NVS	PTB	NWG	FZB	CHP	TTB	KJT	NLR	RPR	SI
2014	2507	24565	0	3	3	**2.0**	9	1	0	3	7	5	9	5	5	5	3	7	1	**4.6**
2015	2503		1	3	3	**2.3**	7	3	-	3	3	3	1	5	-	3	-	3	3	**3.4**
2014	2508	24566	0	3	3	**2.0**	7	1	1	3	7	7	5	5	5	5	3	5	3	**4.4**
2015	2505		1	3	7	**3.7**	5	3	-	7	7	7	3	7	9	3	-	5	5	**5.5**
2014	2509	PB	-	-	7	**7.0**	9	9	7	7	-	7	5	7	-	5	-	-	7	**7.0**
2015	2504	1121	7	9	7	**7.7**	7	1	-	9	9	7	3	7	7	3	1	5	9	**5.7**
2014	2513	24570	9	7	7	**7.7**	9	9	3	7	7	7	5	3	5	5	5	7	7	**6.1**
2015	2509		9	9	7	**8.3**	7	9	-	7	7	7	5	7	7	9	1	7	9	**6.8**
2014	2514	PB 1	7	-	7	**7.0**	9	9	5	7	-	9	7	7	5	-	-	-	7	**7.2**
2015	2510		9	9	7	**8.3**	7	7	-	7	7	5	1	5	7	3	3	7	9	**5.7**
2014	2522	24573	0	3	3	**2.0**	7	1	5	3	9	5	5	5	7	5	3	5	1	**4.7**
2015	2512		5	3	3	**3.7**	7	1	-	9	7	3	3	7	7	1	1	7	5	**4.8**
2014	2524	PB 6	9	7	3	**6.3**	7	9	1	9	7	7	7	5	7	5	5	5	7	**6.2**
2015	2514		9	7	7	**7.7**	7	1	-	7	5	7	1	5	7	3	1	5	9	**4.8**
2014	2525	24575	5	5	7	**5.7**	7	3	7	3	7	9	5	7	7	5	5	3	5	**5.6**
2015	2513		5	5	7	**5.7**	7	1	-	3	7	7	5	7	9	5	-	5	7	**5.7**
2014	2526	24576	3	7	3	**4.3**	9	3	7	5	9	9	5	7	5	5	3	3	3	**5.6**
2015	2515		7	7	7	**7.0**	7	5	-	9	7	5	5	7	9	5	1	5	7	**6.0**
2014	2527	24577	1	3	3	**2.3**	3	1	0	3	5	7	7	3	5	5	3	3	1	**3.5**
2015	2504		1	3	3	**2.3**	7	1	-	9	7	7	7	3	7	5	1	7	5	**5.5**
2014	2528	PS 5	9	7	3	**6.3**	7	9	9	7	7	7	7	5	5	5	5	5	5	**6.4**
2015	2506		7	-	7	**7.0**	9	7	-	9	7	5	3	3	9	7	1	9	9	**6.5**
2014	T(N)1		9	9	7	**8.3**	9	9	9	7	7	9	7	9	7	5	5	5	7	**7.3**
2015			9	9	7	**8.3**	9	9	-	9	7	7	7	9	9	7	5	7	9	**7.8**
2014	RP-Bio- 226		1	3	3	**2.3**	7	1	1	-	7	7	5	3	7	5	5	5	3	**4.7**
2015			3	3	3	**3.0**	5	3	-	5	7	7	3	3	7	3	1	5	3	**4.3**
2014	**LSI**		**7.0**	**6.5**	**5.6**		**8.1**	**6.9**	**6.8**	**5.1**	**6.3**	**6.2**	**5.9**	**5.6**	**5.8**	**6.1**	**4.8**	**4.7**	**5.0**	
2015			**7.5**	**7.3**	**5.7**		**7.0**	**7.1**	**-**	**7.9**	**5.8**	**5.6**	**4.1**	**5.4**	**4.6**	**4.2**	**1.8**	**4.8**	**7.2**	

Table 4.15 contd.: Reaction of NILs of Basmati against Bacterial blight resistance at multiple locations under NSN1 in AVT 1 BT, Kharif, 2014 & 2015

Year	Entry No	IET No	Locations not considered for trait verification – BLB											
			PBL	CHT	GRO	RNR	MCP	GGV	KRK	CHN	JGL	PTN	USG	overall SI
2014	2507	24565	5	3	5	5	1	5	2					**3.9**
2015	2503		5	9	5	-	1	9	5	**3**	**1**	**5**	**-**	**3.8**
2014	2508	24566	5	5	1	5	1	9	1	**3**	**3**	**6**	**-**	**3.9**
2015	2505		5	9	5	-	1	7	5					**5.0**
2014	2509	PB 1121	9		5	3	7	9						**--**
2015	2504		5	7	5	-	1	7	3	**3**	**3**	**6**	**5**	**5.4**
2014	2513	24570	9	5	3	3	1	7	1					**5.6**
2015	2509		9	5	5	-	1	5	0	**1**	**1**	**9**	**-**	**5.6**
2014	2514	PB 1	7		1	1	0	7						**--**
2015	2510		7	5	7	-	1	9	1	**3**	**1**	**7**	**-**	**5.5**
2014	2522	24573	7	5	3	5	3	-	-					**4.2**
2015	2512		3	3	5	-	1	3	3	**3**	**1**	**9**	**6**	**4.2**
2014	2524	PB 6	9	5	5	7	0	7	2					**5.8**
2015	2514		9	7	-	-	1	5	1	**3**	**5**	**8**	**6**	**5.2**
2014	2525	24575	-	7	3	5	1	9	1					**5.2**
2015	2513		7	9	-	-	1	5	3	**3**	**1**	**0**	**-**	**4.9**
2014	2526	24576	-	3	5	5	1	9	2					**4.9**
2015	2512		7	9	7	-	1	7	0	**1**	**3**	**7**	**5**	**5.5**
2014	2527	24577	9	7	5	5	0	7	2					**3.9**
2015	2507		5	7	7	-	3	9	3	**3**	**3**	**8**	**6**	**5.1**
2014	2528	PS 5	9	5	3	3	3	7	2					**5.7**
2015	2506		5	5	7	-	3	9	0	**3**	**3**	**8**	**-**	**5.8**
2014	T(N)1		-	1	5	3	1	7	2					**6.2**
2015			5	3	7	-	3	9	7	**5**	**5**	**8**	**-**	**7.0**
2014	RP-Bio- 226		9	1	5	3	1	5	1					**4.0**
2015			7	3	7	-	1	3	7	**1**	**-**	**0**	**-**	**4.0**
2014	**LSI**		**6.01**	**4.28**	**4.28**	**3.00**	**2.88**	**6.48**	**1.75**	**--**	**--**	**--**	**--**	
2015			**5.8**	**4.6**	**5.9**	**--**	**2.1**	**6.1**	**2.8**	**2.9**	**2.5**	**5.9**	**5.2**	

Table 4.16 : Reaction of NILs of Basmati against blast resistance at multiple locations under NSN1 in AVT 1 BT, Kharif, 2014 & 2015

YEAR	Entry No.	IET No	Locations considered for trait verification -Blast									
			MLN	LNV	DRR	NLR	PTB	MTU	GDL	JDL	HZB	SI
2014	2507	24565	9	8	6	4	7	3	6	1	5	**5.4**
2015	2503		9	8	5	4	8		5	7	7	**6.6**
2014	2508	24566	9	8	9	4	7	3	6	1	6	**5.9**
2015	2505		9	6	5	4	8		7	8	6	**6.6**
2014	2509	PB11211	9	9	3	5	7	3	6	5	-	**5.9**
2015	2504		9	8	3	5	9		7	8	6	**6.9**
2014	2513	24570	1	3	4	4	4	3	4	1	0	**2.7**
2015	2509		1	3	5	5	2		3	4	0	**2.9**
2014	2514	PB 1	9	8	6	3	8	3	7	4	7	**6.1**
2015	2510		9	6	5	4	9		4	8	7	**6.5**
2014	2522	24573	9	8	5	4	7	4	7	2	5	**5.7**
2015	2512		9	7	5	4	8		3	9	7	**6.5**
2014	2524	PB 6 (RP)	9	7	7	4	8	3	9	2	7	**6.2**
2015	2514		9	8	5	3	8		4	8	6	**6.4**
2014	2525	24575	3	7	4	3	4	2	5	1	0	**3.2**
2015	2513		5	5	3	4	4		3	4	0	**3.5**
2014	2526	24576	3	6	3	2	4	3	5	1	0	**3.0**
2015	2515		5	6	5	4	3		3	4	0	**3.8**
2014	2527	24577	3	8	3	3	4	3	5	1	4	**3.8**
2015	2507		3	9	4	5	4		3	7	0	**4.4**
2014	2528	PS 5 (RP)	9	7	4	7	4	3	4	4	6	**5.3**
2015	2506		8	7	7	4	4		5	9	9	**6.6**
2014	HR-12		9	9	9	8	7	7	9	5	8	**7.9**
2015			9	8	9	7	9		9	9	8	**8.5**
2014	IR-64		6	5	5	7	4	3	5	2	4	**4.6**
2015			1	5	3	4	3		3	4	0	**2.9**
2014	T(N1)		9	7	8	9	6	7	3	3	5	**6.3**
2015			8	9	7	6	4		3	9	8	**6.8**
2014	Tetep		2	6	3	3	4	5	3	3	5	**3.8**
2015			1	3	1	5	2		3	4	0	**3.3**
2014	LSI		**5.4**	**5.6**	**5.3**	**4.7**	**4.2**	**4.6**	**3.5**	**2.7**	**2.5**	
2015			**5.8**	**6.2**	**4.8**	**4.8**	**3.6**	**--**	**3.9**	**6.9**	**5.0**	

Table 4.16 contd.. : Reaction of NILs of Basmati against blast resistance at multiple locations under NSN1 in AVT 1 BT, Kharif, 2014 & 2015

	Entry No.	IET No 2014	Locations not considered for trait verification- Blast																	Over all SI
			REW	RNC	GGT	PNP	RNR	MGD	GGV	MDY	NVS	CBT	WBL	USH	KJT	TRR	ALM	JGL	KRK	UMM	
2014	2507	24565	3	5	7	5	7	3	2	3	3	3	3	4	5	0					**4.4**
2015	2503		4		5	9		5	2	5	0		5	7	7	0	5	3	3	8	**5.2**
2014	2508	24566	5	5	7	5	3	4	2	3	5	3	3	4	5	3					**4.9**
2015	2505		6		7	9		4	2	7	1		6	7	8	0	7	5	0	8	**5.7**
2014	2509	PB112	5	5	5	7	0		1	5		2	6		5	3					**4.0**
2015	2504	11	4		7	9		3	2	7	0		5	7	8	0	7	3	3	3	**5.4**
2014	2513	24570	4	2	9	6	3	4	3	3	3	2	4	1	6	0					**3.4**
2015	2509		5		7	9		3	3	9	3		5	7	7	0	5	-	0	2	**3.9**
2014	2514	PB 1	3	5	5	4	3		2	3		2	4		5	3					**3.5**
2015	2510		6		7	9		4	3	9	2		6	4	8	0	9	3	2	9	**5.8**
2014	2522	24573	7	5	7	7	3	4	-	3	3	2	5	7	6	3					**5.0**
2015	2512		5		7	9		3	4	9	3		5	7	8	0	9	-	2	7	**6.0**
2014	2524	PB 6	7	7	7	5	5	4	2	5	3	3	5	3	2	3					**5.1**
2015	2514	(RP)	6		7	9		3	3	7	3		4	8	7	0	9	3	2	9	**5.8**
2014	2525	24575	6	6	5	5	0	6	3	3	3	3	4	3	5	3					**3.8**
2015	2513		4		7	8		3	5	7	3		5	8	7	0	3	-	0	5	**4.1**
2014	2526	24576	5	3	5	4	1	8	4	3	1	6	4	3	6	3					**3.8**
2015	2515		5		6	9		2	3	5	1		5	7	7	0	3	3	3	7	**4.1**
2014	2527	24577	6	4	5	4	1	6	3	3	3	2	3	2	5	3					**3.8**
2015	2507		4		7	8		4	3	6	4		4	7	7	0	3	3	3	3	**4.3**
2014	2528	PS 5	6	5	5	4	3	4	2	3	5	3	3	2	5	3					**4.5**
2015	2506	(RP)	5		7	9		3	2	7	3		-	7	7	1	7	3	0	5	**5.5**
2014	HR-12		5	5	5	4	5	4	5	3	5	2	4	9	6	3					**5.9**
2015			7		5	8		7	4	9	3		7	7	8	0	6	3	0	8	**6.6**
2014	IR-64		2	4	5	5	7	7	4	3	1	2	4	9	6	3					**4.6**
2015			3		7	8		3	2	4	1		4	6	8	0	5	-	0	4	**3.6**
2014	T(N1)		4	5	5	4	5	4	3	3	3	2	5	3	1	3					**4.6**
2015			3		7	9		3	2	9	5		6	6	7	1	5	-	3	5	**5.7**
2014	Tetep		4	4	5	6	3	4	2	3	5	3	5	8	2	0					**3.9**
2015			2	--	7	8	--	3	2	6	3	-	5	8	8	1	5	-	0	1	**3.8**
2014	LSI		**3.9**	**4.2**	**5.3**	**5.1**	**3.7**	**4.7**	**3.5**	**3.3**	**3.2**	**3.0**	**4.4**	**4.2**	**4.7**	**2.0**	--	--	--	--	
2015			**4.0**	**--**	**5.9**	**8.4**	**--**	**3.5**	**2.4**	**6.5**	**2.9**	**--**	**4.6**	**6.8**	**7.0**	**0.4**	**5.2**	**3.2**	**1.6**	**5.2**	

INITIAL VARIETY TRIAL BASMATI (IVT-BT)

Locations: 9 **Entries: 35**

Checks: Pusa Basmati-1(Yield check), Pusa Basmati 1121 (Quality and Yield check), Taroari Basmati (Quality Check), Pusa RH 10 (Hybrid Check) and Local. **Table: 4.17**

Initial variety trial-Basmati (IVT-BT) with 35 entries consisted of 30 test cultures including two hybrid entries and 5 checks. The trial was organised at 12 locations in North Western Region of Zone II comprising 6 traditional basmati growing states of Delhi, Uttarakhand, Punjab, Haryana, Uttar Pradesh and Jammu & Kashmir. Data from Khudwani, Karnal and Modipuram was not received. Hence data from 9 locations data was analyzed. Sowing was taken up during first to second fortnight of June followed by transplanting in July at all the test locations.. The conduct of the trial at all locations was satisfactory. However at Chatha some of the entries viz., IET 25393, IET 25400 and IET 25406 did not flower and incidence of brown spot, false smut, glume discoloration and stem borer was reported. The net plot size across locations varied from 6.58 sq.m to 10 sq.m. The general information relating to the conduct of trial with highest yielding check and test entry at each location is presented in tabular form.

General information regarding the conduct of trial – Initial Variety Trial- Basmati (IVT-BT) kharif, 2015

Location	Highest yielding check		Test Entry (IET No.)	Yield kg/ha	Experimental mean (kg/ha)	Yield range kg/ha
	Check	Yield kg/ha				
IARI, New Delhi	Pusa RH 10	7153	25417	7791 (1)	5900	2545-7791
Pantnagar	Pusa Basmati 1121	7948 (1)	25407	6926 (2)	5241	3141-7948
Gurdaspur	Pusa RH 10	5399	25397	6579 (1)	4397	1180-6579
Ludhiana	Pusa RH 10	6023	25412	6745 (1)	4669	1527-6745
Rauni	Pusa RH 10	3640	25394	4358 (1)	3247	1933-4358
Kapurtala	Pusa RH 10	4756	25394	5789 (1)	3809	1312-5789
Kaul	Pusa Basmati 1121	4450	25394	6200 (1)	4024	2600-6200
Nagina	Pusa RH 10 (1)	6641(1)	25392	6510 (2)	5229	2344-6641
Chatha	Pusa Basmati 1121 (1)	4600(1)	25396	4350 (2)	3305	2650-4600

The experimental mean yield across locations varied from 3247 kg/ha (Rauni) to 5900 kg/ha (New Delhi). The mean yield of the test entries ranged from 2673 kg/ha (Taroari Basmati) to 5491 kg/ha (IET 25417). Among the checks, Pusa RH 10 exhibited superior performance at 6 out of 9 locations followed by Pusa Basmati 1121 at remaining 3 locations. Among the yield checks, Pusa Basmati 1121 was the best check on overall basis & zone wise (Zone II) and state wise performance. Pusa Basmati 1121 exhibited superior performance at 7 of 9 locations among the yield checks, with yield of 4197 kg/ha. Overall zone wise performance as well as state wise performance of the promising cultures is presented in Table 4.22. The CV (%) of the experiments across locations varied from 6.79 (Nagina) to 15.41 (Kapurthala). The mean days to 50% flowering (Table 4.19) among the test entries varied from 91 (IET 25392) to 128 (IET 25403). The mean plant height varied from 99 cm (Pusa RH 10) to 136 cm (Taroari Basmati) among the checks (Table 4.20) while among the test entries, it varied from 87 cm (IET 25395) to 131 cm (IET 25406). The mean number of panicles/m^2 (Table 4.21) ranged from 277 (Pusa RH 10) to 344 (IET 25405).

Quality analysis of the entries was done in the quality lab at the Indian Institute of Rice Research (IIRR), Hyderabad, IARI, New Delhi and NRRI, Cuttack from the samples of

the trial conducted at IARI, New Delhi. Complete physico-chemical characteristics consisting of milling, grain and cooking quality features were analyzed (Table 4.23, 4.24, & 4.25). Overall acceptability of the test entries was also assessed through panel tests by the panel lists where each entry was scored for cooked rice appearance, cohesiveness, tenderness on touching and chewing, aroma, elongation and overall acceptability (Tables 4.26& 4.27) **The norm for promotion/recommendation of the entries in this trial are desirable basmati quality traits on par or better than the quality checks combining 5% yield superiority over best yield check.**

Monitoring of the test entries during crop growth stage in field experimentation across zone of this trial indicated that 3 (IET 25406 (2622), IET 25413 (2630) and IET 25415) out of 35 entries were found to be non-uniform either due to mixtures or segregation for grain type and other plant characteristics. The analysis results across locations revealed that out of 30 test entries, 27 entries failed to record yield superiority over best check Pusa Basmati 1121. In addition to inferior yield performance, only seven entries qualified minimum quality standards of Basmati indicating poor growth in breeding basmati rices. The entries which did not possess the required yield advantage *per se* over best check or were lacking in some important quality parameters or both are listed below and are discontinued from further testing

Trait	**IET No**
Poor Yield	
25390, 25391, 25392, 25393, 25395, 25396, 25397, 25398, 25399, 25400, 25401, 25402, 25403, 24602, 25404, 25405, 25406, 25408, 25409, 25410, 25411, 25412, 25413, 25414, 25415, 25416 and 25418.	
Non- uniformity	25406, 25413 and 25415
Poor Yield, Low milling recovery, Poor KLAC, Poor ER	25392
Poor Yield, Poor KL, Poor KL AC, Poor ER, undesirable ASV	25393
Poor KL, Low L/B ratio, poor KLAC and poor ER	25394
Poor Yield and low AC	25390, 25395, 25399, 25401, 25404, 25406
Poor Yield, Poor KL, Low L/B ratio, Poor KLAC, Poor ER, High AC and hard GC	25397
Poor Yield, Poor KLAC, Low AC	25398
Poor Yield, Low KL, Low L/B ratio, Poor KLAC	25403
Poor Yield, High AC, poor ER	24602
Poor ER	25407
Poor Yield, Poor KL, poor KLAC, poor ER and Low AC	25409
Poor Yield, poor ER, high AC and hard GC	25410
Poor Yield, more Kernel breadth and Low AC	25411
Poor Yield, Low KL, more kernel breadth, Low L/B ratio, poor KLAC, poor ER and undesirable ASV	25412
Poor Yield, Low KL, more kernel breadth, and Low L/B ratio	25413
Poor Yield, Low KLAC, poor ER	25414
Poor Yield, poor KLAC, Poor ER and high AC	25416
Poor cooking quality in Panel test	IET 25417, IET 25394

Among the remaining 3 test entries IET 25417, IET 25394 and IET 25407 recorded the required yield superiority over the best check. The performance of the remaining one culture is described below.

Table 4.22 : Overall Performance and regional of promising entries in Initial Variety Trial – Basmati (IVT –BT), kharif, 2015

Entry No.	IET No./ Designation/ Cross combination	GY / FD	Yield adv. (%) over (BC)/ (HC)	Significant superior to checks	Performance, rank, % Increase over best check			Remarks
				BC (*) HC (#)	State	% over BC	% over HC	
2634	25417 (NPH 2005) NPS 2003A/NPS 2117	5491(1) 101	12.0 7.0	#PNT 6571(3) *LDH 6502 (2) *KPT 5692(2)	DE UT PU HA JK UP	14 -- 37 9 -- --	9.0 23.0 5.0 17.0 -- --	Poor cooking quality in the panel test
2623	25407 (HUBR 16) Taroari Basmati dwarf mutant-2/Pusa Basmati 1121	5194(3) 108	6.0 1.0	#PNT 6926(2) *GDP 5794(3) *LDH 5807(7)	DE UT PU HA JK UP	-- -- 30 -- -- --	-- 30.0 -- -- -- --	Poor cooking quality in the panel test
2606	Pusa Basmati 1 (YC)	4285 114						
2611	Taroari Basmati (QC)	2673 119						
2620	Pusa Basmati 1121 (Q&YC)	4917 114						
2626	Pusa RH 10	5123 99						
2616	Local check (LC)	4578 105						

IET 25417 (NPH 2005) , hybrid culture with parentage of NPS 2003A/NPS 2117 ranked first among all the test culture with a mean yield of 5491 kg /ha (1st) and recorded 101 days to 50% flowering and is of semi dwarf plant stature (100 cm) on overall basis(Zone II). Quality wise, IET 25407 with aromatic long slender grains, although fulfilled the minimum physico-chemical quality specifications prescribed but failed in the panel test. IET 25417 in the panel test appeared sticky, hard on touching and chewing with moderate elongation and breadth wise swelling and undesirable overall acceptability scores (1.91-IIRR & 1.8- IARI) at both labs ranked VI at IIRR with inferior cooking quality as compared to any of the quality checks of basmati (PB1: 3.83, T.bas: 3.83, PB 1121: 4.08 at IIRR & PB1: 3.60, T.bas: 4.0, PB 1121: 4.2 at IIRR). Hence this culture is discontinued from further testing.

IET 25407 (HUBR 16) developed from the cross Taroari Basmati dwarf mutant-2/Pusa Basmati 1121 with semi-tall plant stature (116 cm) and 108 days to 50% flowering recorded a mean grain yield of 5194 kg/ha with an yield advantage of 6 % over best check-Pusa Basmati 1121 on overall basis (Zone II). Although this culture exhibited superior yield advantage over best check and hybrid check, it failed in the panel test with sticky appearance, less taste, moderate elongation and poor over acceptability scores at both the labs (2.33-IIRR & 1.2- IARI) as compared to any of the quality checks of basmati (PB1: 3.83, T.bas: 3.83, PB

1121: 4.08 at IIRR & PB1: 3.60, T.bas: 4.0, PB 1121: 4.2 at IIRR). Hence this culture is discontinued from further testing.

None of the entries in Initial variety trial-Basmati (IVT-BT) merit promotion to the next level of testing.

Table 4.17: Composition of entries in Initial Variety Trial - Basmati (IVT – BT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
2601	25390	Pusa 1826-12-27-1-4	Pusa Basmati 1509/Pusa Basmati 6	ELS
2602	25391	UPR 3951-1-2-1	Pant Sugandh Dhan 17/ UPR 3027-9-1-1	LS
2603	25392	RSK-1098	IET-16310/Pusa 1460	LS
2604	25393	CSR TPB 1	Trichy 1/ PB1	LS
2605	25394	RP 5141-432-10-3-2	Vasumati/BM 171	LS
2606	**Pusa Basmati-1 (Yield Check)**			
2607	25395	PAU 6295-2 (RYT -3423)	Bas 370/IET 17948//*2 Bas 370///Pusa Bas1121	ELS
2608	25396	CSR TPB 7	Trichy 1/ PB1	LS
2609	25397	NDR 6204	IET 13550/Taroari Basmati	LS
2610	25398	Pusa 1734-8-3-85	PB1121/FL478//PB 121*3	ELS
2611	**Taroari Basmati (Quality Check)**			
2612	25399	PAU 6305-2 (RYT-3404)	Bas 370/IET 17948//*2 Bas 370///Pusa Bas1121	ELS
2613	25400	HKR 11-509	Pusa Sugandha-3/HBC 19	LS
2614	25401	Pusa 1475-03-42-45-119-1	PB1/IRBB60//Pusa1302	ELS
2615	25402	***MR 8585***	MR8585A/MR8585R	ELS
2616	**Local Check**			
2617	25403	RP 5147-322-56-4-3	Sugandhamathi/ SRAC 3499	LS
2618	24602 (Repeat)	SJR 70-3-2	Vasumati / Taroari Basmati	LS
2619	25404	NVB-1 (Nagina Vallabh Basmati-1)	Pusa Sugandh 5/IPB-1	LS
2620	**Pusa Basmati 1121 (Quality & yield check)**			
2621	25405	PAU 6331-1 (RYT-3424)	Bas 386/IET 17948//*2 Bas 386///Pusa Bas1121	ELS
2622	25406	HKR 11-447	Sikandri/HBC 19	LS
2623	25407	HUBR-16	Taroari Basmati dwarf mutant-2/Pusa Sugandh -2	LS
2624	25408	CSR TPB 31	Trichy 1/ PB1	LS
2625	25409	HUBR-152	Basmati 370/Nagarjuna	LS
2626	**Pusa RH 10 (Hybrid Check)**			
2627	25410	RSK-1103	IET-12016/Taraori Basmati//Pusa 1121	LS
2628	25411	HUBR-151	Pusa Sugandha-2/Taraori Basmati dwarf mutant-2	LS
2629	25412	UPRI 2013-16	IR 32809-26-3-3/ IR 39292-14-3-2-3	LS
2630	25413	CSR TPB 2	Trichy 1/ PB1	LS
2631	25414	UPR 3951-1-3-1	Pant Sugandh Dhan 17/ UPR 3027-9-1-1	LS
2632	25415	SJR-72-2-2	Pusa 2517-2-51-1/ Saanwal Basmati	LS
2633	25416	NDR 6260	IR 64/NDR 637	LS
2634	25417	***NPH-2005***	NPS 2003A/NPS2117	LS
2635	25418	Pusa 1734-8-3-91	PB 1121/FL478//PB 121*4	ELS

Table No. 4.18 : Grain Yield (kg/ha) of entries in IVT- BT 2015 Kharif 2015

Entry No.	IET No.	II																	
		ND		UT		PUN		PUN		PUN		PUN		PUN (4)	
		IAR		PNT		GDP		LDH		RUN		KPT		Mean	
2601	25390	5449		4693		5629	4 *	4008		3479		4215		4333	14%
2602	25391	7362	2 ...8% _3%	4170		4233		4909		3906	3	3899		4237	12%
2603	25392	5974		5502	_3%	3076		4625		1933		2709		3086	
2604	25393	3087		4167		6143	2 *	2500		2597		1312		3138	
2605	25394	6260		4666		5445	6	6148	3 *	4358	1 *	5789	1 *	5435	1 * 43% **10%**
2606	Pusa Basmati 1 (YC) ©	5362		6169	6 _16%	3701		4276		3547		3671		3798	
2607	25395	6296		5295		4261		5067		3210		3574		4028	6%
2608	25396	6821		6371	4 # _19%	4137		5261	9 *	3671	7	4446	6	4379	* 15%
2609	25397	7138	6 ...4%	5384	_1%	6579	1 *	4880		3749	5	3899		4777	6 * 26%
2610	25398	7238	4 ...6% _1%	5834	9 _9%	3557		4009		3149		3605		3580	
26011	Taroari Basmati (QC) ©	2545		3448		2677		1527		2818		2940		2490	
2612	25399	4673		4764		3242		3932		3679	6	3496		3587	
2613	25400	4378		3141		2309		2717		3177		1882		2521	
2614	25401	5235		5517	_3%	3260		4311		2160		3665		3349	
2615	25402	6929	7 ...1%	3945		5014		5011		3522		4031		4395	* 16%
2616	Local Check	6872	...1%	5641	_6%	4864		4735		2777		4050		4107	8%
2617	25403	3332		4892		1180		4113		2331		3300		2731	
2618	24602	5000		5602	_5%	4174		3255		3317		4010		3689	
2619	25404	4965		5679	_6%	5216		4160		3341		3961		4170	10%
2620	Pusa 1121 (Q&Y) ©	6837		7948	1 # _49%	4252		4313		2942		2990		3624	
2621	25405	6148		6059	7 _13%	4339		5199		2939		3376		3963	4%
2622	25406	4388		3857		5376	8	3265		2996		3384		3755	
2623	25407	6908	8 ...1%	6926	2 # _30%	5794	3 *	5807	7 *	4069	2	4099		4942	4 * 30%
2624	25408	6270		6296	5 # _18%	3003		5221	*	3898	4	4182		4076	7%
2625	25409	5189		3854		2856		5730	8 *	3563		4390	7	4135	9%
2626	Hybrid ©	7153	5 ...5%	5340		5399	7	6023	4 *	3640	8	4756	4	4955	3 * 30%
2627	25410	6362		4453		5234		5016		3477		4246	9	4493	8 * 18%
2628	25411	6536		5843	8 _9%	4646		4734		3510		4324	8	4304	13%
2629	25412	6056		5686	_6%	4963		6745	1 *	3145		4676	5	4883	5 * 29%
2630	25413	6663		5280		4715		5855	6 *	3156		3610		4334	14%
2631	25414	7316	3 ...7% _2%	5635	_6%	4366		6020	5 *	3621	9	4064		4518	7 * 19%
2632	25415	6895	9 ...1%	4441		4187		4628		3113		2866		3699	
2633	25416	6541		5222		5156		4415		3177		4998	3 *	4436	9 * 17%
2634	25417	7791	1 ...14% _9%	6571	3 # _23%	5601	5	6502	2 *	2974		5692	2 *	5192	2 * 37% **5%**
2635	25418	4526		5128		5298	9	4503		2687		3205		3924	3%
	Exp Mean	**5900**		**5241**		**4397**		**4669**		**3247**		**3809**		**4030**	
	C.D. 5%	1272		882		1368		907		719		1193		574	
	C.V.%	10.61		8.28		15.31		9.56		10.89		15.41		14.40	
	Sowing Date	17-Jun		09-Jun		23-Jun		18-Jun		10-Jun		28-Jun			
	Planting Date	14-Jul		16-Jul		24-Jul		15-Jul		28-Jul		31-Jul			
	Local ©	Pusa Sugandh 5		Pant Sugandh Dhan 17		Punjab Basmati-3		Punjab Basmati-3		Punjab Basmati-3		Punjab Basmati-3			

* Superior to Q /Y/Q&Y Check % Superior over Q /Y/ Q&Y Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Contd... Table No. 4.18 : Grain Yield (kg/ha) of entries in IVT- BT 2015 Kharif 2015

Entry No.	IET No.	II						Zone II Mean (9)		Overall Mean (9)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		HAR		U.P.		J&K								
		KUL		NGN		CHT								
2601	25390	3650		5729		3750	5 #	4511		4511		99	108	306
2602	25391	4500	6 ...1% _8%	3906		3250		4460		4460		110	103	280
2603	25392	3100		6510	2 ...10%	3100		4059		4059		91	91	295
2604	25393	2600		4427				3354		3354		120	103	304
2605	25394	6200	1 *#...39% _49%	6380	5 ...8%	3850	4 #	5455	2 * 11% **6%**	5455	2 *# 11% **6%**	111	105	306
2606	Pusa Basmati 1 (YC) ©	3850		4492		3500		4285		4285		114	107	300
2607	25395	3700		5924		2550		4431		4431		109	87	335
2608	25396	4600	5 ...3% _11%	5469		4350	2 #	5014	7 2%	5014	7 2%	109	107	313
2609	25397	4750	4 ...7% _14%	5859		3150		5043	6 3%	5043	6 3%	103	111	281
2610	25398	3900		5273		3100		4407		4407		112	114	316
26011	Taroari Basmati (QC) ©	2600		2799		2700		2673		2673		119	136	308
2612	25399	3650		6055	9 ...2%	2800		4032		4032		118	88	317
2613	25400	3850		3060				3064		3064		119	140	305
2614	25401	3350		6315	6 ...7%	3750	6 #	4174		4174		95	91	313
2615	25402	3950		6445	3 ...9%	3100		4661		4661		99	107	290
2616	Local Check	2900		5859		3500		4578		4578		105	110	307
2617	25403	4250	_2%	2344		2650		3155		3155		128	83	282
2618	24602	4500	7 ...1% _8%	5273		3550	8	4298		4298		102	111	289
2619	25404	3950		6250	8 ...5%	3150		4519		4519		102	103	291
2620	Pusa 1121 (Q&Y) ©	4450	9 _7%	5924		4600	1 #	4917	8	4917	8	114	110	327
2621	25405	4200	_1%	6445	4 ...9%	2900		4623		4623		111	91	344
2622	25406	4350	_5%	4232				3981		3981		117	131	309
2623	25407	4050		5990	...1%	3100		5194	3 6% **1%**	5194	3 6% **1%**	108	116	298
2624	25408	4050		3971		3150		4449		4449		117	112	313
2625	25409	4000		3190		3250		4002		4002		120	114	283
2626	Hybrid ©	4150		6641	1 ...12%	3000		5123	4 4%	5123	4 4%	99	99	277
2627	25410	4500	8 ...1% _8%	5599		2850		4637		4637		112	118	308
2628	25411	4400	_6%	6055	...2%	3600	7	4850	9	4850	9	112	95	297
2629	25412	4950	2 #...11% _19%	6315	7 ...7%	3050		5065	5 3%	5065	5 3%	112	94	308
2630	25413	3300		5013		3350		4549		4549		113	110	303
2631	25414	3650		4102		3000		4642		4642		113	104	306
2632	25415	3750		5339		3550	9	4308		4308		106	122	299
2633	25416	4300	_4%	5729		3950	3 #	4832		4832		109	114	289
2634	25417	4850	3 ...9% _17%	5990	...1%	3450		5491	1 *# 12% **7%**	5491	1 *# 12% **7%**	101	100	280
2635	25418	4050		4102		3150		4072		4072		112	112	316
	Exp Mean	**4024**		**5229**		**3305**		**4435**		**4435**		**110**	**107**	**303**
	C.D. 5%	722		722		636		340		294		1		23
	C.V.%	8.83		6.79		9.43		11.70		10.09		1.28		10.85
	Sowing Date	04-Jun		19-Jun		04-Jun								
	Planting Date	27-Jul		21-Jul		10-Jul								
	Local ©	CSR 30		Vallabh Basmati - 22		Basmati 564								

* Superior to Q /Y/Q&Y Check % Superior over Q /Y/ Q&Y Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 4.19 : Days to 50% Flowering of entries in IVT- BT 2015 Kharif 2015

Entry No.	IET No.	II										Zone II Mean (9)	Overall Mean (9)
		ND	UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		IAR	PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2601	25390	85	87	114	86	110	111	105	93	107	97	99	99
2602	25391	93	111	125	97	117	116	114	100	116	114	110	110
2603	25392	81	79	109	79	100	98	96	86	96	88	91	91
2604	25393		113	128	112	120	124	121	115	126		120	120
2605	25394	101	110	124	103	118	116	115	105	114	109	111	111
2606	Pusa Basmati 1 (YC) ©	101	113	126	106	118	122	118	107	117	113	114	114
2607	25395	100	106	119	99	112	119	112	106	119	101	109	109
2608	25396	99	96	122	101	114	117	113	105	121	108	109	109
2609	25397	96	103	112	90	113	112	107	99	106	101	103	103
2610	25398	101	112	128	105	113	116	115	106	116	109	112	112
26011	Taroari Basmati (QC) ©	116	116	133	110	116	119	119	110	119	128	119	119
2612	25399	106	119	131	111	120	124	121	113	124	119	118	118
2613	25400	117	123	128	107	120	122	119	113	125		119	119
2614	25401	84	82	110	84	102	104	100	90	104	94	95	95
2615	25402	84	93	110	85	111	111	104	93	106	97	99	99
2616	Local Check	89	107	106	104	112	104	106	111	107	105	105	105
2617	25403	122	130	134	121	134	134	131	115	138	127	128	128
2618	24602	94	93	116	87	110	113	106	101	105	99	102	102
2619	25404	90	96	117	90	113	114	108	98	107	97	102	102
2620	Pusa 1121 (Q&Y) ©	104	113	125	107	114	119	116	109	120	116	114	114
2621	25405	101	105	134	103	112	115	116	102	117	113	111	111
2622	25406	117	115	130	110	120	120	120	110	120		117	117
2623	25407	96	105	120	95	114	120	112	101	116	101	108	108
2624	25408	105	119	130	109	119	123	120	111	126	117	117	117
2625	25409	119	118	134	107	114	128	121	115	128	116	120	120
2626	Hybrid ©	86	93	114	88	110	108	105	93	98	98	99	99
2627	25410	108	104	123	104	120	118	116	110	116	109	112	112
2628	25411	102	110	125	100	118	118	115	108	114	117	112	112
2629	25412	101	108	129	101	119	118	117	108	114	109	112	112
2630	25413	98	112	128	100	119	122	117	110	125	108	113	113
2631	25414	96	110	128	98	116	119	115	106	116	127	113	113
2632	25415	97	102	118	94	115	117	111	104	107	101	106	106
2633	25416	103	107	122	98	116	116	113	102	112	109	109	109
2634	25417	85	96	116	86	114	113	107	92	106	98	101	101
2635	25418	105	107	124	103	114	118	115	107	121	108	112	112
	Exp Mean	**99**	**106**	**122**	**99**	**115**	**117**	**113**	**104**	**115**	**108**	**110**	**110**
	C.D. 5%	2	6	6	2	3	3	2	1	1	2	1	1
	C.V.%	0.84	2.96	2.25	0.83	1.09	1.46	1.61	0.63	0.45	0.78	1.53	1.28

Table No. 4.20 : Plant Height (cm) of entries in IVT- BT 2015 Kharif 2015

Entry No.	IET No.	II									Zone II Mean (8)	Overall Mean (8)
		UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2601	25390	106	119	123	95	100	109	103	105	111	108	108
2602	25391	107	110	109	89	91	100	105	102	109	103	103
2603	25392	98	100	103	87	82	93	80	90	87	91	91
2604	25393	102	121	111	92	95	105	99	101		103	103
2605	25394	112	109	129	91	93	105	106	95	108	105	105
2606	Pusa Basmati 1 (YC) ©	128	111	112	95	101	105	104	97	106	107	107
2607	25395	97	93	94	80	78	86	88	74	96	87	87
2608	25396	124	116	113	95	93	104	100	106	109	107	107
2609	25397	127	131	119	93	105	112	114	113	89	111	111
2610	25398	129	133	124	90	107	114	106	109	113	114	114
26011	Taroari Basmati (QC) ©	149	143	149	122	140	138	112	137	137	136	136
2612	25399	99	97	93	80	77	87	84	93	84	88	88
2613	25400	163	150	161	125	130	141	130	119		140	140
2614	25401	101	103	100	81	81	91	85	93	82	91	91
2615	25402	118	119	115	91	93	104	103	111	108	107	107
2616	Local Check	133	102	115	86	85	97	128	99	135	110	110
2617	25403	85	110	89	81	70	87	82	75	75	83	83
2618	24602	118	127	128	82	101	110	110	111	115	111	111
2619	25404	117	112	106	81	102	100	93	102	110	103	103
2620	Pusa 1121 (Q&Y) ©	122	117	127	92	103	110	110	101	112	110	110
2621	25405	104	92	96	91	80	90	91	79	92	91	91
2622	25406	144	136	150	108	119	128	124	136		131	131
2623	25407	131	134	129	93	108	116	104	116	111	116	116
2624	25408	134	125	120	108	105	114	107	100	94	112	112
2625	25409	130	117	130	102	109	114	108	105	112	114	114
2626	Hybrid ©	113	107	113	95	95	102	89	98	82	99	99
2627	25410	133	119	129	105	110	116	117	120	110	118	118
2628	25411	103	106	109	89	96	100	89	97	75	95	95
2629	25412	103	99	103	88	84	93	85	97	92	94	94
2630	25413	128	130	115	88	104	109	97	108	109	110	110
2631	25414	120	108	117	88	95	102	99	97	110	104	104
2632	25415	128	141	136	104	113	123	114	121	118	122	122
2633	25416	123	115	125	99	108	112	111	111	120	114	114
2634	25417	100	106	110	95	92	101	95	101	98	100	100
2635	25418	125	125	131	96	103	114	109	101	105	112	112
	Exp Mean	**119**	**117**	**118**	**94**	**98**	**107**	**102**	**103**	**104**	**107**	**107**

Table No. 4.21 : Panicles/ M² of entries in IVT- BT 2015 Kharif 2015

Entry No.	IET No.	II									Zone II Mean (8)	Overall Mean (8)
		UT	PUN	PUN	PUN	PUN	PUN (4)	HAR	U.P.	J&K		
		PNT	GDP	LDH	RUN	KPT	Mean	KUL	NGN	CHT		
2601	25390	315	325	297	182	337	285	369	346	281	306	306
2602	25391	272	319	287	154	304	266	319	311	278	280	280
2603	25392	281	335	278	157	347	279	349	350	266	295	295
2604	25393	300	320	320	175	314	282	395	302		304	304
2605	25394	283	385	311	183	323	300	315	356	291	306	306
2606	Pusa Basmati 1 (YC) ©	297	350	301	171	333	289	345	322	281	300	300
2607	25395	348	468	337	169	373	336	355	341	291	335	335
2608	25396	292	345	297	207	370	305	379	344	274	313	313
2609	25397	292	305	290	191	271	264	337	296	264	281	281
2610	25398	364	365	320	163	343	298	375	318	279	316	316
26011	Taroari Basmati (QC) ©	288	353	314	173	333	293	383	333	288	308	308
2612	25399	313	383	300	200	376	314	385	308	272	317	317
2613	25400	308	378	251	185	307	280	379	329		305	305
2614	25401	291	318	373	181	317	297	351	420	257	313	313
2615	25402	253	340	268	135	317	265	380	358	273	290	290
2616	Local Check	251	375	343	218	327	316	333	329	279	307	307
2617	25403	224	278	307	205	310	275	335	323	274	282	282
2618	24602	223	355	314	208	287	291	364	294	272	289	289
2619	25404	238	335	294	193	343	291	377	296	253	291	291
2620	Pusa 1121 (Q&Y) ©	371	350	367	234	333	321	348	321	291	327	327
2621	25405	285	415	413	251	413	373	339	359	280	344	344
2622	25406	285	338	344	225	327	308	313	336		309	309
2623	25407	299	355	261	226	314	289	382	295	250	298	298
2624	25408	309	328	360	226	343	314	381	317	243	313	313
2625	25409	217	385	258	170	284	274	331	340	281	283	283
2626	Hybrid ©	260	290	251	204	350	274	331	279	255	277	277
2627	25410	292	380	347	214	333	318	337	302	260	308	308
2628	25411	260	290	300	190	373	288	370	322	275	297	297
2629	25412	268	398	267	194	317	294	333	420	272	308	308
2630	25413	252	410	261	223	333	307	348	331	270	303	303
2631	25414	274	375	301	182	330	297	349	351	284	306	306
2632	25415	303	323	241	205	389	289	352	304	279	299	299
2633	25416	335	293	261	193	307	263	358	277	287	289	289
2634	25417	281	303	271	208	314	274	330	289	247	280	280
2635	25418	311	345	376	208	323	313	337	382	243	316	316
	Exp Mean	**286**	**349**	**305**	**194**	**332**	**295**	**353**	**328**	**272**	**303**	**303**
	C.D. 5%	60	83	74	88	73	41	58	30	35	23	23
	C.V.%	10.34	11.71	11.88	22.34	10.76	14.13	8.03	4.49	6.23	11.10	10.85

Table 4.23 : Summary of grain quality characteristics of entries in Initial Variety Trial - Basmati (IVT – BT) conducted at IARI, New Delhi and analyzed at IIRR, Hyderabad kharif 2015

Ent.No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC	Aroma
2601	25390	76.1	66.3	45.9	8.16	1.81	4.5	LS	VOC	4.8	290	15.6	1.91	7	19.56	23	SS
2602	25391	79.9	68.7	50	7.08	1.61	4.39	LS	VOC	4.1	360	13.4	1.89	7	22.08	22	SS
2603	25392	75.6	63.7	48.2	7.06	1.73	4.08	LS	A	4.1	235	11.1	1.57	5	11.3	80	SS
2604	25393	75.8	66	54.4	6.64	1.81	3.66	LS	A	4.2	110	10.6	1.59	3	22.7	22	SS
2605	25394	80.3	67.9	59.8	5.59	1.75	3.19	LS	VOC	4.6	195	10.8	1.57	3	19.06	52	MS
2606	PB 1	79.2	69.2	58.7	7.19	1.75	4.1	LS	VOC	5.4	360	14.9	2.07	7	22.49	22	SS
2607	25395	77.7	69.1	59	7.59	1.85	4.1	LS	VOC	4	320	15.9	2.09	7	17.24	22	SS
2608	25396	79.1	68.4	52.8	7.33	1.9	3.85	LS	VOC	4.2	300	14.4	1.96	7	24.17	22	SS
2609	25397	78.6	67.1	59.1	6.56	1.92	3.41	LS	VOC	4.3	290	8.5	1.29	7	26.31	23	SS
2610	25398	77.9	67.6	54.4	8.21	1.88	4.36	LS	VOC	4.2	345	7.3	2.1	7	19.5	23	SS
2611	T.BAS	76.5	65.8	52	7.15	1.79	3.99	LS	A	5.3	175	14.3	2.0	4	22.88	22	SS
2612	25399	77.2	67.5	55.3	7.78	1.88	4.13	LS	A	4.7	325	14.6	1.87	7	19.71	23	SS
2613	25400	78.1	69.5	51.3	6.98	1.72	4.05	LS	A	5.5	205	13.7	1.96	4	20.12	43	SS
2614	25401	77.5	68.2	55.1	7.99	1.82	4.39	LS	VOC	5	295	13.5	1.68	5	18.56	36	SS
2615	25402	78	67.3	46.9	8.35	1.62	5.15	LS	VOC	4.6	310	14.5	1.73	7	21.94	30	SS
2616	LC	78.6	69.4	57.0	7.6	1.79	4.24	LS	VOC	5.3	290	12.8	1.68	7	19.06	23	SS
2617	25403	79	69.3	62.9	5.07	1.88	2.69	MS	VOC	5.3	240	8.8	1.73	7	22.58	22	MS
2618	24602	77.4	66.3	48.8	7.56	1.82	4.15	LS	A	4.7	95	12.6	1.66	4	26.28	24	MS
2619	25404	77.3	68.7	54.6	7.55	1.74	4.33	LS	VOC	5.5	300	13.5	1.78	7	19.18	22	MS
2620	PB 1121	75.9	66.5	53.2	8.29	1.86	4.45	LS	VOC	4.8	360	17.2	2.07	7	21.23	22	SS
2621	25405	76.7	66	37.6	7.56	1.82	4.15	LS	VOC	5.5	155	15.8	2.08	3.5	16.66	40	SS
2622	25406	78.9	70.5	54.4	7.75	1.82	4.25	LS	VOC	4.1	270	14.1	1.81	7	19.53	22	SS
2623	25407	77.3	67.1	54.1	8.19	1.8	4.55	LS	VOC	4.6	345	12.7	1.55	7	21.53	44	SS
2624	25408	75.9	67.1	54.3	6.91	1.73	3.99	LS	A	5.5	340	12.6	1.82	7	22.05	22	MS
2625	25409	80	69.6	50.9	6.39	1.75	3.65	LS	VOC	5.6	165	9.0	1.4	4	19.18	38	SS
2626	PRH-10	80.5	70.3	49.9	7.38	1.83	4.03	LS	VOC	5.3	310	11.6	1.57	5	21.31	54	MS
2627	25410	79	68.9	47.3	7.48	1.78	4.2	LS	A	5.7	280	12.6	1.68	7	26.92	22	SS
2628	25411	78.1	70.1	53.9	7.02	2.03	3.45	LS	A	4.5	285	13.5	1.92	5	15.72	70	SS
2629	25412	78.2	69.8	65.8	6.64	2.05	3.23	LS	VOC	5.1	140	10.6	1.59	3	21.2	52	MS
2630	25413	77.5	68.7	53.9	6.48	2.04	3.17	LS	VOC	4.6	250	12.0	1.85	7	24.75	40	SS
2631	25414	79.2	69	49	7.19	1.67	4.3	LS	VOC	4.5	360	11.0	1.52	7	23.2	22	SS
2632	25415	80.3	72	57.6	6.97	1.9	3.66	LS	VOC	4.6	265	12.2	1.75	7	22.17	23	SS
2633	25416	79.2	69.6	59.3	6.88	1.93	3.56	LS	VOC	4.6	305	10.0	1.45	7	25.96	23	SS
2634	25417	80.5	71	49.4	7.06	1.81	3.9	LS	VOC	4.7	330	12.7	1.79	7	23.78	49	SS
2635	25418	76.4	66.4	48.3	8.11	1.81	4.48	LS	VOC	4.4	325	16.7	2.05	7	20.97	41	SS
Acceptable range			**65**	**45**	**>6.61**	**<2.0**	**3.5**	**LS**	**<10%**	**>3.5**	**>250**	**12**	**1.7**		**20-25**	**>40**	**SS/ MS**

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table -4.24 : Summary of grain quality characteristics of entries in Initial Variety Trial - Basmati (IVT–BT) conducted at IARI, New Delhi and analyzed at IARI, New Delhi, kharif 2015

Ent.No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	VER	WU	KLAC	ER	ASV	AC	GC
2601	25390	69.8	62.1	49.9	8.25	1.66	4.97	ELS	VOC	4.9	305	14.95	1.81	7.0	23.6	58.5
2602	25391	75.8	67.4	56.2	6.90	1.66	4.15	LS	VOC	5.0	290	12.80	1.86	7.0	23.1	44.0
2603	25392	71.7	62.1	52.6	6.90	1.66	4.16	LS	VOC	5.0	275	13.20	1.91	5.0	14.7	91.0
2604	25393	68.8	60.1	55.0	6.20	1.66	3.73	LS	VOC	4.8	272	11.90	1.92	5.0	19.8	71.0
2605	25394	70.9	61.8	54.9	5.43	1.70	3.19	MS	VOC	4.9	372	9.20	1.69	5*	26.0	98.5
2606	PB 1	69.6	62.4	55.2	6.88	1.66	4.14	LS	VOC	5.0	305	14.13	2.05	7.0	21.8	79.0
2607	25395	69.9	62.8	55.8	7.56	1.70	4.45	LS	VOC	4.6	315	14.80	1.96	7.0	23.6	50.5
2608	25396	72.7	64.3	52.6	7.00	1.60	4.38	LS	VOC	4.7	290	13.00	1.86	7.0	22.4	71.0
2609	25397	74.6	66.5	56.6	6.60	1.66	3.98	LS	VOC	4.6	280	9.35	1.42	7.0	11.9	105.5
2610	25398	74.9	64.5	54.7	7.90	1.70	4.65	ELS	VOC	4.4	300	14.60	1.85	7.0	25.4	77.5
2611	T.BAS	72.1	64.1	56.7	6.83	1.66	4.11	LS	VOC	5.2	119	11.20	1.64	5.0	22.9	71.0
2612	25399	71.5	63.5	57.6	7.56	1.70	4.45	ELS	VOC	4.6	270	14.30	1.89	7.0	20.4	68.5
2613	25400	68.8	60.9	53.8	6.63	1.66	3.99	LS	VOC	4.6	300	12.45	1.88	5.0	26.5	62.5
2614	25401	73.1	65.4	56.3	7.73	1.66	4.66	ELS	VOC	4.9	265	13.60	1.76	7.0	20.3	54.5
2615	25402	70.2	62.2	50.3	7.75	1.70	4.56	ELS	VOC	4.9	270	13.03	1.68	7.0	21.5	60.0
2616	LC	74.1	66.0	58.0	7.78	1.66	4.69	ELS	VOC	5.1	310	13.05	1.68	7.0	10.2	51.5
2617	25403	74.3	66.8	61.7	4.60	1.66	2.77	MS	VOC	4.6	305	8.70	1.89	7.0	25.7	56.0
2618	24602	70.3	62.3	51.7	7.42	1.70	4.36	LS	VOC	4.9	230	12.00	1.62	7*	25.0	98.0
2619	25404	70.9	63.1	53.9	6.96	1.66	4.19	LS	OC	4.6	285	12.15	1.75	7.0	26.1	60.0
2620	PB 1121	71.3	63.8	56.9	7.98	1.70	4.69	ELS	VOC	5.2	335	16.70	2.09	7.0	23.5	60.5
2621	25405	70.7	62.0	38.9	7.42	1.70	4.36	LS	VOC	5.1	340	12.20	1.65	5.0	14.0	103.0
2622	25406	72.4	65.7	58.1	6.73	1.66	4.05	LS	OC	4.6	255	13.20	1.96	7.0	22.6	37.0
2623	25407	73.2	65.0	55.4	7.70	1.66	4.64	ELS	OC	4.6	260	13.00	1.69	7.0	13.5	50.5
2624	25408	71.5	63.5	58.3	7.33	1.66	4.42	LS	VOC	6.9	380	13.50	1.84	7.0	22.8	26.5
2625	25409	73.8	66.2	57.0	5.86	1.70	3.45	MS	VOC	5.1	365	10.00	1.71	5.0	21.9	48.5
2626	PRH-10	73.2	63.9	50.7	6.88	1.66	4.14	LS	OC	4.8	285	11.00	1.60	6.0	24.3	83.5
2627	25410	68.5	61.5	51.1	7.10	1.66	4.27	LS	VOC	4.6	260	12.13	1.71	7.0	23.6	40.5
2628	25411	72.7	65.0	63.2	6.90	1.66	4.16	LS	VOC	4.6	285	13.00	1.88	6.0	21.3	69.5
2629	25412	73.8	65.0	58.4	6.67	1.70	3.92	LS	VOC	4.0	300	9.95	1.49	3.0	25.7	73.0
2630	25413	71.8	64.6	57.9	6.46	1.66	3.89	LS	VOC	4.7	290	11.73	1.82	7.0	24.4	96.5
2631	25414	72.0	64.4	53.0	6.90	1.43	4.83	LS	OC	4.8	265	10.80	1.57	7.0	29.7	50.0
2632	25415	72.7	65.5	58.3	6.86	1.66	4.13	LS	P	5.0	250	12.27	1.79	6.0	29.3	56.0
2633	25416	74.1	66.0	59.0	6.70	1.56	4.29	LS	OC	4.9	280	10.32	1.54	7.0	21.1	40.0
2634	25417	72.7	64.3	50.9	6.76	1.60	4.23	LS	OC	4.6	290	13.60	2.01	7.0	24.3	60.5
2635	25418	68.8	60.7	48.2	7.53	1.60	4.71	ELS	VOC	5.0	270	16.80	2.23	7.0	22.5	53.0
Acceptable range			**65**	**45**	**>6.61**	**<2.0**	**3.5**	**LS**	**<10%**	**>3.5**	**>250**	**12**	**1.7**		**20-25**	**>40**

Table 4.25 : Summary of grain quality characteristics of entries in Initial Variety Trial - Basmati (IVT – BT) conducted at IARI, New Delhi and analyzed at NRRI, Cuttack, kharif 2015

Entry No.	IET No.	Hull %	Mill %	HRR %	KL mm	KB mm	L/B	ASV	VER	KLAC mm	ER	AC %	WU ml/100g
2601	25390	76.00	62.50	56.00	7.38	1.51	4.89	7.00	4.00	16.00	2.17	19.80	170.00
2602	25391	79.00	62.00	56.00	6.43	1.59	4.04	7.00	4.25	12.60	1.96	21.82	275.00
2603	25392	75.00	60.00	53.00	6.84	1.54	4.44	6.00	4.00	12.50	1.83	18.80	130.00
2604	25393	76.50	63.00	57.00	6.24	1.52	4.11	3.00	4.00	12.00	1.92	18.97	109.00
2605	25394	76.00	64.00	57.00	**5.41**	1.65	3.28	3.00	4.00	11.00	2.03	19.65	105.00
2606	Pusa Bas1	75.00	65.00	55.00	6.53	1.57	4.16	7.00	4.00	14.70	2.25	19.47	215.00
2607	25395	76.00	65.00	58.00	6.81	1.61	4.23	7.00	4.25	16.80	2.47	19.02	205.00
2608	25396	75.00	66.00	55.00	6.63	1.76	3.77	5.00	4.25	13.60	2.05	21.90	195.00
2609	25397	76.50	64.00	55.50	6.24	1.81	3.45	7.00	4.00	11.00	1.76	20.95	245.00
2610	25398	76.00	63.00	51.50	7.63	1.56	4.89	7.00	4.25	19.00	2.49	19.12	115.00
2611	T.Bas	75.00	62.50	56.50	6.42	1.53	4.20	4.00	3.75	13.10	2.04	19.82	95.00
2612	25399	75.00	63.20	56.50	7.41	1.65	4.49	7.00	3.75	12.90	1.74	19.62	190.00
2613	25400	75.50	63.50	59.50	6.65	1.52	4.38	4.00	4.00	13.00	1.95	19.15	155.00
2614	25401	76.50	65.00	57.50	7.50	1.67	4.49	7.00	4.00	13.30	1.77	19.15	165.00
2615	25402	77.00	59.50	48.00	7.54	1.06	7.11	7.00	4.00	12.80	1.70	19.20	190.00
2616	LC	80.00	67.00	61.00	7.15	1.52	4.70	7.00	4.00	13.20	1.85	19.32	185.00
2617	25403	80.50	65.00	62.50	4.75	1.67	2.84	6.30	3.75	10.70	2.25	20.62	135.00
2618	24602	79.00	67.50	60.00	7.10	1.57	4.52	3.00	4.00	13.00	1.83	19.72	140.00
2619	25404	80.00	64.50	54.50	6.90	1.49	4.63	7.00	4.00	14.30	2.07	19.10	215.00
2620	PB 1121	79.50	65.50	62.00	7.31	1.61	4.54	7.00	4.25	18.40	2.52	19.47	230.00
2621	25405	75.50	66.00	56.00	7.22	1.61	4.48	3.00	4.00	14.00	1.94	19.20	115.00
2622	25406	79.50	61.00	56.50	6.58	1.67	3.94	6.00	3.75	11.20	1.70	18.82	250.00
2623	25407	80.50	68.00	62.50	7.84	1.66	4.72	7.00	4.25	13.10	1.67	19.40	225.00
2624	25408	75.50	66.50	63.00	5.99	1.58	3.79	6.30	4.00	13.70	2.29	19.35	245.00
2625	25409	80.50	63.50	57.00	5.73	1.60	3.58	4.00	3.75	10.60	1.85	18.82	90.00
2626	Pusa RH 10	79.00	68.50	57.50	6.79	1.68	4.04	6.50	3.75	10.30	1.52	18.92	120.00
2627	25410	76.00	68.00	59.00	6.56	1.48	4.43	7.00	4.00	13.50	2.06	20.47	205.00
2628	25411	78.00	66.00	63.00	6.25	1.74	3.59	6.00	4.00	13.70	2.19	18.67	195.00
2629	25412	80.50	67.50	61.00	6.23	1.97	3.16	3.00	3.75	12.30	1.97	19.70	70.00
2630	25413	78.50	66.50	57.00	5.49	1.90	2.89	5.50	4.00	11.80	2.15	22.87	115.00
2631	25414	79.00	67.00	58.00	6.38	1.51	4.23	7.00	4.00	12.00	1.88	19.65	209.00
2632	25415	80.50	70.00	64.50	6.51	1.83	3.56	7.00	4.25	12.30	1.89	18.98	185.00
2633	25416	79.00	65.00	61.00	5.91	1.77	3.34	7.00	3.75	11.70	1.98	20.47	165.00
2634	25417	77.00	68.00	59.00	6.37	1.72	3.70	7.00	3.75	10.40	1.63	20.02	155.00
2635	25418	78.50	63.50	56.00	7.14	1.63	4.38	7.00	4.25	16.80	2.35	19.70	215.00

Table 4.26: Panel test scores of entries in Initial Variety Trial -Basmati (IVT-BT), IIRR Hyderabad *Kharif* 2015

Entry No.	IET No	Appearance	Cohesiveness	Tenderness on		Taste	Aroma	Elongation	Overall acceptability	Total	Mean	Rank
				Touching	Chewing							
2623	25407	4.75	3.50	4.16	4.08	3.33	3.58	2.58	2.33	28.31	3.53	IV
2634	25417	4.75	3.75	4.16	4.00	3.33	3.08	2.33	1.91	27.31	3.41	VI
2626	PRH-10	4.33	3.41	4.33	4.58	3.00	3.41	2.50	2.50	27.56	3.44	V
2606	PB-1	4.58	4.25	4.58	4.08	4.08	4.00	4.16	3.83	34.06	4.25	II
2611	T.Bas.	4.83	4.50	4.50	4.58	4.50	3.33	3.75	3.83	33.32	4.16	III
2620	PB1121	4.58	4.50	4.50	4.16	4.16	4.25	4.50	4.08	35.15	4.39	I
	BPT 5204	5.00	4.41	4.00		3.50	1.66	2.00	2.50	27.23	3.40	VII
	Range	4.0-4.9 Creamish white 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4.0 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9 No scent	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable			

Table 4.27 : Panel test scores of entries in Initial Variety Trial -Basmati (IVT-BT), IARI, New Delhi *Kharif* 2015

Entry No	IET No	Appearance	Cohesiveness	Tenderness on		Taste	Aroma	Elongation	Overall Acceptability
				Touching	Chewing				
2601	25390	4.5	4.2	4.3	4.3	4.0	4.3	4.0	4.3
2602	25391	2.4	2.2	4.0	3.6	2.8	1.2	2.2	2.0
2603	25392	4.8	2.4	3.2	3.2	3.8	3.2	1.2	1.8
2604	25393	3.2	3.4	4.0	3.4	3.6	3.6	1.8	2.0
2605	25394	5.0	3.0	2.6	2.8	2.4	2.0	1.6	1.4
2606	PB 1	4.0	4.0	3.4	3.2	3.4	3.6	3.0	3.6
2607	25395	4.2	3.2	4.4	3.8	4.2	4.0	4.0	3.8
2608	25396	5.0	3.0	4.2	3.8	3.4	3.0	2.0	2.2
2609	25397	4.8	3.6	3.0	2.8	2.2	2.2	1.5	1.8
2610	25398	5.0	4.3	4.2	4.5	4.7	3.6	4.6	4.3
2611	T.BAS	4.5	4.5	4.4	4.0	4.0	4.0	3.5	4.0
2612	25399	4.2	3.2	4.2	4.8	3.4	3.0	2.6	3.5
2613	25400	4.4	4.2	3.2	3.6	2.8	2.0	2.5	2.0
2614	25401	4.5	4.4	4.0	4.0	4.0	3.8	3.5	4.2
2615	25402	3.5	3.5	3.4	4.0	2.2	2.0	2.8	3.6
2616	LC	3.5	3.5	4.0	4.0	2.4	3.0	3.1	3.4
2617	25403	3.6	3.2	3.2	3.6	2.6	1.4	1.0	1.0
2618	24602	3.5	3.0	3.6	4.6	3.0	2.6	1.0	1.0
2619	25404	2.8	2.4	4.0	4.0	2.6	3.4	3.0	2.8
2620	PB 1121	4.4	4.2	4.2	3.6	3.4	3.6	4.0	4.2
2621	25405	3.2	3.0	4.2	4.2	2.8	3.4	2.2	2.2
2622	25406	3.4	2.2	3.0	3.0	2.4	2.0	1.6	1.4
2623	25407	3.0	1.8	4.0	3.8	2.4	2.4	2.0	1.2
2624	25408	4.0	3.2	1.8	2.8	3.0	1.8	2.0	1.2
2625	25409	2.6	2.2	1.4	3.6	2.0	2.2	1.2	1.4
2626	PRH-10	5.2	2.8	1.8	4.0	2.4	1.6	1.8	1.8
2627	25410	4.2	4.6	4.2	4.2	4.0	3.8	3.0	3.2
2628	25411	3.8	1.2	3.6	3.6	3.2	3.8	1.6	1.8
2629	25412	4.6	1.4	3.4	3.2	2.4	2.0	1.8	1.6
2630	25413	4.8	2.2	4.4	4.4	2.4	4.2	2.0	1.8
2631	25414	3.4	2.0	3.8	3.8	3.0	1.0	2.0	1.8
2632	25415	4.6	2.6	4.4	4.4	2.4	4.0	2.4	1.8
2633	25416	3.0	3.4	3.8	4.2	3.8	4.4	2.0	1.8
2634	25417	3.2	4.2	3.0	3.2	3.2	4.0	2.0	1.8
2635	25418	4.2	4.3	4.5	4.4	4.4	4.5	4.5	4.6
	Range	4.0-4.9 Creamish white 3.0-3.9 Red streaks	4.0-4.9 Partially separated 3.0-3.9 Slightly sticky	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	4.0-4.9 Moderately soft 3.0-3.9 Moderately hard	3.0-3.9 Desirable 2.0-2.9 Tasteless	4.0 Strong 3.0-3.9 Optimum 2.0-2.9 Mild 1.0-1.9 No scent	3.0-3.9 Good 2.0-2.9 Moderate	4.0-4.9 Excellent 3.0-3.9 Good 2.0-2.9 Acceptable

ADVANCE VARIETY TRIAL 1 - AROMATIC SHORT GRAIN (AVT 1 - ASG)

Locations: 18 **Entries: 16**

Checks: Shobini (NC), Badshabhog, CR Sugandh Dhan 907 & Sugandhasamba (ZC), Dubraj & Ketekejoha (QC) and Local **Table: 5.1**

Advance Variety Trial-1 Aromatic Short Grain (AVT1-ASG) comprised of 21 entries including 5 checks: Shobini (National check), CR Sugandh Dhan 907, Badshabhog, Sugandha Samba (Zonal checks), Ketekejoha and Dubraj (Quality check) and local check. Among the 16 test entries, two cultures IET 23878 and IET 23879 were in the third year of testing and the remaining 14 entries were promoted from IVT-ASG and were in the second year of testing. During Kharif 2015, based on their performance in region/zone, the entries were sent only to their respective zones. The entries in Zone I, II & VI consisted of 16 test cultures and 5 checks while the entries in Zone III, IV, V & VII consisted of 11 test entries and 4 checks. The statistical analysis was also done separately in two sets [Set 1: Entries evaluated in Zone I, Zone II and Zone VI; Set 2: Entries evaluated in Zone III, Zone IV, Zone V and Zone VII). Although the general conduct of trial across locations was satisfactory and was in accordance with the general instructions specified, the crop experienced drought spells at some of the locations (Kanpur, Masodha, Raipur Radhanagari, Pondaghat, Mugad). Severe drought condition was reported from Masodha, while at Raipur it is reported that there were no rain from 23rd September to 30th November, 2015. From Pondaghat more than 5 drought spells during various stages of crop growth was reported. At Radhanagari drought coinciding the vegetative, flowering and grain filling stage was reported. Similarly at more than five drought spells at seedling, vegetative, grain filling and maturity stage was reported form Mugad. The experimental mean from Radhanagari, Pundibari and Mugad was below 2500 kg/ha; at Bankura the CV of the experiment was very low 2.10 and it was high at Raipur (34.52). Hence, the data from Raipur, Masodha, Radhanagari, Bankura, Pundibari, Mugad were not included in the final analysis. In total the data from 12 locations was only included in the final analysis. The experimental mean and performance of entries across locations is reported in tabular form.

General information of conduct of trial Advance Variety Trial 1– Aromatic Short Grain (AVT 1- ASG), Kharif, 2015

Location	Highest Yielding ckeck		Highest Yielding entry	Yield (kg/ha)	Experimental Mean (kg/ha)	Yield Range (kg/ha)
	check	Yield (kg/ha)				
Kanpur @	Shobni	3260	23878	3450	2672	1703-3450
Pondaghat	Shobini	5086	24615	6023	4326	2335-6023
Radhanagari (@)	Shobini	2786	24620	3832	2327	1212-3832
Nawagam (@)	Shobini	4836	24619	5283	2972	521-5283
CRRI	Badhsabhog	3743	24613	5045	3884	1756-5045
Jeypore	CR Sugandh Dhan 907	5397	24613	7180	5181	3302-7180
Chinsuah	Shobini	5410	24620	5567	4675	3717-5567
Bankura(@)	Gandheswari (LC)	4100	23878	4032	3082	2247-4032
Pundibari	Badhabhog	3184	24612	4271	2314	1320-4271
Masodha @	Dubraj	4647	24621	4754	3241	2030-4754
Varasani	Shobini	6833	24613	7333	5412	2800-7333
Gorakhpur @	CR Sugandh Dhan 907	5224	24619	5734	4014	2225-5734
Arundhatinagar	Dubraj	2639	24620	4627	2947	2235-4627
Raipur @	Dubraj	4121	24613	5674	3910	2762-5674
Jagdalpur	CR Sugandh Dhan 907	5565	24613	6847	4928	4060-6847
Bilaspur	Shobani	4678	24613	5702	4435	2485-5702
Ambikapur	Local check	6038	24613	8329	4625	3267-8329
Mugad (@)	Shobini	1169	23879	1882	962	389-1882

Among checks, Shobini (National check) exhibited superior performance in 6 out of 12 locations followed by Badhsabhog and CR Sugandh Dhan 907 which showed superior performance in two locations respectively. The experimental mean grain yield across locations ranged 2314 kg/ha (Pundibari) to 5412 kg/ha (Varanasi). The CV (%) of experiments varied from 5.45 (Chinsurah) to 16.46 (Ambikapur). Shobini (NC) is the best across all the zones except in zone IV where Dubraj (2639 kg/ha) is the best check. Shobini recorded mean grain yield of 3260 kg/ha, 5524 kg/ha, 4733 kg/ha and 4961 kg/ha respectively in Zone II, Zone III, Zone V and Zone VI. The performance of entries (Tables 5.2 to 5.6) in AVT 1 ASG are described here below:

Performance of entries in 3rd year of testing

IET 23878 (R1747-4941-1-515-1) derived from cross Rastic Br 240-47/Shyamjira failed to exhibit the required yield superiority across all the zones tested in the final year. Hence this culture is discontinued from further testing.

IET 23879 (R1656-1146-5-513-1) developed from cross Swarna/Jira Shankar recorded a mean grain yield of 5234 kg/ha with 109 days to 50% flowering on overall basis in the analysis comprised of zone II, zone IV and zone V during Kharif, 2015. This culture also exhibited significant superior performance over best check at NRRI, Cuttack (5009 kg/ha, 2nd). Zone wise, IET 23879 recorded 12% and 17% respectively yield superiority over best check in zone IV & zone V. Based on three years performance, IET 23879 exhibited superior performance over best check consecutively for three years in Chhattisgarh (17%-2015; 34%-2014; 52.95%-2013) and for two years in the states of Tripura (12%-2015; 19.68%- 2013),West Bengal (42%-2014; 55.91%-2013), Maharashtra (22%-2014; 11.68%-2013) and Karnataka (41%-2014; 14.5%-2013). Hence, this culture is promising in Tripura, Chhattisgarh, West Bengal, Maharashtra and Karnataka. Quality wise, this culture recorded aromatic medium slender grains, high HRR (63.2%), intermediate ASV (4) and amylose content (24.49%) with soft gel consistency (68 mm).

Performance of entries in 2nd year of testing

14 entries are in the 2nd year of testing which are promoted from IVT-ASG Kharif, 2014. It is mentioned in data sheets that IET 24608 seed was not received by many of the test locations and hence data for this entry is not available. Among the remaining entries, none of the entries are promising in zone II and zone VI (set 1 analysis) while some of the entries are promising in set II analysis (Zone III, Zone IV, Zone V and Zone VII) on overall basis and zone wise. The performance of entries in the analysis involving locations of zone III, zone IV, zone V and zone VII are described below.

IET 24613 (ORJ-1135) derived from the RR-615 mutant recorded 6045 kg/ha (1st) with 107 days to flowering overall basis in the analysis of locations of zone III, zone IV & Zone V. IET 24613 exhibited significant superior performance over best check at CRRI (5045 kg/ha, 1st), Jeypore (7180 kg/ha, 1st), Jagadalpur (6847 kg/ha, 1st), Bilaspur (5702 kg/ha, 1st), Ambikapur (8329 kg/ha, 1st), Raipur (5674 kg/ha, 1st) and Arundhatinagar (3548 kg/ha, 3rd). This culture exhibited 25% yield advantage over best check on overall basis and is of semi dwarf plant saturated (104cm) with 283 panicles/m^2. Zone wise, IET 24613 out yielded best checks by 10%, 34% and 40% respectively in zone III (ranked 1st), zone IV

(ranked 3rd) and zone V (ranked 1st). This culture also exhibited superior performance over best check in Uttar Pradesh (7% - 1st rank) and Odisha (24%, 1st rank). Quality wise, IET 24613 possessed aromatic medium slender grains recorded high head rice recovery (61.3%), desirable ASV (4) and intermediate amylose content (24.25 %) and medium gel consistency (51 mm).

The culture IET 23879 (R 1656-1146-5-5-13-1) with high yield potential desirable quality characters and strongly scented found to promising for the state of Tripura, Chhattisgarh, West Bengal, Maharashtra and Karnataka.

Zone wise other promising entries which merit promotion to next level of testing in AVT-2-ASG are

Zone III	IET 24613
Zone IV	IETs 24613, 24625, 24619 & 24617
Zone V	IET 24613, 24621

Table 5.7: Overall performance of entries (3rd year testing) in Advance Variety Trial- Aromatic short grain (AVT 1 ASG), Kharif, 2015

IET NO	Year	Yield (kg/ha) /FD/ GT	Yield adv. % over BC	Significantly superior to Best check, location, yield kg/ha/rank				Increase over the best check			
								State		Region/Zone	
								Rank	%	Rank	%
23879 (R 1656-1146-5-513-1, Swarna/Jira Shankar	2015	5234 (2) 109	**8.0**	CRRI 5009(2)				TR CG	12 17	Z-IV Z- V	12 17
	2014	4662 (1) 110 MS	**28**	CRRI 4499 (1) CHN 4367 (1) MSD 3868 (2) VRN 5500 (2) RPR 6534 (1)		JDP 5231 (1) SND 4575 (1) RDN 4532 (1) SRS 4919 (1)		OD (10) WB (1) CG (4) MH (1) KA (1)	30 42 34 22 41	R3 (1) R4 (1) R5 (2)	20 22 14
	2013	3893 (2) 107 MS	**35.93**	SRS 4823 (1) MDI 4224 (2)		VRN 6050 (3) JDP 4750 (3) GER 3661 (3)		WB (5) UP (5) CH (5) AS (3) TR (9) MH (9) KA (2)	55.91 75.66 52.95 30.28 19.68 11.68 14.50	R3 (4) R4 (9) R5 (2)	49.61 11.68 17.47
Checks											
Shobini	2015	4832 103	Badshabhog	2015	3614 117	Kalanamak	2014	3650 109	Local	2015	4111 109
CR Sugandh Dhan 907 (ZC)	2015	3894 112		2014	3157 114		2013	2183 109		2014	3582 111
Dubraj	2015	3979 113		2013	2553 112					2013	2864 109

Table 5.8: Overall & Zone wise performance of entries (2nd year testing) in Advance Variety Trial- Aromatic short grain (AVT 1 ASG), Kharif, 2015

Entry No.	IET NO	Yield (kg/ha) /FD/ GT	Yield adv. % over BC				
			Overall	Z-III	Z-IV	Z-V	Z-VI
2706	24613 ORJ- 1135 RR-615 Mutant	6045 (1) 107 MS	**25**	10	34	40	-
2720	24625 (RP 4926-401-86-72-50-28) Swarna/RAU 3041	3724 96 SB	--	--	41	--	--
2709	24619 NWGR -7011 GR 7/Mahisugnadha/2-1	3468 94 SS	--	--	31	--	--
2721	24617 (RP 4926-215-111-74-21-12) Swarna/RAU 3041	3467 93 MS	--	--	31	--	--
2715	24621 MGD- 1402 IET 18673/ Kumud	5234 97 MS	--	--	--	11	--
Yield of the best check / FD		4832 103		5524 110	2465 94	4733 96	4961 106

Table 5.1: Composition of entries in Advance Variety Trial 1 –Aromatic Short Grain (AVT-1-ASG), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
2nd year of testing				
2701	24612	R 1656-2816-9-3223-1	Swarna/Jira shankar	SB
2702	24614	CR 3648-22-4	Gayatri/Chinikamini	SB
2703	24616	UBKVAR-2	Pureline Selection from Kalobhog	MS
2704	**Shobini (NC)**			
3rd year of testing				
2705	23878	R 1747-4941-1-515-1	Rastic Br 240-47/ShayamJira	MS
2nd year of testing				
2706	24613	ORJ-1135	RR-615 mutant	MS
2707	24620	RP 4926-175-90-60-45-19	Swarna/RAU 3041	SB
3rd year of testing				
2708	23879	R 1656-1146-5-513-1	Swarna/Jira Shankar	MS
2nd year of testing				
2709	24619	NWGR-7011	GR-7/Mahisugandha/2-1	SS
2710	**Badshabhog (QC)**			
2711	24606	VG 09006	ADT 43/Seeraga Samba	SB
2712	24624	RSR 2011-12-1	Selection from Dubraj	MS
2713	**CR Sugandh Dhan 907 —ZC**			
2714	24615	RP 4926-341-128-101-31-13	Swarna/RAU 3041	MS
2715	24621	MGD-1402	IET-18673/ Kumud	
2716	24623	RP 4926-189-96-48-19-11	Swarna/RAU 3041	MS
2717	**Dubraj (QC)**			
2718	24608	RP 5901-153-7-2-1-1	RP Bio 226*1/IET 18004	SS
2719	**Local Check**			
2720	24625	RP 4926-401-86-72-50-28	Swarna/RAU 3041	SB
2721	24617	RP 4926-215-111-74-21-12	Swarna/RAU 3041	MS

Table No. 5.2: Grain Yield (kg/ha) of entries in AVT-1 ASG Zone 1, 2 & 6 Kharif 2015

Entry No.	IET No.	II	VI								Zone VI Mean (2)		Overall Mean (3)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		U.P.	MH		MH		MH (1)		GU								
		KNP	PDG		@RDN		Mean		NWG								
2701	24612	2543	5089	4	2986	4	5089	4	3274	7	4181	8	3635	8	113	104	231
2702	24614	2030			1212				595		595		1313		124	76	224
2703	24616	2630			1751				521		521		1575		123	134	236
2704	Shobini (NC)	3260 3	5086	5	2786	5	5086	5	4836	2	4961	1	4394	1	108	91	238
2705	23878	3540 1 ...9%			2433	9			4836	3	4836	3	4188	2	90	87	249
2706	24613	1910	4977	6	2381		4977	6	2902		3939	9	3263		109	96	253
2707	24620	2810 9	4331	8	3832	1 *	4331	8	3274	8	3803		3472	9	107	84	252
2708	23879	2900 6	4174	9	1888		4174	9	2902		3538		3325		106	81	266
2709	24619	2300	4511	7	1743		4511	7	5283	1	4897	2	4031	4	110	97	242
2710	Badshabhog (QC)	1703	3247		2459	8	3247		446		1847		1799		114	135	254
2711	24606	2777	3937		2474	7	3937		3125		3531		3280		102	85	255
2712	24624	3272 2	2545		1506		2545		2158		2352		2658		122	120	234
2713	CR Sugandh Dhan 907 —ZC	2823 7			2610	6			2902		2902		2863		117	87	244
2714	24615	2823 8	6023	1 *	3045	3	6023	1	3274	9	4648	5	4040	3	108	92	258
2715	24621	3063 4	4087		2004		4087		4390	4	4238	7	3847	6	104	90	253
2716	24623	2705	5376	3	2244		5376	3	3125		4250	6	3735	7	107	92	246
2717	Dubraj (QC)	2788	2335		1351		2335		1265		1800		2129		119	139	246
2718	24608																
2719	Local Check	2938 5	3807		2241		3807		3051		3429		3265		106	114	272
2720	24625	2033	3742		3494	2 *	3742		3795	5	3768		3190		110	88	244
2721	24617	2596	5944	2 *	2106		5944	2	3497	6	4721	4	4012	5	107	92	262
	Exp Mean	**2672**	**4326**		**2327**		**4326**		**2972**		**3574**		**3252**		**110**	**99**	**248**
	C.D. 5%	452	592		483		580		509		376		285		1		12
	C.V.%	10.24	8.21		12.56		8.05		10.36		9.13		9.39		0.98		6.08
	Sowing Date	03-Jul	12-Jun		15-Jun				09-Jun								
	Planting Date	29-Jul	03-Jul		10-Jul				17-Jul								
	Local ©	Sakkarchini	Phondaghat 1		Ambemohar 157				Krishna Kamod								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.2 Contd: Grain Yield (kg/ha) of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	III															
		OD		OD		OD (2)			W.B		W.B		W.B		W.B (1)		
		CTK		JYP		Mean			CHN		BNK @		PNB @		Mean		
2701	24612	4579	4 *	4005		4292			4557		2924		4271	1 *	4557		
2704	Shobini (NC)	3631		6220	2	4925	5		5410	2	2847		1899		5410	2	
2705	23878	4908	3 *	3302		4105			3917		4032	1 *	2013	9	3917		
2706	24613	5045	1 *	7180	1 *	6113	1 *	24%	4750	8	2770		3938	2 *	4750	8	
2707	24620	4364	5	5656	4	5010	4	2%	5567	1	3653	2	2213	6	5567	1	3%
2708	23879	5009	2 *	5646	5	5327	3	8%	4613		3447	5	2409	5	4613		
2709	24619	3652		5661	3	4657	7		5407	3	3632	3	1908		5407	3	
2710	Badshabhog (QC)	3743	9	4341		4042			5110	4	3216	6	3184	3	5110	4	
2713	CR Sugandh Dhan 907 —ZC	1756		5397	8	3576			4917	7	3183	7	1453		4917	7	
2714	24615	3807	7	5646	6	4726	6		4033		3032	8	2711	4	4033		
2715	24621	3794	8	4796		4295			3717		3032	9	2018	8	3717		
2717	Dubraj (QC)	2797		4823		3810			5083	5	2893		1328		5083	5	
2718	24608			5386	9	5386	2	9%	3967		2247				3967		
2719	Local Check	3559		4466		4012			4100		3555	4	1502		4100		
2720	24625	4170	6	4836		4503	8		5033	6	2601		1749		5033	6	
2721	24617	3450		5532	7	4491	9		4623	9	2247		2109	7	4623	9	
	Exp Mean	**3884**		**5181**		**4553**			**4675**		**3082**		**2314**		**4675**		
	C.D. 5%	746		544		491			425		108		247		415		
	C.V.%	11.49		6.30		9.34			5.45		2.10		6.37		5.32		
	Sowing Date	18-Jun		25-Jun					30-Jun		17-Jul		15-Jun				
	Planting Date	30-Jul		23-Jul					04-Aug		27-Aug		13-Jul				
	Local ©	Ketekijoha		Kalajeera					Gandheswari		Danaguri		Kalo Nunia				

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.2 Contd.: Grain Yield (kg/ha) of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	III												IV		V			
		U.P.		U.P.		U.P.		U.P. (1)		Zone III Mean (4)				TR		CG		CG	
		MSD	@	VRN		GRP	@	Mean						ARD		RPR		JDP	
2701	24612	2831		5100		2877		5100		4560				2615	9	4105	4	5384	5
2704	Shobini (NC)	3819	4	6833	2			6833	2	5524	2			2465		3616		5076	6
2705	23878	3285	6	4957		2225		4957		4271				2235		3723	9	4791	8
2706	24613	3339	5	7333	1	3617	9	7333	1 7%	6077	1 * 10%			3548	3 * ...34%	5674	1 *	6847	1 *
2707	24620	2297		5867	8	4217	6	5867	8	5363	4			4627	1 * ...75%	3804	7	4330	
2708	23879			6800	3	4668	5	6800	3	5517	3			2945	7 ...12%	4643	2	5620	2
2709	24619	4193	3	4800		5734	1	4800		4880	9			3468	4 * ...31%	2762		5541	4
2710	Badshabhog (QC)	3018	9	2800		2288		2800		3998				2325		3797	8	4106	
2713	CR Sugandh Dhan 907 —ZC	2244		3167		5224	3	3167		3809				2425		4104	5	5565	3
2714	24615	3125	7	6567	5	4163	7	6567	5	5013	8			2948	6 ...12%	3416		4414	
2715	24621	4754	1	6000	7	3989	8	6000	7	4577				2258		3721		4903	7
2717	Dubraj (QC)	4647	2	2800		3250		2800		3876				2639	8	4121	3	4566	9
2718	24608			5767	9			5767	9	5040	7								
2719	Local Check	2724		4467		3355		4467		4148				2509		3557		4507	
2720	24625	3072	8	6567	6	4887	4	6567	6	5151	5			3724	2 * ...41%	3715		4203	
2721	24617	2030		6767	4	5706	2	6767	4	5093	6			3467	5 * ...31%	3896	6	4060	
	Exp Mean	**3241**		**5412**		**4014**		**5412**		**4802**				**2947**		**3910**		**4928**	
	C.D. 5%	430		869		2326		704		320				803		586		453	
	C.V.%	7.90		9.63		34.52		7.82		8.23				16.30		8.96		5.50	
	Sowing Date	08-Jul		03-Jun		05-Jul								24-Jul		24-Jun		18-Jun	
	Planting Date	08-Aug		26-Jun		25-Jul								11-Aug		19-Jul		16-Jul	
	Local ©	NDR 6093				Pusa 1176								Harinarayan		Indira Sugandhit Dhan 1		Dubraj	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.2 Contd.: Grain Yield (kg/ha) of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	V						Zone V Mean (4)		VII		Overall Mean (9)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		CG		CG		CG (4)				KA						
		BSP		AMB		Mean		Mean		MGD	@					
2701	24612	4737	7	5427	6	4913	4 4%	4913	4 4%	1161	4	4501	9	113	108	255
2704	Shobini (NC)	4678	8	5561	5	4733	5	4733	5	1169	3	4832	5	103	98	259
2705	23878	3421		5105	7	4260		4260		621	6	4040		94	99	281
2706	24613	5702	1 *	8329	1 *	6638	1 * 40%	6638	1 * 40%	620	7	6045	1 * 25%	107	104	283
2707	24620	5058	4	4675		4467	8	4467	8			4883	4 1%	109	100	300
2708	23879	5439	2	6394	3	5524	2 * 17%	5524	2 * 17%	1882	1 *	5234	2 * 8%	109	93	277
2709	24619	3450		4433		4046		4046		1339	2 *	4353		108	108	292
2710	Badshabhog (QC)	2485		3815		3551		3551				3614		117	154	265
2713	CR Sugandh Dhan 907 —ZC	4444	9	3267		4345		4345				3894		112	94	275
2714	24615	5000	5	5105	8	4484	6	4484	6			4548	7	103	105	249
2715	24621	5409	3	6905	2	5234	3 * 11%	5234	3 * 11%			4611	6	101	97	232
2717	Dubraj (QC)	4444		4541		4418	9	4418	9	400	8	3979		113	153	255
2718	24608											5040	3 4%	112	116	259
2719	Local Check	3798		6038	4	4475	7	4475	7			4111		109	121	273
2720	24625	3626		4970	9	4129		4129		389	9	4538	8	106	99	283
2721	24617	4825	6	3842		4156		4156		1075	5	4496		103	101	243
	Exp Mean	**4435**		**5227**		**4625**		**4625**		**962**		**4523**		**107**	**109**	**268**
	C.D. 5%	927		1439		425		425		54		249		1		12
	C.V.%	12.50		16.46		11.36		11.36		3.23		10.26		1.24		9.61
	Sowing Date	15-Jun								11-Jun						
	Planting Date	07-Jul		20-Jul												
	Local ©	Vishnu Bhog		Indira Sugandhit Dhan-1						KAGISAL						

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.3: Days to 50% flowering of entries in AVT-1 ASG Zone 1, 2 & 6 Kharif 2015

Entry No.	IET No.	II	VI				Zone VI Mean (3)	Overall Mean (4)
		U.P.	MH	MH	MH (2)	GU		
		KNP	PDG	RDN	Mean	NWG		
2701	24612	108	111	111	111	121	115	113
2702	24614	110	121	126	123	141	129	124
2703	24616	111	118	119	118	143	127	123
2704	Shobini (NC)	112	98	105	102	115	106	108
2705	23878	102	77	90	83	92	86	90
2706	24613	109	102	106	104	119	109	109
2707	24620	112	101	101	101	113	105	107
2708	23879	104	102	105	104	112	106	106
2709	24619	108	103	118	110	109	110	110
2710	Badshabhog (QC)	112	84	119	102	139	114	114
2711	24606	108	101	102	102	98	100	102
2712	24624	113	118	122	120	135	125	122
2713	CR Sugandh Dhan 907 —ZC	115	120	107	114	127	118	117
2714	24615	115	98	104	101	113	105	108
2715	24621	113	96	105	101	100	100	104
2716	24623	114	97	105	101	112	105	107
2717	Dubraj (QC)	116	115	117	116	128	120	119
2718	24608							
2719	Local Check	104	84	115	99	123	107	106
2720	24625	112	102	105	104	119	109	110
2721	24617	111	98	107	103	114	106	107
	Exp Mean	**110**	**102**	**109**	**106**	**119**	**110**	**110**
	C.D. 5%	3	1	1	1	0	0	1
	C.V.%	1.90	0.58	0.59	0.58	0.00	0.45	0.98

Table No. 5.3: Days to 50% flowering of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	III											Zone III Mean (7)	IV	V					Zone V Mean (4)	Overall Mean (12)
		OD	OD	OD (2)	W.B	W.B	W.B	W.B (3)	U.P.	U.P.	U.P.	U.P. (2)		TR	CG	CG	CG	CG	CG (4)		
		CTK	JYP	Mean	CHN	BNK	PNB	Mean	@MSD	VRN	GRP	Mean		ARD	RPR	JDP	BSP	AMB	Mean		
2701	24612	129	110	120	109	113	117	113	105	131	111	121	117	91	117	114	122	88	110	110	113
2704	Shobini (NC)	128	104	116	108	114	104	109	117	101		101	110	94	107	104	102	71	96	96	103
2705	23878	106	93	100	92	115	93	100	104	82	111	97	99	82	88	92	86	85	88	88	94
2706	24613	128	112	120	112	112	108	111	123	95	117	106	112	96	109	109	107	81	102	102	107
2707	24620	130	112	121	113	116	108	112	135	131	109	120	117	98	107	110	102	73	98	98	109
2708	23879	127	115	121	107	117	112	112		118	111	115	116	97	108	110	107	79	101	101	109
2709	24619	129	115	122	105	120	108	111	118	102	120	111	114	94	107	110	104	76	99	99	108
2710	Badshabhog (QC)	130	104	117	115	118	129	121	124	134	123	129	122	89	119	118	129	91	114	114	117
2713	CR Sugandh Dhan 907 –ZC	139	114	127	115	114	129	119	128	99	101	100	116	91	119	120	126	71	109	109	112
2714	24615	125	104	115	109	112	105	109	127	99	112	105	109	90	105	106	100	71	96	96	103
2715	24621	122	103	113	102	110	107	106	109	94	101	98	106	88	104	106	99	79	97	97	101
2717	Dubraj (QC)	130	113	122	113	116	127	119	115	105	120	113	118	88	118	107	124	90	110	110	113
2718	24608		113	113	93	108		100		135		135	112								112
2719	Local Check	128	109	119	95	120	129	115	110	105	105	105	113	91	106	119	122	78	106	106	109
2720	24625	129	115	122	104	105	104	104	104	116	109	113	112	96	108	111	105	76	100	100	106
2721	24617	122	112	117	103	112	103	106	127	96	111	103	108	93	105	107	100	71	96	96	103
	Exp Mean	**127**	**109**	**118**	**106**	**114**	**112**	**111**	**118**	**109**	**112**	**110**	**113**	**92**	**109**	**110**	**109**	**79**	**101**	**101**	**107**
	C.D. 5%	0	2	2	1	0	4	1	1	0	3	1	1	5	1	1	0	2		0	1
	C.V.%	0.00	1.03	1.17	0.41	0.00	2.19	1.25	0.60	0.13	1.54	1.06	1.13	3.55	0.52	0.37	0.00	1.31		0.29	1.24

Table No. 5.4: Plant Height (cm) of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	III											Zone III Mean (7)	IV	V					Zone V Mean (4)	VII	Overall Mean (13)
		OD	OD	OD (2)	W.B	W.B	W.B	W.B (3)	U.P.	U.P.	U.P.	U.P. (2)		TR	CG	CG	CG	CG	CG (4)		KA	
		CTK	JYP	Mean	CHN	BNK	PNB	Mean	@MSD	VRN	GRP	Mean		ARD	RPR	JDP	BSP	AMB	Mean		MGD	
2701	24612	124	93	109	112	100	130	114	106	113	106	109	111	114	103	106	124	104	109	109	70	108
2704	Shobini (NC)	106	103	105	102	90	110	101	91	107		107	103	89	100	95	114	92	100	100	67	98
2705	23878	93	97	95	85	115	104	101	110	104	102	103	100	118	101	91	106	104	101	101	69	99
2706	24613	118	105	112	105	90	121	105	86	115	111	113	109	92	110	101	117	91	105	105	70	104
2707	24620	102	94	98	93	85	114	97	105	94	109	101	99	135	98	88	106	84	94	94		100
2708	23879	105	86	96	95	85	106	95		93	106	100	97	104	96	84	109	83	93	93	53	93
2709	24619	113	108	110	110	100	112	107	90	124	115	119	112	136	102	108	115	105	108	108	60	108
2710	Badshabhog (QC)	168	147	158	147	155	136	146	95	153	166	159	153	159	161	156	155	152	156	156		154
2713	CR Sugandh Dhan 907 —ZC	110	91	101	108	85	100	98	128	87	82	84	95	89	100	95	99	85	95	95		94
2714	24615	117	101	109	100	90	109	100	85	115	109	112	106	118	103	89	115	92	100	100		105
2715	24621	105	96	101	110	90	107	102	88	114	92	103	102	107	101	90	106	88	96	96	50	97
2717	Dubraj (QC)	176	164	170	148	140	164	151	89	168	155	161	159	139	170	151	168	160	162	162	94	153
2718	24608		91	91	110	90		100		181		181	118								108	116
2719	Local Check	140	121	131	125	140	135	133	108	76	114	95	122	129	103	130	147	95	119	119		121
2720	24625	104	95	99	99	90	103	97	110	89	102	96	97	124	103	90	104	85	95	95		99
2721	24617	121	100	110	98	95	103	99	100	116	104	110	105	120	110	93	118	96	104	104	46	101
	Exp Mean	**120**	**106**	**113**	**109**	**103**	**117**	**109**	**99**	**116**	**112**	**114**	**112**	**118**	**111**	**104**	**120**	**101**	**109**	**109**	**69**	**109**
	C.D. 5%							0				4	4						0	0		

Table No. 5.4: Plant Height (cm) of entries in AVT-1 ASG Zone 1, 2 & 6 Kharif 2015

Entry No.	IET No.	II	VI				Zone VI Mean (3)	Overall Mean (4)
		U.P.	MH	MH	MH (2)	GU		
		KNP	PDG	RDN	Mean	NWG		
2701	24612	64	127	91	109	134	117	104
2702	24614	54	93	71	82	86	83	76
2703	24616	104	174	124	149	134	144	134
2704	Shobini (NC)	61	116	78	97	108	101	91
2705	23878	77	85	82	83	106	91	87
2706	24613	62	117	88	103	118	108	96
2707	24620	72	88	79	83	98	88	84
2708	23879	69	86	70	78	99	85	81
2709	24619	73	125	74	100	117	105	97
2710	Badshabhog (QC)	87	163	131	147	160	151	135
2711	24606	64	103	80	92	92	92	85
2712	24624	97	155	100	127	130	128	120
2713	CR Sugandh Dhan 907 —ZC	58	106	90	98	93	96	87
2714	24615	57	119	85	102	108	104	92
2715	24621	68	115	79	97	99	98	90
2716	24623	71	114	74	94	111	99	92
2717	Dubraj (QC)	104	166	117	141	170	151	139
2718	24608							
2719	Local Check	88	86	131	108	152	123	114
2720	24625	62	114	78	96	98	97	88
2721	24617	61	109	83	96	113	102	92
	Exp Mean	**73**	**118**	**90**	**104**	**116**	**108**	**99**
	C.D. 5%				6		0	

Table No. 5.5: Panicles/ M² of entries in AVT-1 ASG Zone 1, 2 & 6 Kharif 2015

Entry No.	IET No.	II	VI				Zone VI Mean (3)	Overall Mean (4)
		U.P.	MH	MH	MH (2)	GU		
		KNP	PDG	RDN	Mean	NWG		
2701	24612	247	240	176	208	263	226	231
2702	24614	219	162	263	213	250	225	224
2703	24616	244	268	203	235	230	234	236
2704	Shobini (NC)	240	232	206	219	273	237	238
2705	23878	316	211	195	203	274	226	249
2706	24613	206	290	255	272	260	268	253
2707	24620	170	302	274	288	262	279	252
2708	23879	297	292	213	253	260	255	266
2709	24619	208	305	178	242	276	253	242
2710	Badshabhog (QC)	267	288	223	256	239	250	254
2711	24606	303	209	248	228	261	239	255
2712	24624	281	227	175	201	251	218	234
2713	CR Sugandh Dhan 907 —ZC	294	231	193	212	260	228	244
2714	24615	266	287	216	252	262	255	258
2715	24621	296	266	178	222	270	238	253
2716	24623	252	291	179	235	262	244	246
2717	Dubraj (QC)	285	243	210	227	246	233	246
2718	24608							
2719	Local Check	289	288	258	273	255	267	272
2720	24625	216	296	197	246	266	253	244
2721	24617	291	257	237	247	264	253	262
	Exp Mean	**259**	**259**	**214**	**236**	**259**	**244**	**248**
	C.D. 5%	19	34	24	23	7	13	12
	C.V.%	4.33	8.00	6.85	8.29	1.59	5.60	6.08

Table No. 5.5 : Panicles/ M² of entries in AVT-1 ASG Zone 3,4,5 & 7 Kharif 2015

Entry No.	IET No.	III											Zone III Mean (7)	IV	V				Zone V Mean (3)	VII	Overall Mean (12)
		OD	OD	OD (2)	W.B	W.B	W.B	W.B (3)	U.P.	U.P.	U.P.	U.P. (2)		TR	CG	CG	CG	CG (3)		KA	
		CTK	JYP	Mean	CHN	BNK	PNB	Mean	@MSD	VRN	GRP	Mean		ARD	RPR	JDP	AMB	Mean		MGD	
2701	24612	217	297	257	296	294	214	268	314	324	297	311	277	297	186	258	230	225	225	155	255
2704	Shobini (NC)	260	297	279	295	259	174	243	502	267		267	259	347	211	250	193	218	218	292	259
2705	23878	232	326	279	297	452	220	323	336	300	248	274	297	338	201	245	201	216	216	307	281
2706	24613	231	378	304	303	322	231	285	489	241	306	273	287	359	222	244	221	229	229	337	283
2707	24620	256	356	306	299	390	262	317	418	281	312	296	308	461	224	271	187	227	227		300
2708	23879	243	363	303	292	328	222	281		299	294	296	291	377	236	272	186	232	232	210	277
2709	24619	280	335	307	319	387	222	309	511	298	307	302	307	405	221	301	186	236	236	243	292
2710	Badshabhog (QC)	216	370	293	304	293	136	244	389	235	275	255	261	404	226	246	206	226	226		265
2713	CR Sugandh Dhan 907 —ZC	270	409	340	284	296	152	244	305	278	321	299	287	347	236	252	181	223	223		275
2714	24615	198	294	246	307	291	159	252	309	265	305	285	260	315	212	177	212	200	200		249
2715	24621	242	308	275	306	292	168	255	440	239	246	243	257	284	205	232	187	208	208	77	232
2717	Dubraj (QC)	199	457	328	320	261	155	245	358	271	256	263	274	286	240	203	215	219	219	203	255
2718	24608		315	315	278	193		235		324		324	278							183	259
2719	Local Check	359	306	333	312	353	136	267	333	267	308	287	291	337	214	219	194	209	209		273
2720	24625	241	415	328	313	261	165	246	331	296	288	292	283	462	224	281	168	224	224		283
2721	24617	267	358	313	293	227	168	230	234	224	284	254	260	286	243	236	200	226	226	123	243
	Exp Mean	**247**	**349**	**300**	**301**	**306**	**186**	**266**	**376**	**276**	**289**	**282**	**280**	**354**	**220**	**246**	**198**	**221**	**221**	**213**	**268**
	C.D. 5%	50	44	34	24	4	15	9	65	25	15	13	11	85	36	61	23	25	26	70	12
	C.V.%	12.05	7.59	9.69	4.73	0.77	4.79	3.74	10.24	5.51	3.10	3.91	6.27	14.35	9.88	14.77	6.88	12.13	12.44	19.29	9.61

Table 5.6: Grain quality characteristics of entries in Advance Variety Trial 1- Aromatic Short Grain (AVT 1-ASG), kharif 2015

IIRR												
ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	VER	WU	KLAC
2701	24612	80.1	67.4	59.3	4.29	2.28	1.88	SB	VOC	5.4	205	7.8
2702	24614	81.3	71.9	65.3	4.31	1.96	2.19	SB	VOC	5.3	190	5.4
2703	24616	81.5	71.8	66.4	4.76	1.85	2.57	MS	A	5	220	7.2
2704	Shobini (NC)	76.9	62.8	58.4	5.15	1.64	3.14	SS	VOC	4.8	205	8.1
2705	23878	78.5	55.6	53.7	5.58	2.03	2.74	MS	VOC	5.3	260	8.1
2706	24613	77.9	68.1	61.3	5.49	2.05	2.67	MS	VOC	4.6	255	8.6
2707	24620	76.7	68.4	67.3	4.37	1.86	2.34	SB	A	5	255	6.2
2708	23879	79.3	68.9	63.2	5.45	1.85	2.94	MS	A	4.6	310	7.4
2709	24619	80.8	69.9	65.8	5.73	1.71	3.35	SS	A	4.2	320	8.8
2710	Bhasha Bhog	78.2	68.9	57.6	4.08	1.92	2.12	SB	VOC	5.4	265	6.6
2711	24606	76.1	65.2	52.3	3.48	1.93	1.8	SB	VOC	4.7	360	6.4
2712	24624	81.1	67.5	51.4	4.81	1.82	2.64	MS	VOC	5.2	240	7.2
2713	CR Sugandh dhan 907	78.3	66.9	62.6	5.26	1.97	2.67	MS	A	5.3	245	8.8
2714	24615	76.6	62.9	54.6	4.75	1.85	2.56	MS	VOC	4.7	265	7.3
2715	24621	78.1	60.1	56.2	5.16	1.85	2.78	MS	VOC	4.8	280	8.0
2716	24623	78.9	70.5	65.0	4.89	1.75	2.79	MS	A	5.3	160	5.5
2717	Dubraj	78.1	63.5	56.0	5.27	2.23	2.36	SB	VOC	5	285	8.6
2718	24608	80.8	70.2	59.8	5.55	1.61	3.44	SS	VOC	4.2	330	10.1
2719	LC											
2720	24625	77.3	67.2	63.4	4.49	2	2.24	SB	A	4.7	280	6.9
2721	24617	76.4	60.2	57.3	4.83	1.84	2.62	MS	VOC	4.8	220	7.7

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 5.6 Contd.: Grain quality characteristics of entries in Advance Variety Trial 1- Aromatic Short Grain (AVT 1-ASG), kharif 2015

IIRR							NRRI		
ENTRY NO.	IET NO.	ER	ASV	AC	GC	AROMA	ASV	AC	GC
2701	24612	1.81	5.0	25.69	60	NS	5.00	19.57	41.00
2702	24614	1.25	5.0	23.93	25	SS	5.00	22.50	38.00
2703	24616	1.51	5.0	21.79	64	SS	6.00	19.95	45.00
2704	Shobini (NC)	1.57	4.0	23.73	22	MS	3.00	20.17	38.00
2705	23878	1.45	3.0	20.85	54	NS	3.00	20.62	34.00
2706	24613	1.56	4.0	24.25	51	MS	4.00	19.80	49.00
2707	24620	1.41	4.0	23.76	59	NS	3.00	22.42	31.00
2708	23879	1.35	4.0	24.49	68	SS	3.00	20.47	39.00
2709	24619	1.53	4.0	23.46	47	SS	4.00	19.57	42.00
2710	Bhasha Bhog	1.61	4.0	21.03	50	SS	5.00	19.42	43.00
2711	24606	1.83	4.0	21.44	42	NS	3.00	21.52	37.00
2712	24624	1.49	4.0	21.94	25	SS	4.00	19.57	44.00
2713	CR Sugandhdhan 907	1.67	4.0	25.75	23	MS	5.30	20.55	39.00
2714	24615	1.53	4.0	22.14	44	NS	3.00	19.87	47.00
2715	24621	1.55	4.0	26.78	47	MS	4.00	19.57	44.00
2716	24623	1.12	4.0	23.20	22	NS	3.00	19.95	51.00
2717	Dubraj	1.63	4.0	26.04	43	MS	4.00	20.25	41.00
2718	24608	1.81	5.0	23.61	52	MS	6.00	20.55	42.00
2719	LC						6.00	18.52	34.00
2720	24625	1.53	4.0	22.73	23	ms	4.00	20.02	41.00
2721	24617	1.59	4.0	22.11	22	MS	5.00	20.77	43.00

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

INITIAL VARIETY TRIAL – AROMATIC SHORT GRAIN (IVT- ASG)

Locations: 19 **Entries: 27**

Checks: Shobini (NC), Badshabhog, CR Sugandh Dhan 907 & Sugandhasamba(ZC), Dubraj & Ketekejoha (QC) and Local **Table: 5.9**

Initial Variety Trial – Aromatic short grain (IVT-ASG) was sent to 21 locations of 6 rice agro-climatic zones of rice comprising of 8 states. The total number of entries tested were 27 with 5 checks: Shobini (National check), Badshabhog, CR Sugandh Dhan 907 and Sugandhsamba (Regional check), Ketekejoha and Dubraj (Quality check) and local check along with 22 test cultures. Data from all the locations was received except from Chakdha (West Bengal) and Khudwani (J&K). However, data from 7 locations was not considered in the final analysis because of either low experimental mean yields, or low/ high CV. The experimental mean yields from Kanpur (U.P.), Radhangari (Maharashtra), Nawagam (Gujarat) and Mugad (Karnataka) were below 2500 kg/ha, while CV from Chinsurah (West Bengal) is too low (2.63%) and from Gorakhpur (U.P.) was very high (41.30). At Masodha, the experiment was failed due to drought. Data for many entries from Pondaghat was missing due to late flowering thus affecting grain filling (IET 25427, IET 25437, IET 25439 and Katekejoha) or seed not germinated (IET 25440). Hence, data from 12 locations is only considered in the final analysis which comprised 4 zones. Among these locations, the experimental mean yield varied from 2617 kg/ha at Pundibari to 5605 kg/ha at Raipur. IET 25437 was the lowest yielder with 3177 kg/ha, while IET 25419 was the top performing entry with 4495 kg/ha on overall basis. The CV (%) of experiments varied from 3.27 (Hathwara) to 14.31 (Arundhatinagar). Shobini (NC) is the best check with mean grain yield of 4240 kg/ha on overall basis. Zone wise also, Shobini (NC) is the best check in all zones except in zone VI where local check exhibited superior performance.

General information of conduct of trial Initial Variety Trial – Aromatic Short Grain (IVT- ASG), Kharif, 2015

Location	Highest Yielding ckeck		Highest	Yield	Experimental Mean	Yield Range
	check	Yield (kg/ha)	Yielding entry	(kg/ha)		(kg/ha)
Kanpur @	ShobIni	3804	25428	4470 (1)	2443	565-4470
CRRI	Zonal check	4924	25427	5757 (1)	3876	2800-5757
Jeypore	Ketekejoha	7659 (1)	25431	7372 (2)	4787	3183-7659
Chinsuah @	Dubraj	5700 (1)	25423	5675 (2)	4397	2965-5700
Bankura	Shobini	3947	25419	4109 (1)	3317	2562-4109
Pundibari	Shobini	2140	25421	5673 (1)	2617	1533-5673
Hathwara	Shobini	4890	25431	5590 (1)	3983	2525-5590
Masodha @	Ketekejoha	3451	25428	4036 (1)	2930	1888-4036
Varasani	Shobini	5550	25419	6850 (1)	4841	2500-6850
Gorakhpur @	Shobini	3395	25422	5921 (1)	2444	1038-5921
Arundhatinagar	Shobini	3993	25419	4824 (1)	3045	2072-4824
Raipur	Shobini	7348 (1)	25421	7254 (2)	5605	3418-7254
Jagdalpur	Dubraj	3247	25440	4546 (1)	2710	1809-4546
Bilaspur	Shobani	3947	25436	5833 (1)	3887	2763-5833
Ambikapur	Dubraj	6187	25439	7627 (1)	4296	2027-7627
Pondaghat	Local check	5346	25431	5396 (1)	3484	835-5396
Radhanagari (@)	Local check	2758	25422	3917 (1)	2390	1426-3917
Nawagam (@)	Shobini	2469	25424	3704 (1)	1385	240-3704
Mugad (@)	Local check	785	25429	990 (1)	301	28-990

On overall basis, national check, zonal check, quality checks (Kektekejoha and Dubraj) and local check recorded 4240 kg/ha, 3744 kg/ha, 3762 kg/ha, 3792 kg/ha and 3794 kg/ha, respectively. Days to 50% flowering among the test entries ranged from 94 days (IET 25428, IET 25423) to 122 days (IET 25427). Among the checks, Shobini (NC) was earliest to flower with 101 days to 50% flowering, followed Local and Zonal checks with 110 days (Table 5.11). IET 25430 was tallest in plant stature with 135 cm and IET 25433 was the shortest with 86 cm (Table 5.12). The panicles/m^2 (Table 5.13) among the test entries varied from 246 (IET 25430) to 310 (IET 25429).

Quality analysis of entries was conducted at Indian Institute of Rice Research, Hyderabad for all the physic-chemical characters except the head rice recovery using the samples grown at Raipur (Table 5.14). The broken percent was very high from the samples grown from Raipur, hence the entries grown at IIRR, were utilized for analyzing and estimation of milling characteristics. Among the entries tested IET nos. 24520, 25422, 25428 and 25440 were with long slender grains and hence they are dropped. Based on the mean performance of entries across locations, the superior performing entries on overall and zone wise (Tables 5.15 & 5.16) are discussed below.

Overall

IET 25419 (HUR-156) derived from the cross combination Taroari Basmati dwarf mutant-2/MTU 7029 with a mean grain yield of 4491 kg/ha and 102 days to 50% flowering ranked first on overall basis (Table 5.10). This culture is of semi-dwarf plant stature with 103 cm, possessing 283 panicles/m^2 recorded 6% yield advantage over best check (Shobini) on overall basis. IET 25419 exhibited significant superior performance over best check at Varanasi (6650 kg/ha 1^{st}) and at Hathwara (5440 kg/ha, 2^{nd}). Zone wise, IET 25419 was promising in Zone III (Eastern) and Zone IV (North-Eastern) by 15% and 21% yield superiority respectively over best check (Shobini). This culture also out yielded the best check in Uttar Pradesh, Tripura and West Bengal. Quality wise, IET 25419 with aromatic short slender grain grains recorded high head rice recovery (61.9%), ASV of 4 with intermediate AC (23.58 %) and hard GC (22mm). Based on yield and quality, IET 25419 is promoted to next level of testing in AVT 1 ASG.

Zone II (Northern)

The data from single location (Kanpur) only is available. The experimental mean yield at Kanpur location was 2443 kg/ha which is below 2500 kg/ha and so the data is not included in the final analysis. Hence, there are no promising entries in zone.

Zone III (Eastern)

IET 25433 (RP 4993-300-22-18-5-8-1) derived from the cross BPT 5204/Chittimuthyalu with 4519 kg/ha ranked 2^{nd} in Zone III. IET 25433 with 117 days to 50% flowering, semi dwarf plant stature culture (93 cm), 313 panicles /m^2, recorded 11% yield advantage over best check. IET 25433 exhibited significant superiority over best check at Varanasi (6650 kg/ha, 4^{th}). State wise it recorded 20% yield superiority over BC in Uttar Pradesh. Quality wise, IET 25433 possessed aromatic medium slender grains with 22.67%

amylose content, ASV of 4.0 and 22 mm of gel consistency. Based on yield and quality as compared to checks this culture is promoted to next level of testing.

In addition to above culture, IET nos. 25419, 25424 and 25431 also recorded the record yield advantage over best check were promising.

Zone IV (North Eastern)

IET 25419 is promising on overall as well as in Zone IV (North Eastern) and is promoted to next level of testing in AVT-1 ASG.

Zone VI (Western)

None of the entries surpassed the required yield advantage over best check.

Zone V (Central)

IET 25422 (HUR-155) exhibited 13% yield superiority over best check in Chhattisgarh. Quality wise, it possessed long slender grains and hence not suited to this trial.

Zone VII (Southern)

Data from Mugad was not included due to low experimental mean yield (301 kg/ha), none of the entries are promising.

Based on yield superiority and quality the following entries merit promotion to AVT-1 ASG

Overall	**IET 25419**
Zone III	**IET Nos. 25419, 25433, 25424, 25431**
Zone IV	**IET 25419**

Table 5.15: Overall performance of entries in Initial Variety Trial- Aromatic short grain (IVT-ASG), Kharif, 2015

Entry No.	IET NO	Yield (kg/ha) /FD/ GT	Yield adv. % over BC	Significantly superior to Best check, location, yield kg/ha/rank	Increase over the best check			
					State		Region/Zone	
					Rank	%	Rank	%
2801	25419	4491 102	6	HTW 5440 (2) VRN 6650 (1)	WB (4) UP (1) TR (1)	8 23 21	Z III (1) Z IV (1)	15 21
2806	Shobini (NC)	4240 101						
2808	Zonal Check	3744 110						
2812	Ketekejoha (QC)	3762 116						
2816	Dubraj (QC)	3792 113						
2822	Local (LC)	3794 110						

Table 5.16: Zone wise performance of entries in Initial variety Trial-Aromatic Short Grain (IVT-ASG) kharif, 2015

Entry No.	IET NO	Yield (kg/ha) /FD/ GT	Yield adv. % over BC	Significantly superior to Best check, location, yield kg/ha/rank	Increase over the best check	
					State, Rank	%
Zone III (Eastern)						
2801	25419	46601(1) 98	15	HTW 5440 (2) VRN 6850 (1)	WB(4) UP(1) TR(1)	8 23 21
2819	25433	4519 (2) 117	11	VRN 6650 (4)	UP(4)	20
2807	25424	4511(3) 109	11	VRN 6850 (2)	UP(2)	23
2817	25431	4479 (4) 105	10	HTW 5590 (1)	WB (3)	9
2806	Shobini(NC)	4069 102				
2808	CR Sugandh Dhan 209 (ZC)	3902 112				
2812	Ketekejoha (QC)	3888 119				
2816	Dubraj (QC)	3634 118				
2822	Local (LC)	3517 120				

Table 5.9: Composition of entries in Initial Variety Trial –Aromatic Short Grain (IVT-ASG), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
2801	25419	HUR-156	Taroari Basmati dwarf mutant-2/MTU 7029	SS
2802	25420	CR 2939-23-8-3	IR 36/Basmati 370	LS
2803	25421	CSAR 2012-10	Selection from Kalmahi	MS
2804	25422	HUR-155	Pusa Sugandh-2/Narendra 97	LS
2805	25423	R 2093-1536-1-660-1	Samaleshwari / TRC 87-251	SB
2806	**Shobini (NC)**			
2807	25424	RP 4926-318-119-65-41-16	Swarna/RAU 3041	SB
2808	**Badshabhog (Central), CR Sugandh Dhan 907 (Eastern) -- ZC**			
2809	25425	Pusa 1638-07-130-2-67-1-1	PUSA 1176/Kalanamak	MS
2810	25426	HUR-1308	PB1/MTU7029	SS
2811	25427	CR 3660-22-9-4	PR 118/Basmati 370	MS
2812	**Ketekejoha (QC)**			
2813	25428	Sharbati Selection-1	Pure line selection from Sharbati	LS
2814	25429	Pusa 1638-07-171-1-81-1-2	Pusa 1176/Kalanamak	MS
2815	25430	TTB-J-4-2-2	Kopow joha/Mahsuri	MS
2816	**Dubraj (QC)**			
2817	25431	RP 4926-358-127-83-24	Swarna/RAU 3041	SB

Entry No.	IET No.	Designation	Cross Combination	Grain type
2818	25432	TTB-J-3-32-6	Manikimadhuri joha/Bahadur	SBS
2819	25433	RP 4993-300-22-18-5-8-1	BPT5204/Chittimutyalu	MS
2820	25434	SKL-022-40-32-11-43-43	PKV HMT/Dubraj	SS
2821	25435	SYE 381-19-46-15	PKV HMT/ Shrikant	SS
2822	**Local Check**			
2823	25436	ORJ 1142 (RP 4926-341-128-101-3-13)	Swarna / RAU 3041	MS
2824	25437	Gandheswari	Local Selection	SB
2825	25438	TTB-J-3-35-1	Manikimadhuri joha/Bahadur	SB
2826	25439	UBKVR-A-3	Selection from Kalobhog	MS
2827	25440	NDR 9939	IR702014-8-NDR-28-1-41-B-2/NDR 8011	LS

Table No. 5.10: Grain Yield (kg/ha) of en tries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	II		III																			
		U.P.		OD		OD		OD (2)		W.B		W.B		W.B		W.B		W.B (3)					
		KNP	@	CTK		JYP		Mean		CHN	@	BNK		PNB		HTW		Mean					
2801	25419	4100	3	4996	2	4290		4643		3450		4109	1	2273		5440	2*	3941	4*	8%			
2802	25420	3452	6	3651		4078		3865		3675		2839		1978		2525		2448					
2803	25421	4275	2	2809		4691		3750		3700		3578	9	5673	1*	3565		4272	1*	17%			
2804	25422	2675		4592	5	3624		4108		3775		2724		2420		3165		2770					
2805	25423	2035		2979		3435		3207		5675	2	2669		2582	*	5013	4	3421					
2806	Shobini (NC)	3804	4	4668	4	3219		3944		5450	4	3947	2	2140		4890	6	3659	6				
2807	25424	3019	9	4001		5613	7	4807	9	4425		3532		2357		4713	8	3534	8				
2808	Zone Check	1700		4924	3	5331		5127	4	5025	7	3564		1934		3613		3037					
2809	25425	1532		2818		7002	4	4910	7	4300		3670	7	2203		4125		3333					
2810	25426	1790		4099		3563		3831		4925		3675	6	2683	8*	3700		3353					
2811	25427	2000		5757	1	3183		4470		3675		3486		2368		3263		3039					
2812	Ketekejoha (QC)	1700		3562		7659	1	5610	1	4425		3647	8	1940		3418		3002					
2813	25428	4470	1*	4113	9	5604	8	4858	8	3650		3924	3	4123	2*	2838		3628	7				
2814	25429	1825		3539		3382		3461		3900		2876		1572		3660		2703					
2815	25430	1575		3517		4264		3890		5425	5	3555		1780		4855	7	3397					
2816	Dubraj (QC)	3400	7	3907		5648	6	4777		5700	1	2886		1990		3625		2834					
2817	25431	3150	8	3329		7372	2	5350	3	5525	3	3024		3362	6*	5590	1*	3992	3*	9%			
2818	25432	900		3647		4264		3955		5225	6	3463		4057	3*	4910	5	4143	2*	13%			
2819	25433	1930		4122	8	5794	5	4958	5	4025		3186		2272		5093	3	3517	9				
2820	25434	2780		4099		4052		4076		5025	8	3070		2040		3435		2848					
2821	25435	3730	5	4077		7028	3	5553	2	4725		3361		2667	9*	4248		3425					
2822	Local Check	2998		3002		4295		3648		3600		3763	5	1533		3160		2819					
2823	25436	1835		4386	7	4272		4329		4100		2608		3305	7*	3105		3006					
2824	25437	1485		2993		4846		3919		2965		2562		2109		4275	9	2982					
2825	25438	800		4391	6	5494	9	4942	6	3275		2724		2272		3951		2982					
2826	25439	565		2800		3197		2998		4050		3255		3467	5*	3625		3449					
2827	25440					4061		4061		5025	9	3855	4	3570	4*	3740		3722	5	2%			
	Exp Mean	**2443**		**3876**		**4787**		**4340**		**4397**		**3317**		**2617**		**3983**		**3306**					
	C.D. 5%	556		974		521		541		238		340		359		268		148					
	C.V.%	11.05		12.20		5.30		8.79		2.63		4.99		6.68		3.27		3.89					
	Sowing Date	03-Jul		18-Jun		25-Jun				23-Jun		17-Jul		26-Jun		10-Jul							
	Planting Date	30-Jul		30-Jul		27-Jul				28-Jul		21-Aug		20-Jul		04-Aug							
	Local ©	Sakkarchini		Ketekijoha		Kalajeera				Gandheswari		Danaguri		Kalo Nunia		Danaguri							

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.10 Contd.: Grain Yield (kg/ha) of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	III								Zone III Mean (6)		IV		V			
		U.P.		U.P.		U.P.		U.P. (1)				TR		CG		CG	
		MSD	@	VRN		GRK	@	Mean				ARD		RPR		JDP	
2801	25419	3385	5	6850	1 *	4298	2	6850	1 * 23%	4660	1 * 15%	4824	1 ...21%	7228	3	2873	
2802	25420	2083		4650		1821		4650		3287		2783		7034	5	2461	
2803	25421	2734		3850		1626		3850		4028	9	3291		7254	2	2286	
2804	25422	2930		6650	3 *	5921	1 *	6650	3 * 20%	3863		3588	7	7128	4	3043	6
2805	25423	3190	9	6000	7	2740		6000	7 8%	3779		1839		6752	6	2256	
2806	Shobini (NC)	2995		5550	9	3395	6	5550	9	4069	8	3993	4	7348	1	2809	
2807	25424	2669		6850	2 *	2543		6850	2 * 23%	4511	3 * 11%	3509	8	6093	8	2531	
2808	Zone Check	2604		4050		2220		4050		3902		3685	6	5347		2432	
2809	25425	3776	3	4750		1979		4750		4095	7 1%	3101		6296	7	2905	9
2810	25426	3385	6	5795	8	3650	5	5795	8 4%	3919		3008		5673		2733	
2811	25427	2214		4050		1186		4050		3685		2176		4846		3012	7
2812	Ketekejoha (QC)	3451	4	3100		1514		3100		3888		3424		5343		2582	
2813	25428	4036	1 *	6100	6	4145	3	6100	6 10%	4450	5 * 9%	2085		6071	9	2262	
2814	25429	3190		5550		2488		5550		3430		2072		5463		3154	4
2815	25430			3350		1079		3350		3553		2485		5268		2228	
2816	Dubraj (QC)	2865		3750		1598		3750		3634		2411		5349		3247	3
2817	25431	2995		4200		3874	4	4200		4479	4 * 10%	4041	3 ...1%	4331		2584	
2818	25432	3906	2 *	3400		1331		3400		3957		3263		5640		2507	
2819	25433	2799		6650	4 *	3348	8	6650	4 * 20%	4519	2 * 11%	2259		5784		2922	8
2820	25434	3255	8	6400	5	1164		6400	5 15%	3849		3868	5	5120		3402	2
2821	25435	2474		4100		3388	7	4100		4247	6 4%	4355	2 ...9%	5385		3118	5
2822	Local Check	3320	7	5350		3129	9	5350		3517		3340		3997		1809	
2823	25436	1953		2500		2505		2500		3363		3498	9	4889		2640	
2824	25437	2214		4000		1038		4000		3464		2171		3922		2415	
2825	25438			3950		1457		3950		3797		2143		4756		1920	
2826	25439	1888		4700		1096		4700		3507		2693		3418		2488	
2827	25440			4550		1443		4550		3955		2310				4546	1 *
	Exp Mean	**2930**		**4841**		**2444**		**4841**		**3904**		**3045**		**5605**		**2710**	
	C.D. 5%	397		859		2075		888		247		896		1433		463	
	C.V.%	6.55		8.63		41.30		8.93		7.84		14.31		12.41		8.31	
	Sowing Date	08-Jul		10-Jun		01-Jul						13-Jul		24-Jun		23-Jun	
	Planting Date	08-Aug		27-Jun		25-Jul						06-Aug		18-Jul		16-Jul	
	Local ©	NDR 6093				Pusa 1176						Harinarayan		Indira Sugandhit Dhan 1		Badshahbhog	

Table No. 5.10 Contd.: Grain Yield (kg/ha) of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	V						Zone V Mean (4)		VI			
		CG		CG		CG (4)				MH		MH	
		BLP		ABP		Mean				PDG		RDN	@
2801	25419	4825	4	2667		4398	6	4398	6	3563		3333	4 *
2802	25420	3246		2933		3918		3918		4701	5	1697	
2803	25421	2982		5013	9	4384	7	4384	7	2988		2336	
2804	25422	5132	3	6667	2	5492	1 * 13%	5492	1 * 13%	3554		3917	1 *
2805	25423	3772		4693		4368	8	4368	8	3492		1653	
2806	Shobini (NC)	3947		5387	7	4873	3	4873	3	2986		2402	
2807	25424	3640		2880		3786		3786		4099	7	2081	
2808	Zone Check	2763		2880		3355		3355		4411	6	2619	9
2809	25425	3947		3573		4180		4180		1646		2023	
2810	25426	4386	6	3787		4145		4145		5236	3	3795	2 *
2811	25427	3289		2027		3293		3293				1426	
2812	Ketekejoha (QC)	2763		3947		3659		3659				2012	
2813	25428	4079	8	4693		4276		4276		835		2772	7
2814	25429	4079	9	5707	6	4601	5	4601	5	2708		2059	
2815	25430	3070		3360		3481		3481		2500		3470	3 *
2816	Dubraj (QC)	4605	5	6187	3	4847	4	4847	4	1904		2126	
2817	25431	3816		5387	8	4029		4029		5396	1	2138	
2818	25432	3904		4693		4186		4186		3885	8	2816	6
2819	25433	3728		4800		4308	9	4308	9	4788	4	1560	
2820	25434	5395	2	5920	5	4959	2 2%	4959	2 2%	1413		2424	
2821	25435	4254	7	3787		4136		4136		3535		1631	
2822	Local Check	3904		6027	4	3934		3934		5346	2	2758	8
2823	25436	5833	1 *	3413		4194		4194		3786		1963	
2824	25437	2939		2720		2999		2999				3140	5
2825	25438	3640		2507		3206		3206		3882	9	1999	
2826	25439	3114		7627	1 *	4162		4162				2234	
2827	25440			2720		3633		3633				2160	
	Exp Mean	**3887**		**4296**		**4104**		**4113**		**3484**		**2390**	
	C.D. 5%	1054		586		336		422		425		495	
	C.V.%	13.17		6.64		8.24		10.36		5.86		10.07	
	Sowing Date	15-Jun								12-Jun		15-Jun	
	Planting Date	07-Jul		19-Jul						03-Jul		14-Jul	
	Local ©	Vishnu bhog		Indira Sugandhit Dhan-1						Phondaghat 1		Ambemohar 157	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.10 Contd.: Grain Yield (kg/ha) of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	VI				Zone VI Mean (1)		VII		Overall Mean (12)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		MH (1)		GU				KA						
		Mean		NWG	@			MGD	@					
2801	25419	3563		2126	5	3563		221		4495	1 * 6%	102	103	283
2802	25420	4701	5	2743	3	4701	5	173		3573		101	95	254
2803	25421	2988		1578		2988		300	9	3998		106	134	262
2804	25422	3554		686		3554		393	6	4357	3 3%	95	93	266
2805	25423	3492		1166		3492		795	2	3790		94	96	258
2806	Shobini (NC)	2986		2469	4	2986		450	4	4240	5	101	101	284
2807	25424	4099	7	3704	1 *	4099	7			4151	7	106	94	277
2808	Zone Check	4411	6	686		4411	6	117		3744		110	105	262
2809	25425	1646		1783	8	1646		336	7	3836		110	105	263
2810	25426	5236	3			5236	3	139		4028	8	100	106	271
2811	25427									3405		122	102	264
2812	Ketekejoha (QC)			274				42		3762		116	124	256
2813	25428	835		549		835		336	8	3894		94	116	277
2814	25429	2708		2058	6	2708		990	1 *	3647		107	111	310
2815	25430	2500		343		2500				3353		114	133	246
2816	Dubraj (QC)	1904		754		1904		398	5	3792		113	135	249
2817	25431	5396	1	1852	7	5396	1	265		4369	2 3%	105	101	284
2818	25432	3885	8	274		3885	8			3969		111	105	265
2819	25433	4788	4	1783	9	4788	4			4283	4 1%	110	86	277
2820	25434	1413		3224	2 *	1413		83		4018	9	98	95	268
2821	25435	3535		1166		3535				4160	6	110	99	284
2822	Local Check	5346	2	1783		5346	2	785	3	3794		110	118	273
2823	25436	3786		1372		3786		98		3686		103	102	243
2824	25437			240				37		3177		120	125	236
2825	25438	3882	9	377		3882	9	28		3469		114	108	253
2826	25439			240						3671		117	138	268
2827	25440							39		3669		106	108	301
	Exp Mean	**3484**		**1385**		**3484**		**301**		**3871**		**107**	**109**	**268**
	C.D. 5%	371		385		191		22		215		2	8	34
	C.V.%	5.12		13.44		2.64		3.50		9.79		3.59	0.00	26.31
	Sowing Date			18-Jun				15-Jun						
	Planting Date			23-Jul										
	Local ©			Krishna Kamod										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 5.11: Days to 50% flowering of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	II	III												Zone III Mean (8)
		U.P.	OD	OD	OD (2)	W.B	W.B	W.B	W.B	W.B (4)	U.P.	U.P.	U.P.	U.P. (2)	
		KNP	CTK	JYP	Mean	CHN	BNK	PNB	HTW	Mean	@MSD	VRN	GRK	Mean	
2801	25419	110	129	114	121	103	107	102	103	104	117	99	96	98	107
2802	25420	111	121	111	116	104	100	101	103	102	126	98	101	100	105
2803	25421	98	123	114	118	110	95	108	109	105	97	133	110	121	113
2804	25422	108	126	96	111	98	102	88	98	96	115	82	102	92	99
2805	25423	103	106	99	102	119	95	84	115	103	96	82	95	89	99
2806	Shobini (NC)	107	123	85	104	108	99	103	105	104	119	100	95	98	102
2807	25424	114	130	112	121	109	105	103	106	106	114	104	100	102	109
2808	Zonal Check	108	136	119	127	123	107	120	120	117	121	65	107	86	112
2809	25425	111	123	114	118	111	125	113	107	114	98	131	101	116	115
2810	25426	107	122	95	108	102	102	96	99	100	125	98	116	107	104
2811	25427	121	149	104	126	127	116	134	115	123	126	140	100	120	123
2812	Ketekejoha (QC)	113	135	126	130	123	95	123	112	113	117	133	105	119	119
2813	25428	109	114	110	112	97	102	87	96	95	127	93	101	97	100
2814	25429	106	122	99	110	109	95	115	103	105	98	126	101	114	109
2815	25430	117	136	97	116	116	112	122	110	115		129	105	117	116
2816	Dubraj (QC)	107	125	129	127	114	103	121	104	110	112	134	114	124	118
2817	25431	111	124	111	117	106	108	101	101	104	99	99	111	105	107
2818	25432	117	135	116	125	115	112	110	108	111	120	105	101	103	113
2819	25433	105	137	126	131	119	104	111	110	111	121	116	116	116	117
2820	25434	105	120	114	117	97	95	94	95	95	112	94	100	97	101
2821	25435	115	130	98	114	117	95	106	105	106	119	113	110	111	109
2822	Local Check	110	138	118	128	126	120	130	111	122	100	117	104	110	120
2823	25436	114	123	105	114	109	102	101	102	103	123	100	101	100	105
2824	25437	112	140	112	126	128	109	126	112	119	110	141	113	127	122
2825	25438	111	137	113	125	120	112	109	113	113		105	106	106	114
2826	25439	110	132	124	128	123	99	119	106	112	107	133	103	118	117
2827	25440			109	109	106	109	124	100	110		115	111	113	111
	Exp Mean	**110**	**128**	**110**	**119**	**112**	**105**	**109**	**106**	**108**	**113**	**111**	**104**	**107**	**110**
	C.D. 5%	6	0	3	2	1	0	4	3	1	2	28	9	14	4
	C.V.%	2.68	0.00	1.12	1.46	0.42	0.00	1.85	1.59	1.22	0.92	12.31	4.03	9.33	4.66

Table No. 5.11 Contd.: Days to 50% flowering of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	IV	V					Zone V Mean (4)	VI				Zone VI Mean (3)	Overall Mean (17)
		TR	CG	CG	CG	CG	CG (4)		MH	MH	MH (2)	GU		
		ARD	RPR	JDP	BLP	ABP	Mean		PDG	RDN	Mean	NWG		
2801	25419	101	105	101	103	68	94	94	90	98	94	113	100	102
2802	25420	89	101	105	98	72	94	94	89	105	97	105	100	101
2803	25421	88	107	100	112	77	99	99	104	101	102	119	108	106
2804	25422	89	105	95	89	62	88	88	85	93	89	104	94	95
2805	25423	85	84	89	85	87	86	86	81	110	95	85	92	94
2806	Shobini (NC)	98	106	101	105	76	97	97	86	105	95	114	101	101
2807	25424	99	108	110	107	76	100	100	101	105	103	113	106	106
2808	Zonal Check	96	119	115	129	90	113	113	102	106	104	117	108	110
2809	25425	101	111	105	117	81	103	103	112	85	98	121	106	110
2810	25426	100	101	103	99	72	93	93	90	102	96		96	100
2811	25427	118	131	130	136	104	125	125	136	100	118		118	122
2812	Ketekejoha (QC)	113	120	121	110	92	111	111	121	120	121	105	115	116
2813	25428	81	91	95	94	62	85	85	83	97	90	98	93	94
2814	25429	99	111	105	117	81	103	103	108	105	106	120	111	107
2815	25430	116	118	125	108	83	108	108	108	113	110	123	114	114
2816	Dubraj (QC)	105	117	113	122	87	110	110	88	116	102	129	111	113
2817	25431	92	105	106	105	78	98	98	103	109	106	112	108	105
2818	25432	109	113	118	110	83	106	106	97	116	106	129	114	111
2819	25433	108	112	108	108	72	100	100	90	103	96	127	106	110
2820	25434	93	98	126	94	67	96	96	90	94	92	93	92	98
2821	25435	104	117	113	119	93	110	110	101	117	109	126	115	110
2822	Local Check	91	104	110	122	57	98	98	85	115	100	118	106	110
2823	25436	107	101	104	104	68	94	94	100	101	101	114	105	103
2824	25437	115	124	118	133	98	118	118	120	120	120	130	123	120
2825	25438	112	123	130	111	88	113	113	104	118	111	127	116	114
2826	25439	111	119	115	128	91	113	113	121	120	120	129	123	117
2827	25440	103		92		87	89	89		116	116		116	106
	Exp Mean	**101**	**109**	**109**	**110**	**79**	**102**	**102**	**99**	**107**	**103**	**115**	**107**	**107**
	C.D. 5%	9	2	1	0	1	1	1	1	1		0	0	2
	C.V.%	4.48	0.92	0.38	0.00	0.91	0.58	0.62	0.41	0.61		0.00	0.36	3.59

Table No. 5.12: Plant Height (cm) of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	II	III												Zone III Mean (8)
		U.P.	OD	OD	OD (2)	W.B	W.B	W.B	W.B	W.B (4)	U.P.	U.P.	U.P.	U.P. (2)	
		KNP	CTK	JYP	Mean	CHN	BNK	PNB	HTW	Mean	@MSD	VRN	GRK	Mean	
2801	25419	98	107	108	108	90	100	125	98	103	65	114	111	113	107
2802	25420	97	117	99	108	91	93	102	95	95	66	108	101	104	101
2803	25421	108	154	82	118	140	130	158	118	137	96	160	150	155	137
2804	25422	65	90	138	114	95	80	114	100	97	65	102	108	105	103
2805	25423	88	92	92	92	102	85	104	106	99	76	102	97	100	98
2806	Shobini (NC)	124	106	68	87	115	95	119	110	110	75	113	109	111	104
2807	25424	58	96	96	96	105	80	107	100	98	85	97	101	99	98
2808	Zone Check	101	105	83	94	100	85	105	99	97	65	91	112	102	98
2809	25425	102	124	91	107	110	105	126	101	110	95	124	110	117	111
2810	25426	78	121	107	114	120	95	124	110	112	74	127	118	123	115
2811	25427	83	122	100	111	115	105	109	98	107	70	104	93	99	106
2812	Ketekejoha (QC)	105	149	115	132	140	125	136	120	130	76	137	114	125	129
2813	25428	107	121	134	127	117	120	139	107	121	100	144	123	133	126
2814	25429	89	128	114	121	122	115	126	105	117	94	122	121	121	119
2815	25430	105	145	115	130	125	150	147	114	134		141	123	132	133
2816	Dubraj (QC)	115	143	155	149	140	130	143	121	133	100	164	150	157	143
2817	25431	93	100	142	121	95	150	108	97	113	80	105	111	108	114
2818	25432	76	117	84	100	110	105	124	101	110	75	117	94	105	106
2819	25433	69	99	113	106	90	80	97	93	90	70	80	89	84	93
2820	25434	72	103	74	88	95	100	110	97	101	75	109	108	108	99
2821	25435	78	112	99	105	95	95	122	101	103	65	111	100	105	104
2822	Local Check	124	143	91	117	140	135	137	123	134	110	89	127	108	123
2823	25436	102	114	142	128	110	100	124	101	109	76	114	112	113	115
2824	25437	112	173	104	138	135	135	143	123	134	110	131	121	126	133
2825	25438	89	135	128	131	112	105	119	101	109		117	118	118	117
2826	25439	101	169	109	139	150	150	156	113	142	108	170	139	155	145
2827	25440			173	173	101	120	160	98	120		119	93	106	123
	Exp Mean	**94**	**122**	**109**	**116**	**113**	**110**	**125**	**106**	**114**	**82**	**119**	**113**	**116**	**115**
	C.D. 5%				0									0	

Table No. 5.12 Contd.: Plant Height (cm) of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	IV	V					Zone V Mean (4)	VI				Zone VI Mean (3)	VII	Overall Mean (18)
		TR	CG	CG	CG	CG	CG (4)		MH	MH	MH (2)	GU		KA	
		ARD	RPR	JDP	BLP	ABP	Mean		PDG	RDN	Mean	NWG		MGD	
2801	25419	83	120	96	108	87	103	103	122	107	115	103	111	73	103
2802	25420	79	97	85	104	83	92	92	104	86	95	104	98	65	95
2803	25421	131	137	137	146	134	138	138	154	135	145	157	149	77	134
2804	25422	69	97	79	107	95	95	95	95	85	90	85	88	65	93
2805	25423	67	97	106	98	94	99	99	93	105	99	110	103	90	96
2806	Shobini (NC)	82	117	86	107	87	99	99	98	92	95	99	96	85	101
2807	25424	75	106	109	97	84	99	99	94	86	90	116	99		94
2808	Zone Check	67	183	148	155	143	157	157	98	78	88	71	83	60	105
2809	25425	80	115	100	114	96	106	106	98	87	92	134	106	68	105
2810	25426	79	127	100	117	90	109	109	107	105	106		106	76	106
2811	25427	87	125	92	110	98	106	106	105	85	95		95		102
2812	Ketekejoha (QC)	103	144	124	135	125	132	132	142	126	134	135	134	59	124
2813	25428	83	135	103	130	102	118	118	117	140	129	97	118	68	116
2814	25429	99	120	107	120	106	113	113	114	92	103	132	113	68	111
2815	25430	113	168	108	143	138	139	139	141	148	144	131	140		133
2816	Dubraj (QC)	113	151	112	134	134	133	133	180	130	155	143	151	80	135
2817	25431	83	109	87	109	89	98	98	114	86	100	97	99	49	101
2818	25432	97	123	103	116	102	111	111	131	100	116	92	108		105
2819	25433	52	101	78	95	76	87	87	87	82	85	90	87		86
2820	25434	67	110	83	110	98	100	100	98	100	99	117	105	54	95
2821	25435	76	118	96	108	85	102	102	120	89	105	129	113	52	99
2822	Local Check	79	97	139	141	96	118	118	93	136	114	134	121	98	118
2823	25436	63	102	86	109	102	100	100	113	90	102	92	98	64	102
2824	25437	119	138	139	145	128	138	138	133	118	125	93	115	61	125
2825	25438	128	123	100	125	108	114	114	96	91	94	91	93	54	108
2826	25439	92	170	119	137	136	140	140	134	161	148	136	144		138
2827	25440	74		88		99	93	93		95	95		95	72	108
	Exp Mean	**86**	**124**	**104**	**120**	**104**	**113**	**113**	**115**	**105**	**110**	**112**	**110**	**68**	**109**
	C.D. 5%										6		7		8

Table No. 5.13 : Panicles/ m² of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	II	III												Zone III Mean (8)
		U.P.	OD	OD	OD (2)	W.B	W.B	W.B	W.B	W.B (4)	U.P.	U.P.	U.P.	U.P. (2)	
		KNP	CTK	JYP	Mean	CHN	BNK	PNB	HTW	Mean	@MSD	VRN	GRK	Mean	
2801	25419	333	227	391	309	299	494	247	321	340	307	266	353	310	325
2802	25420	241	205	327	266	281	312	229	269	272	260	259	299	279	272
2803	25421	328	290	404	347	286	362	226	329	300	207	274	266	270	304
2804	25422	238	223	343	283	284	308	224	271	271	394	383	311	347	293
2805	25423	165	192	452	322	290	302	246	300	284	307	262	308	285	294
2806	Shobini (NC)	318	175	438	306	313	459	218	329	330	344	288	336	312	319
2807	25424	250	191	445	318	317	370	202	344	308	280	332	328	330	316
2808	Zone Check	258	213	282	247	316	364	254	296	307	287	287	323	305	292
2809	25425	200	200	384	292	296	386	283	301	316	277	265	305	285	302
2810	25426	235	232	381	306	298	387	205	284	293	394	219	328	273	291
2811	25427	259	226	345	285	312	373	143	361	297	233	303	253	278	289
2812	Ketekejoha (QC)	181	193	397	295	303	386	232	327	312	320	303	300	301	305
2813	25428	333	234	434	334	301	457	339	295	348	344	385	294	339	342
2814	25429	194	217	303	260	289	328	218	306	285	244	242	308	275	276
2815	25430	208	224	411	318	293	343	164	305	276		270	235	252	281
2816	Dubraj (QC)	290	211	376	294	282	314	229	305	282	294	211	254	232	273
2817	25431	279	270	361	315	306	324	352	302	321	294	285	307	296	313
2818	25432	182	242	430	336	273	362	226	280	285	317	312	251	281	297
2819	25433	245	190	555	372	289	328	160	284	265	253	358	339	348	313
2820	25434	288	210	360	285	285	333	306	312	309	247	287	259	273	294
2821	25435	295	204	494	349	302	339	218	295	288	257	326	308	317	311
2822	Local Check	293	251	507	379	273	392	136	297	274	267	252	322	287	304
2823	25436	270	172	367	269	304	262	302	285	288	210	271	336	303	287
2824	25437	186	204	333	269	296	228	169	310	251	297	266	175	220	248
2825	25438	169	210	429	320	309	335	210	304	289		351	355	353	313
2826	25439	165	186	533	359	267	324	200	296	271	254	319	305	312	303
2827	25440			423	423	298	427	323	304	338		308	304	306	341
	Exp Mean	**246**	**215**	**404**	**311**	**295**	**355**	**232**	**304**	**296**	**287**	**292**	**298**	**295**	**300**
	C.D. 5%	21	63	42	37	25	9	13	11	7	40	45	68	32	14
	C.V.%	4.10	14.33	5.01	8.36	4.18	1.19	2.75	1.77	2.44	6.72	7.46	11.02	7.71	6.82

Table No. 5.13 Contd.: Panicles/ m² of entries in IVT-ASG 2015 Kharif 2015

Entry No.	IET No.	IV	V				Zone V Mean (3)	VI				Zone VI Mean (3)	VII	Overall Mean (17)
		TR	CG	CG	CG	CG (3)		MH	MH	MH (2)	GU		KA	
		ARD	RPR	JDP	ABP	Mean		PDG	RDN	Mean	NWG		MGD	
2801	25419	273	251	217	150	206	206	268	222	245	257	249	243	283
2802	25420	255	269	292	150	237	237	288	185	237	259	244	200	254
2803	25421	212	256	210	112	192	192	211	263	237	251	241	173	262
2804	25422	325	291	296	186	257	257	214	307	260	132	217	198	266
2805	25423	296	253	209	160	207	207	264	227	245	212	234	253	258
2806	Shobini (NC)	285	279	223	176	226	226	281	206	243	258	248	250	284
2807	25424	281	252	232	175	219	219	238	207	222	267	237		277
2808	Zone Check	212	282	294	198	258	258	233	277	255	127	212	235	262
2809	25425	213	297	271	224	264	264	144	255	199	253	217	203	263
2810	25426	270	245	229	161	211	211	279	246	263		263	345	271
2811	25427	223	305	214	176	231	231	250	223	236		236		264
2812	Ketekejoha (QC)	336	236	258	228	241	241	241	276	258	103	206	60	256
2813	25428	280	278	222	179	226	226	138	229	184	111	159	198	277
2814	25429	1243	239	212	215	222	222	290	167	228	246	234	263	310
2815	25430	227	237	213	220	223	223	290	205	247	101	198		246
2816	Dubraj (QC)	204	245	218	174	212	212	308	277	292	136	240	203	249
2817	25431	240	249	257	213	239	239	311	223	267	244	259	313	284
2818	25432	270	245	295	213	251	251	289	273	281	100	220		265
2819	25433	290	252	233	193	226	226	291	177	234	248	239		277
2820	25434	265	259	206	211	225	225	213	210	212	264	229	300	268
2821	25435	281	297	286	235	273	273	248	282	265	229	253	188	284
2822	Local Check	230	238	238	194	223	223	314	272	293	242	276	193	273
2823	25436	323	256	225	186	222	222	159	177	168	150	162	98	243
2824	25437	256	309	254	246	270	270	240	296	268	104	213	148	236
2825	25438	239	258	270	190	239	239	276	246	261	104	208	45	253
2826	25439	271	236	272	265	258	258	278	286	282	93	219		268
2827	25440	334		260	192	226	226		233	233		233	208	301
	Exp Mean	**301**	**262**	**244**	**193**	**233**	**233**	**252**	**239**	**245**	**187**	**227**	**205**	**268**
	C.D. 5%	573	48	44	24	16	22	25	34	18	32	17	40	34
	C.V.%	92.57	8.89	8.78	6.00	5.98	8.07	4.81	6.99	5.18	8.37	6.64	9.32	26.31

Table 5.14: Grain quality characteristics of entries in Initial Variety Trial-Aromatic Short Grain (IVT-ASG), kharif 2015

ENTRY NO.	IET NO.	HULL (%)	MILL (%)	HRR (%)	KL (mm)	KB (mm)	L/B	Grain Type	Grain Chalk	VER	WU (ml)
2801	25419	78.8	69.8	61.9	5.79	1.67	3.46	SS	VOC	5.4	280
2802	25420	81.5	68.4	63.9	6.16	1.92	3.2	LS	VOC	4.7	175
2803	25421	79.5	67.5	52.5	5.27	1.97	2.67	MS	VOC	4.8	190
2804	25422	77.3	66.3	60.4	7.1	1.91	3.71	LS	A	4.7	335
2805	25423	77.8	66	37.4	5.12	2.21	2.31	SB	VOC	4.7	210
2806	shobIni (NC)	78.1	67.2	60.8	5.58	1.63	3.42	SS	A	4.4	255
2807	25424	77.6	68.8	65.8	4.6	1.94	2.37	SB	A	4	195
2808	Sugandha Samba (ZC)	78.2	69.5	59.1	4.61	1.77	2.6	MS	A	5	275
2809	25425	80	70	52.3	5.23	1.79	2.92	MS	VOC	4.7	265
2810	25426	73.8	59.4	44.7	5.74	1.57	3.65	SS	A	4.4	280
2811	25427	78.3	69.8	67.6	5.6	1.92	2.91	MS	VOC	4.2	240
2812	Ketekejoha	79.1	65.2	61.5	5.32	1.88	2.82	MS	A	4.8	250
2813	25428	75	62.5	47	6.95	1.75	3.97	LS	VOC	4.6	255
2814	25429	80.9	67.5	56.3	4.94	1.76	2.8	MS	VOC	4.4	285
2815	25430	76.2	68.3	65.1	5.53	1.88	2.94	MS	A	4.3	220
2816	Dubraj	78.5	65.4	47.6	5.44	2.28	2.38	SB	VOC	4.7	190
2817	25431	79.2	69	61.1	4.95	2.07	2.39	SB	VOC	4.4	225
2818	25432	76.4	65.6	61.7	5.2	2.13	2.44	SB	A	4.7	115
2819	25433	79.9	71.6	63.9	4.89	1.94	2.52	MS	VOC	4.7	220
2820	25434	79.7	65.7	61	4.71	1.56	3.01	SS	VOC	4.1	295
2821	25435	78.5	67.7	65.1	4.73	1.47	3.21	SS	A	4.4	270
2822	LC	78.6	70.5	66.6	4.96	1.93	2.56	MS	A	4.4	275
2823	25436	77.7	68.8	61.1	4.97	1.94	2.56	MS	VOC	4.8	170
2824	25437	80.1	68.8	63.4	3.97	2.13	1.86	SB	VOC	5.2	155
2825	25438	76.7	68	63	5.01	1.75	2.86	SB	A	4.8	250
2826	25439	80.6	67.5	52.1	5.02	1.86	2.69	MS	VOC	4.2	245
2827	25440	77.7	63.9	59.6	6.19	1.64	3.77	LS	A	4.8	210

Table 5.14 Contd.: Grain quality characteristics of entries in Initial Variety Trial-Aromatic Short Grain (IVT-ASG), kharif 2015

ENTRY NO.	IET NO.	KLAC (mm)	ER	ASV	AC (%)	GC (mm)	AROMA
2801	25419	9.4	1.62	4	23.58	22	SS
2802	25420	11.7	1.89	3	22.61	41	SS
2803	25421	10.9	2.06	7	21.61	56	MS
2804	25422	12.9	1.81	4	25.05	22	SS
2805	25423	10.2	1.99	4	25.31	22	NS
2806	shobIni (NC)	10.4	1.86	4	24.81	22	MS
2807	25424	8.2	1.78	7	25.19	23	MS
2808	Sugandha Samba (ZC)	8.6	1.86	4	24.87	22	SS
2809	25425	9.8	1.87	4	18.39	51	SS
2810	25426	10.3	1.79	4	12.49	75	SS
2811	25427	10.4	1.85	4	26.34	27	SS
2812	Ketekejoha	10.5	1.97	7	25.57	63	SS
2813	25428	13.9	2	4	18.42	66	NS
2814	25429	10.4	2.5	4	20.41	49	SS
2815	25430	8.8	1.59	4	24.08	23	SS
2816	Dubraj	9.8	1.8	4	25.72	23	SS
2817	25431	7.2	1.45	4	22.52	22	NS
2818	25432	9.1	1.75	4	26.01	22	MS
2819	25433	8.7	1.77	4	22.67	22	NS
2820	25434	8.5	1.8	4	24.17	22	SS
2821	25435	9.6	2.02	4	22.64	22	SS
2822	LC	9.5	1.91	7	24.25	33	MS
2823	25436	7.3	1.46	4	21.97	23	NS
2824	25437	6.4	1.61	4	23.37	25	SS
2825	25438	9.8	1.95	4	20.26	24	MS
2826	25439	8.3	1.65	4	22	53	SS
2827	25440	12.5	2.01	4	23.55	49	SS

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

SALINE AND ALKALINE TOLERANT VARIETY TRIALS

Coastal and Inland salinity and Alkalinity stresses are the major soil causing significant yield reduction in rice. The complex polygenic nature of salt tolerance, occurrence of soil heterogeneity, in respect of salinity, several mineral deficiencies and toxicity and environmental influence limits the progress of salt tolerance breeding programs. The soil stress tolerant variety trails are grouped into 4 trials namely IVT Alkaline and Inland Saline Tolerant Variety Trial (AL & ISTVT) , AVT-1- Alkaline and Inland Saline Tolerant Variety Trial (AL & ISTVT) , IVT- Coastal Saline Tolerant Variety Trial (CSTVT) and AVT-1 Coastal Saline Tolerant Variety Trial (CSTVT) with specific checks *i.e.,* CSR 36 (Alkaline), CSR 23 (Inland Saline), CST 7-1 (Coastal Saline), Jaya (Yield check), local check, CSR 10 (early duration saline check) and BPT 5204 (Sensitive check). IVT-AL & ISTVT and trial was conducted at 16 alkaline locations and 3 inland saline locations with 36 entries. While AVT-1 AL& ISTVT trial was conducted at 12 alkaline locations and 3 inland saline locations with 18 entries. IVT- CSTVT trial was conducted at 10 coastal saline locations with 64 entries while AVT-1-CSTVT was conducted at 10 locations with 16 entries. The promising entries with $\geq$ 5% yield gain over the best check were promoted into corresponding stress situation.

ADVANCE VARIETY TRIAL 1- ALKALINE AND INLAND SALINE TOLERANT VARIETY TRIAL (AVT 1- AL & ISTVT)

Locations : **12 (Al)+ 3 (IS)** **Entries** : **18**

Checks : **CSR 36 (Alkaline), CSR 23 (Inland saline), CSR 10 (Early duration saline check), Jaya (Yield check), FL 478 (Saline tolerant), BPT 5204 (sensitive check) and Local check** **Table** : **6.1**

The AVT-1- AL & ISTVT constituted with 18 entries, 8 in 2ndyear of testing and 3 in 3rd year of testing along with seven checks namely CSR 36 (Alkaline check), CSR 23 (Inland saline check), Jaya (Yield check), CSR 10 (Early duration saline check), local check, FL 478 (Saline tolerant check) and BPT 5204(Sensitive check). The trial was sent to 19 locations (16 alkaline and 3 inland saline locations).

The alkaline centres includes Karnal sodic micro plots (Haryana) and Jind (Haryana), Kurukshetra (Haryana), Rohtak (Haryana) Nawabganj farm, Kanpur (Uttar Pradesh), Bojha farm, Kanpur (Uttar Pradesh), Aligarh (UP), Kolkata (West Bengal) Kumargunj/Masodha (Uttar Pradesh), Lucknow (Uttar Pradesh), Nawagam(Gujarat), Annamalainagar (Tamil Nadu), Trichy (Tamil Nadu), Karaikal (Puducherry), Kampasagar (Telangana), and Kapurthala (Punjab). The locations namely Panipat/Nain (Haryana), Karnal inland saline micro plots (Haryana) and Gangavati (Karnataka) represented with inland salinity.

Data received from fourteen centres. Five centres viz., Kurukshetra, Rohtak, Kolkata, Aligarh, Kampasagar and Trichy could not sent the data. The trial supposed to be conducted at Kurukshetra was carried out at Gautam Budhanagar (UP), a new centre. Of the

14 locations sent the data, 7 were alkaline, 3 moderately alkaline/saline, 2 inland saline and 2 had normal soil condition and analyzed accordingly.

Observations recorded on soil stress parameters across the locations were furnished as below

Locations with alkaline stress

S.No	Locations / State	pH	ECe ($dSm^{-1)}$	Remarks
1	Karnal sodic microplots (Haryana)	9.6	1.2	Alkalinity
2	Jind (Haryana)	9.7	1.2	Alkalinity
3	Gautam Buddha Nagar (Uttar Pradesh)	9.7	1.2	Alkalinity
4	Lucknow (Uttar Pradesh)	9.8	1.64	Alkalinity
5	Kumarganj/Masodha (Uttar Pradesh)	8.9	2.61	Alkalinity
6	Kanpur , Nawabganj farm (Uttar Pradesh)	8.7	0.97	Alkalinity
7	Kanpur , Bojha farm (Uttar Pradesh)	9.9	01.75	Alkalinity

Locations considered as moderate alkaline and normal stress

S.No	Locations / State	pH	ECe ($dSm^{-1)}$	Remarks
1	Kapurthala (Punjab)	9.0	0.43	Modertae
2	Karaikal (Puducherry)	8.51	1.5	Modertae
3	Annamalainagar (Tamil Nadu)	7.67	4.9	Modertae
4	Nawagam (Gujarat)	7.8	0.81	Normal

As per the pH and ECe reported the locations Karnal sodic microplot, Jind, Gautam Buddha Nagar, Kumarganj, Nawabganj and Bojha farm were considered as alkaline. Kapurthala, Karaikal and Annamalainagar as moderate stress location while Nawagam considered as normal location.

Performance of entries under alkaline stress in overall mean

The overall mean yield ranged from 1403 kg/ha (IET 22637) to 3328 kg/ha (IET 24537). The flowering duration ranged from 89 days (IET 22637) to 115 days (BPT 5204). Panicles/m^2 ranged from 219 (FL 478) to 295 (IET 24537) (Tables 6.2, 6.3, 6.4 and 6.5).

As per the proceedings of 49th ARGM, 2015, the test entries were compared with the best check for specific alkaline stress (CSR 36) and local check, while the early duration entries were compared with the best check between CSR 10 and local check for yield.

Under alkalinity local check gave higher yield (2900 kg/ha) compared to CSR 36 (2307kg/ha) and Jaya (2572 kg/ha). The entries recorded ≥ 5% yield improvement over the best check were IET 24537 (3328 kg/ha) and IET 24545 (3068 kg/ha).

IET 24537 (CSR 56) derived from the cross CSR 21/CSR 10, ranked 1st (3328 kg/ha) in overall mean. It possessed long bold grains with 108 days flowering duration. It showed yield superiority of 14.8 % over best check (local). This entry has registered low HRR (49.9%), desirable ASV (4), high amylose content (27.5 %) and medium gel consistency (50 mm) (Table 6.6).

IET 23782 (NDRK 50043) derived from cross NDRK 5081/NDRK 5003 ranked 2nd with yield 3214 kg/ha, with 50% flowering duration and short bold grains. It yielded 10.82% higher than best check on overall mean under alkaline conditions. It ranked 2nd in UP (3214 kg/ha) and in Zone III with yield of 4255 kg/ha. It has moderate HRR 44.9%, high ASV (7) and intermediate AC (24.22%) and GC (52mm).

Performance of promising entries (AVT-1- AL&ISTVT) in overall mean under Alkalinity Kharif, 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check (LC/CSR 36)
1	24537 CSR 56 CSR 21/CSR 10	3328 108 LB	14.8 (LC)
4	24545 NDRK 50046 IR 52713 – 2B-8-2B-1-2/IR 65195-3B-13-2-3	3068 104 LB	5.8 (LC)
	Local check	**2900** **105**	
	CSR 36	2307 109	
	CSR 23 (Inland saline check)	2746 99	
	JAYA (yield check)	2572 104	

Bold italic: Best check and over the best check;, LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

IET 24545 (NDRK 50046) a derivative of cross IR 52713 – 2B-8-2B-1-2/IR 65195-3B-13-2-3 ranked 4th (3068 kg/ha) in overall mean yield. It showed 104 days flowering duration and possessed long bold grains. It gave yield advantage of 5.8 % over the best check. This entry has registered high (62.5 %) HRR, desirable ASV (4), intermediate amylose content (23.6 %) and medium gel consistency (55 mm).

Two entries namely IET 24537and 24545 were found promising with yield improvement of 14.8 %, and 5.8%, respectively over the best check. The entries IET 24537 and IET 24545 were promoted to 3 rd year of testing in AVT-2- AL & ISTVT under alkalinity.

Performance of entries in the zones under alkaline stress

The AL & ISTVT trial was conducted in Zone 2 (northern) and Zone 3 (eastern) under alkalinity stress.

Northern zone (Zone 2):

The trial was conducted in Haryana at 4 alkaline centres *ie.*, Jind and Karnal sodic microplots (Haryana); Nawabganj and Bhoja farms at Kanpur (UP)). Three entries were found promising in this region with required yield advantage of ≥ 5% over the best check (LC) . Among them IET Nos. 24537, 24538 and 24547 and were in 2nd year hence promoted to 3rd year of testing in AVT-2-AL & ISTVT.

Performance of promising entries (AVT-1- AL&ISTVT) in Northern zone under Alkalinity Kharif, 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check (LC/CSR 36)
1	24537 CSR 56 CSR 21/CSR 10	2520 111 LB	23.71 (LC)
3	24538 KR 09003 IWP-200-59-2-1-1-1 (Irradiated mutant of improved white ponni)	2369 100 MS	16.29 (LC)
4	24547 CSR 59 CSR 27/ CSR 11	2353 99 LB	15.51 (LC)
	Local check	**2037** **109**	
	CSR 36	1616 111	
	CSR 23 (Inland saline check)	1641 101	
	CSR 10 (Early Check)	2244 103	
	Jaya (yield check)	1687 106	

Eastern zone (Zone 3):

The trial was conducted in U.P at 3 alkaline centres (Gautam budda nagar, Lucknow and Masoda). Two entries namely IET Nos. 24545 and 24537 were found promising in this zone with required yield advantage of ≥ 5% over the best check (LC) . They are promoted to 3rd year of testing in AVT-2 -Al & ISTVT.

Performance of promising entries (AVT-1- AL &ISTVT) in Northern zone (Z-3) under Alkalinity Kharif, 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check (LC/CSR 36)
1	24545 NDRK 50046 IR 52713 – 2B-8-2B-1-2/IR 65195-3B-13-2-3	4267 100 LB	13.39 (LC)
3	24537 CSR 56 CSR 21/CSR 10	4136 104 LB	9.91 (LC)
	Local check	**3763** **101**	
	CSR 36	2999 107	
	CSR 23 (Inland saline check)	3851 96	
	CSR 10 (Early Check)	4095 97	
	JAYA (yield check)	3458 102	

Three years performance of IET 22637, IET 23782 and IET 23784 under alkaline conditions

Three entries namely IET 22637 (CR 2461-1-30-1-1), IET 23782 (NDRK 50043) and IET 23784 (CSR 11-117) completed three years of testing (2013-2015) under AL& ISTVT. The performance of IET 22637 was not consistent under Alkalinity. Out of three years it was superior to the best check (local check by 20.9 for a single year 2013.

Summary performance of IET 23782 and IET 23784 during 2013 – 2015 in AL & ISTVT trial

S. No	IET. No	Year	Alkalinity	Inland salinity
			Yield advantage (%) over best check	
1	22637	2013 (1st Year)	-	20.9 (LC)
		2014 (2nd year)	--	-
		2015 (3rd year)	-	-
2	23782	2013 (1st Year)		10.4 (LC)
		2014 (2nd year)	6 (CSR 36)	-
		2015 (3rd year)	10.8 (LC)	-
3	23784	2013 (1st Year)	18.5 (CSR 36)	-
		2014 (2nd year)	6(CSR 36)	13.4 (LC)
		2015 (3rd year)	18.45 (Zone 4)	-

The remaining two entries *i.e.*, 23782 and 23784 showed consistent performance continuously for two years under alkalinity. IET 23782 registered yield superiority of 6% and over best check (CSR 36) in 2014 and 10.8% over best check (Local check) in 2015 under alkalinity. It also showed 10.4% yield advantage over the best check in 2013 under Inland salinity.

Similarly IET 23784 displayed 18.5% and 6% yield improvement over the best check (CSR 36) in 2013 and 6% over the best check (CSR 36) in 2013 and 2014 under alkalinity while it recorded 13.4% yield gain over local check for only one year (2014) under Inland salinity.

State wise performance of promising entries IET 22637 , IET 23782 and IET 23784 during 2013-2015 in AL&ISTVT

IET. No	Year	Alkalinity				Inland salinity		
		Yield advantage (%) over best check across states				Yield advantage (%) over best check across states		
		Karnataka	Haryana	U.P Zone -3	U.P Zone 2	Haryana	Karnataka	U.P
23784	2013	-	18.53 (CSR 36)	-	-	-	-	-
	2014	-	10.35 (LC)	-	-	13.0 (LC)	-	-
	2015	-	18.45 (LC)	-	18.4(LC)	-	-	-
23782	2013	-	-	-	-	12.89 (CSR 23)	-	-
	2014	-	14.45(LC)			9.0	-	-
	2015	-		13.07(LC)	6.6(LC)	-	-	-

State wise performance of the entry IET 23784 revealed that it has outperformed the best check for three consecutive years (2013-2015) in Haryana. It displayed yield gain of 18.53% in 2013 over CSR 36 and 10.35% in 2014 and 18.45% in 2015 over local check under alkalinity. It was found promising in Haryana state.

Another entry IET 23782 could not show consistent performance in any of the states during 2013-2015. It was superior to best check 12.89 and 9% over CSR 23 under Inland salinity during 2013 and 2014 respectively. Under alkalinity it was superior to best check (local check) by 14.45% in Haryana during second year (2014) whereas in third year (2015) it was superior to best check by 13.07% in another state, U.P (Zone -3) and 6.6% over local check in U.P (Zone 2). Due to inconsistent performance IET 23782 is discontinued.

List of superior entries under alkalinity

	IET No	Remarks
Overall	IET 24537 IET 24545	Promoted to 3 rd year of testing Promoted to 3 rd year of testing
Zone 2 (Northern)	IET 24538 IET 24547	Dropped due to Low HRR (40.3%) Dropped due to Low HRR (43.6%)

Performance of entries under Inland salinity

The Inland Salinity Tolerant Variety Trial was sent to 3 locations namely Panipat (Haryana), Karnal, Inland saline microplots (Haryana) and Gangavati (Karnataka) . Under Inland salinity stress, the overall mean grain yield ranged from 980 kg/ha (Jaya (YC)) to 3184 kg/ha (IET 24537). Days to 50% flowering ranged from 92 days (IET 24547) to 115 days (IET 24536 and BPT 5204) whereas panicles/m^2 ranged from 206 (IET 24538) to 285(Local check) (Tables 6.2, 6.3, 6.4 and 6.5).

The test entries are compared with the best check between specific inland saline stress check (CSR 23) and local check, while the early duration entries are compared with the best check between CSR 10 and local check for yield improvement.

CSR 23 was the best inland saline check with 3104 kg/ha yield compared to local check (2640 kg/ha) and CSR 10 (2137 kg/ha). None of the entries were found superior in yield by more than 5% over the best check in overall mean. ***Hence none of the entries are promoted to AVT-2 - AL&ISTVT under inland salinity.***

Locations with Inland saline stress

S.No	Locations / State	pH	ECe (dSm^{-1})	Remarks
1	Karnal saline microplots (Haryana)	7.5	8.5	Inland saline
2	Nain/ Panipat (Haryana)	7.5	10.0	Inland saline

Locations considered as normal under Inland salinity

S.No	Locations / State	pH	ECe (dSm^{-1})	
1	Gangavati (Karnataka)	8.1		Normal

Performance of entries under Moderate Alkaline & Inland salinity

The locations namely Kapurthala (Punjab), Annamalainagar (Tamil Nadu) and Karaikal(Puducherry) showed moderate alkalinity. The overall mean grain yield under moderate alkaline stress ranged from 3694 kg/ha (IET 22637) to 6703kg/ha (CSR 23). Days to 50% flowering ranged from 86 days (CSR 10) to 108 days (BPT 5204). Panicles/m^2 ranged from 292 (IET 22637) to 336 (Jaya (YC) (Tables 6.2, 6.3, 6.4 and 6.5)

Among the entries CSR 23 was the top ranking entry with 6703 kg/ha yield . So None of the entries were found superior.

Performance of entries under Normal stress

Two locations *i.e.,* Nawagam (Gujarat) and Gangavathi (Karnataka) indicated normal stress. The overall mean of grain yield ranged from 3134 kg/ha (IET 22637) to 5490kg/ha (CSR 23). Days to 50% flowering ranged from 88days (FL 478) to 116 days (IET 22637). Panicles/m^2 ranged from 342 (IET 24541) to 475 (IET 23784).

Two entries IET 24537 (CSR 56) and IET 24545 (NDRK 50046) were superior under normal soil condition with yield of 6579 kg/ha and 6198 kg/ha, respectively compared to the best check CSR 23 (5490 kg/ha)

Performance of promising entries (AVT-1- AL&ISTVT) in over all mean under Normal Kharif, 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check (CSR 23)
1	24537 CSR 56 CSR 21/CSR 10	6579 98 LB	19.83 (CSR 23)
2	24545 NDRK 50046 IR 52713 – 2B-8-2B-1-2/IR 65195-3B-13-2-3	6198 97 LB	12.89 (CSR 23)
	CSR 23	**5490** **99**	
	CSR 36	5430 105	
	Local check	5292 99	
	CSR 10 (Early Check)	4001 91	
	Jaya (yield check)	3822 98	

INITIAL VARIETY TRIAL - ALKALINE AND INLAND SALINE TOLERANT VARIETY TRIAL (IVT- AL & ISTVT)

Locations : **16 (Al) + 3 (IS)** **Entries** : **36**

Checks : **CSR 36 (Alkaline), CSR 23 (Inland saline), CSR 10 (Early duration check), Jaya (Yield check), BPT 5204 (Sensitive check) and Local check** **Table** : **6.7**

The Initial variety trial -Alkaline and Inland Saline Tolerant Variety Trial (IVT- AL & ISTVT) consisted of 36 entries including six checks namely CSR 36 (Alkaline check), CSR 23 (Inland saline check), Jaya (Yield check), CSR 10 (Early duration check), local check and BPT 5204 (Sensitive check). The trial was sent to 19 locations (16 alkaline and 3 inland saline locations).

The alkaline centres included Karnal sodic micro plots (Haryana) and Jind (Haryana), Kurukshetra (Haryana), Rohtak (Haryana) Nawabganj farm, Kanpur (Uttar Pradesh), Bojha farm, Kanpur (Uttar Pradesh), Aligarh (UP), Kolkata (West Bengal) Kumargunj/Masodha (Uttar Pradesh), Lucknow (Uttar Pradesh), Nawagam(Gujarat), Annamalainagar (Tamil Nadu), Trichy (Tamil Nadu), Karaikal (Puducherry), Kampasagar (Telangana), and Kapurthala (Punjab). The locations namely Panipat/Nain (Haryana), Karnal inland saline micro plots (Haryana) and Gangavati (Karnataka) represented inland salinity.

Fourteen centres have sent the data except Rohtak, Kolkata, Aligarh, Kampasagar and Trichy. The trial could not be conducted in farmers' fields of Kurukshetra as land was the constraint. Instead the trial was carried out at Gautam Budda nagar (UP).

The details on soil stress parameters provided by cooperators are as follow.

Locations with alkaline stress

S.No	Locations / State	pH	ECe (dSm^{-1})	Remarks
1	Karnal Sodic microplots (Haryana)	9.6	1.2	Alkalinity
2	Jind (Haryana)	9.7	1.2	Alkalinity
3	Gautam Buddha Nagar, (U.P)	9.7	1.2	Alkalinity
4	Kumarganj/ Masodha (U.P)	8.9	2.61	Severe Alkalinity
5	Kanpur, Nawabganj farm(U.P)	10.1	0.18	Alkalinity
6	Kapurthala (Punjab)	9	0.43	Alkalinity

Locations with severe alkaline stress

S.N	Locations / State	pH	ECe (dSm^{-1})	Remarks
	Kanpur, Bhoja farm(U.P)	10.1	-	Severe Alkalinity
	Lucknow (U.P)	9.8	1.64	Alkalinity

Locations considered as moderate alkaline location

S.No	Locations / State	pH	ECe (dSm^{-1})	Remarks
1	Karaikal (Puducherry)	8.51 Heavy soil	1.5	Moderte alkalinity

Locations considered as normal under alkalinity

S.No	Locations / State	pH	ECe (dSm^{-1})	Remarks
1	Nawagam (Gujarat)	8.2	1.27	Normal

Performance of entries under alkaline stress

The overall mean yield ranged from 2287 kg/ha (CSR 23) to 3950 kg/ha (Local check). The flowering duration ranged from 97 days (CSR 10) to 119 days (CSR 23). Panicles/m^2 ranged from 273 (IET 25377) to 333 (IET 25369) (Tables 6.8, 6.9, 6.10 and 6.11).

Performance of promising entries under alkaline stress, kharif 2015

Rank	IET No. / designation / cross combination	GY (kg/ha) / days to 50% flowering/ grain type	Percentage of Yield advantage over best check (CSR 36)
1	25388 RP 5898-136-8-4-1-1 RP Bio 226*1/CSR 27	6090 105 LS	19.3 (CSR 36)
2	IET 25366 NPH 909 NP 2001A/NPS 70 R	5868 94 LS	14.9 (CSR 36)
3	IET 25368 GNV -10-89 Selection from GGV-05-01/NES-07-03	5764 93 MS	12.9 (CSR 36)
4	IET 25375 RP 5898-24-6-1-1-1-1 RP Bio 226*1/CSR 27	5729 102 MS	12.2 (CSR 36)
5	IET 25361 PAU 2K10-23-54-14-44-40-367 BC2F5 PAU 201/ PAU3699-13-2-3-1// PAU201	5722 100 MS	12.1 (CSR 36)
	CSR 36 (Alkaline check)	**5104 103**	
	Local check	4271 91	
	CSR 10 (Early check)	4542 87	
	Jaya (Yield check)	4424 101	
	BPT 5204	4090 112	

The test entries were compared with the best check between specific alkaline stress check (CSR 36) and local check, while the early duration entries are compared with the best check between CSR 10 and local check for yield improvement.

Under alkalinity local check gave highest yield (3950 kg/ha). Hence none of the entries are promoted from the IVT-AL&ISTVT to AVT-1-AL &ISTVT.

Performance of entries under moderate alkaline stress in overall mean

The entries experienced moderate alkaline stress at Karaikal (Puducherry). The overall mean yield ranged from 3194 kg/ha (IET 25383) to 6090 kg/ha (IET 25388). The flowering duration ranged from 87 days (CSR 10) to 114 days (IET 25369). Panicles/m^2 ranged from 215 (IET 25384) to 303 (BPT 5204).

Under moderate alkaline stress, CSR 36 gave high yield (5104 kg/ha) compared to CSR 10 (4542 kg/ha), local check (4271 kg/ha) and Jaya (4424 kg/ha). Five entries recorded ≥ 10% yield improvement over the best check, alkaline check (CSR 36) namely IET 25388 (6090 kg/ha), IET 25366 (5868 kg/ha) IET 25368 (5764 kg/ha), IET 25375 (5729 kg/ha) and IET 25361 (5722 kg/ha).

IET 25388 (RP 5898-136-8-4-1-1) derived from the cross RP Bio 226*1/CSR 27 ranked 1st (6090 kg/ha) in overall mean. It possessed long slender grains with 105 days flowering duration. It showed 19.3 % yield advantage over CSR 36 (Alkaline check).

IET 25366 (NPH 909) a hybrid derived from the cross NP 2001A/NPS 70 R ranked 2nd (5868 kg/ha) in overall mean yield. It possessed long slender grains with 94 days flowering duration. It was superior to CSR 36 with 14.9 % yield improvement. A hybrid in a zone having single location need to have yield advantage more than 20% over best check, hence this hybrid could not be promoted.

IET 25368 (GNV -10-89) a a selection from GGV-05-01/NES-07-03 ranked 3rd (5764 kg/ha) in overall mean yield. It showed 93days flowering duration and possessed medium slender grains. It gave yield advantage of 12.9 % over CSR 36, the best check.

The fourth ranking entry IET 25375 (RP 5898-24-6-1-1-1-1) derived from the cross RP Bio 226*1/CSR 27 registered mean yield of 5729 kg/ha with 102 days flowering duration possessing medium slender grains. It showed yield superiority of 12.2 % yield gain over the best check (CSR 36).

IET 25361 (PAU 2K10-23-54-14-44-40-367) derived from the cross BC2F5 (PAU 201/PAU 3699-13-2-3-1//PAU201) ranked fifth (5722 kg/ha) with 100 days flowering duration possessing long slender grains. It was superior to CSR 36 with 12.1% yield improvement**.**

Four entries namely IET 25388, 25368, 25375 and 25361 were found promising with yield improvement of 19.3 %, 12.9%, 12.2%, and 12.1% respectively over the best check - CSR36. These entries were promoted to 2nd year of testing in AL & ISTVT (AVT-1-AL & ISTVT)under moderate alkaline stress.

Performance of entries under severe alkaline stress

Severe alkaline stress prevailed at Bhoja farm (Kanpur) and Lucknow (Uttar Pradesh**)**. The entries IET 25369 and IET 25385 including the checks CSR 23 and CSR 10 could not flower under high pH (9.8) while CSR 36, CSR 23, IET 25375, IET 25382, IET 25385 and CSR 10 could not set seed. Yield was drastically reduced ranging from 50.5 kg to 505.05 kg/ha. Similarly at Bhoja farm only 7 entries survived namely IET 25360, IET 25361, IET 25362, 25366, CSR 36, IET 25372 and IET 25373 under high pH of 10.1. Rest of the entries failed to survive. The overall mean yield ranged from 42 kg/ha (IET 25370) to 1004 kg/ha (IET 25361). The flowering duration ranged from 94 days (IET 25365 and IET 25363) to 114 days (IET 25360). Panicles/m^2 ranged from 11 (IET 25375) to 149 (IET 25361) .

The test entries are compared with the best check between specific alkaline stress check (CSR 36) and local check, while the early entries are compared with the best check between CSR 10 and local check for yield improvement.

Under severe alkaline stress, CSR 36 gave high yield (719 kg/ha) compared to local check (546 kg/ha) and Jaya (181 kg/ha). Two entries recorded ≥ 5% yield improvement over the best check, alkaline check (CSR 36) namely IET 25361 (1004 kg/ha) and IET 25360 (756 Kg/ha).

IET 25361 (PAU 2K 10-23-54-14-44-40-367) derived from the cross BC2 F5[PAU201/PAU3699-13-2-3-1//PAU201] ranked 1st (1004 kg/ha) in overall mean yield. It possessed long slender grains with 104 days flowering duration. It was superior to CSR 36 by 39.6 % yield improvement. It showed yield superiority over best check under moderate stress also.

IET 25360 (CSR 2013-IR 42-25), a derivative of the cross A69-1/IR 73718-23-2-1-3 ranked 2nd (756 kg/ha) in overall mean. It possessed medium bold grains with 114 days flowering duration. It showed 5.1 % yield advantage over the best check, CSR 36 (Alkaline check).

Two entries namely IET 25361 and IET 25360 ***showed yield improvement of 39.6 and 5.1 respectively over the best check - CSR36. Hence promoted to 2nd year of testing in AL & ISTVT (AVT-1-AL & ISTVT).***

Performance of promising entries under severe alkaline stress , Kharif 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv (%) over best check (LC/CSR 36)
1	25361 PAU 2K 10-23-54-14-44-40-367 BC2 F5[PAU201/PAU3699-13-2-3-1//PAU201]	1004 104 LS	39.6 (CSR 36)
2	25360 CSR 2013-IR 42-25 A69-1/IR 73718-23-2-1-3	756 114 MB	5.1 (CSR 36)
	CSR 36	**719** **102**	
	Local check	546 104	
	CSR 23	- -	
	CSR 10 (Early Check)	- -	
	JAYA (yield check)	139 109	

Performance of entries under normal stress

Crop was exposed to normal stress at Nawagam and Gangavati. Under this situation among checks local check was the best among with 4710 kg/ha. The entries IET 25369, IET 25360, IET 25365 and IET 25378 were promising with 5322 Kg./ha, 5141 kg/ha, 5104kg/ha and 4972 kg/ha yield.

Performance of entries under normal stress, kharif 2015.

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv (%) over best check (LC/CSR 23)
1	25369 CSR 2013-IR 42-22 A69-1/IR 73718-23-2-1-4	5322 118 MB	12.99 (LC)
2	25360 CSR 2013-IR 42-25 A69-1/IR 73718-23-2-1-3	5141 87 MB	9.15 (LC)
3	25365 CURE 105 Selection from lnand race of Sunderban	5104 104 LB	8.36 (LC)
4	25378 CSR 2013 MI – 10 IR 4630-22-2-5-1-3/IR 05N204	4972 102 LS	5.56 (LC)
	Local check	**4710** **98**	
	CSR 36	4346 100	
	CSR 23 (Inland saline check)	3995 118	
	CSR 10 (Early Check)	3274 82	
	Jaya (yield check)	3770 104	

List of superior entries under alkalinity

	IET No	Remarks
Moderate stress	IET 25388 IET 25366 IET 25368 IET 25375 IET 25361	Promoted to 2nd year of testing (AVT-1 AL & ISTVT) Promoted to 2nd year of testing (AVT-1 AL & ISTVT) Promoted to 2nd year of testing (AVT-1 AL & ISTVT) Promoted to 2nd year of testing (AVT-1 AL & ISTVT) Promoted to 2nd year of testing (AVT-1 AL & ISTVT) Promoted to 2nd d year of testing (AVT-1 AL & ISTVT).
Severe stress	IET 25361	Promoted to 2nd year of testing (AVT-1 AL & ISTVT)
	IET 25360	Promoted to 2nd year of testing (AVT-1 AL & ISTVT)

INLAND SALINITY

The Inland Salinity Tolerant Variety Trial was sent to 3 locations namely Panipat (Haryana), Karnal, Inland saline microplots (Haryana) and Gangavati (Karnataka). The data from Gangavati was not included in analysis as the location was found to be normal.

The test entries are compared with the best check between specific stress check (CSR 23) and local check, while the early duration entries are compared with the best check between CSR 23 and local check for yield improvement.

Under inland salinity stress, the overall mean grain yield ranged from 1279 kg/ha (IET 25362) to 3143 kg/ha (IET 25378). Days to 50% flowering ranged from 92 days (IET 25365) to 111 days (IET 25380); whereas panicles/m^2 ranged from 261 (local check) to 397 (IET 25360) (Tables 6.8, 6.9, 6.10 and 6.11).

Local check was the best check with 2704 kg/ha yield compared to CSR 23 (2456 kg/ha) and CSR 10 (2297 kg/ha). Over the best check , 4 entries namely IET 25378 (3143 kg/ha), IET 25387 (3105 kg/ha), IET 25369 (3066 kg/ha) and IET 25385 (3026 kg/ha), were found superior in yield by more than 5%.

Locations with Inland salinity

S.No.	Locations	pH	ECe (dSm^{-1})
1	Nain/ Panipat (Haryana)	7.5	10.0
2	Karnal inland saline microplots (Haryana)	7.5	8.5

Inland saline locations considered as normal

S.No.	Locations	pH	ECe (dSm^{-1})
1	Gangavati (Karnataka)	8.1-8.25	

IET 25378 (CSR 2013 MI-10) a derivative of the cross IR 4630-22-2-5-1-3/IR 05N204 stood 1st (3143 kg/ha) in overall mean yield. It showed 97 days flowering duration and possessed long slender grains. It exhibited yield improvement of 16.2 % yield advantage over best check (local).

Performance of promising entries in overall mean under Inland salinity, Kharif 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv (%) over best check (CSR 23/ LC/)
1	25378 CSR 2013 MI-10 IR 4630-22-2-5-1-3/IR 05N204	3143 97 LS	16.2 (LC)
2	25387 CSR 2013 MI- 27 Cheriviruppu/IR10205-37-1-3	3105 94 MB	14.8 (LC)
3	25369 CSR 2013-IR 42-22 A69-1/IR73718-23-2-1-4	3066 96 MB	13.3 (LC)
4	25385 NDRK 50051 Jaya/USAR – 1	3026 105 LB	11.9 (LC)
	Local check	**2704** **98**	
	CSR 23 (Inland saline check)	2456 108	
	CSR 10 (Early Check)	2297 95	
	JAYA (yield check)	2612 108	

Bold : Best check and over the best check; , LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

IET 25387 (CSR 2013 MI- 27) derived from the cross Cheriviruppu/IR10205-37-1-3 with 94 days flowering duration and medium bold grains ranked 2nd (3105 kg/ha). It recorded 14.8 % yield advantage over the best check (local).

IET 25369 (CSR 2013-IR 42-22) derived from the cross A69-1/IR73718-23-2-1-4 ranked 3rd (3066 kg/ha) in overall mean yield. It possessed medium bold grains and had 96 days flowering duration. It was s superior to local check with 11.9% yield advantage.

IET 25385 (NDRK 50051) , a derivative of the cross Jaya/Usar 1 ranked 4th (3026 kg/ha) in overall mean yield. It possessed long bold grains and had 105 days flowering duration. It was s superior to local check with 11.9% yield advantage.

Four entries were found superior with ≥ 5 % yield gain over the best check (local) under inland saline conditions. Since IET 25378 (16.2%), IET 25387 (14.8%), IET 25369 (13.3 %) and IET 25385 (11.9 %) were promoted to 2nd year of testing in AL & ISTVT (AVT-1-AL& ISTVT) under inland salinity.

List of superior entries under inland salinity

	IET No	Remarks
Overall	IET 25378	Promoted to 2nd year of testing
	IET 25387	Promoted to 2nd year of testing
	IET 25369	Promoted to 2nd year of testing
	IET 25385	Promoted to 2nd year of testing

Table No. 6.1: Composition of entries in Advance Variety Trial 1- Alkaline and Inland Saline Tolerant Variety Trial (AVT 1- AL& ISTVT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
3rd year of testing				
1701	22637	CR 2461-1-30-1-1	Gayatri / IET 14652	SB
2nd year of testing				
1702	24537	CSR 56	CSR 21/CSR 10	LB
1703	24545	NDRK 50046	IR 52713-2B-8-2B-1-2/IR 65195-3B-13-2-3	MS
3rd year of testing				
1704	23782	NDRK 50043	NDRK 5081/NDRK 50003	SB
1705	**CSR 36 (Alkaline)**			
2nd year of testing				
1706	24538	KR 09003	IWP-200-59-2-1-1-1(Irradiated mutant of Improved White Ponni)	SB
1707	**Jaya (Yield Check)**			
3rd year of testing				
1708	23784	CSR 11-117	CSR 11/MI48	SB
1709	**CSR 10 (Early)**			
2nd year of testing				
1710	24539	NDRK 50044	IR 52709-2B-5-2B-1-1/Sarjoo 52	SB
1711	**CSR 23 (Inland saline)**			
1712	24541	CSR 55	CSR 23/CSR 27	LS
1713	24536	PAU 3075-35-1	Pusa 44/ PR 110// Pusa 44*3	MS
1714	**BPT 5204 (Sensitive Check)**			
1715	24547	CSR 59	CSR 27/ CSR 11	LB
1716	**Local Check**			
1717	24556	RP 5898-18-5-2-1-1	RP Bio 226*1/CSR 27	LB
1718	**FL 478 Check with Saltol 1**			

Table No. 6.2: Grain Yield (kg/ha) of entries in AVT 1-AL&ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II								Zone II Mean (2)		III			
		HAR		HAR		U.P.		U.P.				U.P.		U.P.	
		@		@								@			
		KRL(Sodic)		JND		NWB-KNP		BHJ-KNP				GBN		LCK	
1701	22637					1425		1380		1403					
1702	24537	4214	1 *	3861	1 *	2825	1 *	2215	2 *	2520	1 * 12%	3988	1 *	4472	2
1703	24545	3548	7	3170	8	2075	8	1661	8	1868	8	3147	8	4417	3
1704	23782	3444	8	3171	7	2450	6	1896	7	2173	6 *	2969	9	4028	5
1705	CSR 36 (Al)	3718	5	3268	6	1975	9	1256		1616		3438	5	3278	
1706	24538	2615		2623		2625	3	2113	3	2369	3 * 6%	1966		3611	6
1707	Jaya (YC)	1708		1709		1775		1599	9	1687		1230		3361	9
1708	23784	4111	3 *	3627	4 *	2513	4	2313	1 *	2413	2 * 8%	3907	3 *	3111	
1709	CSR 10 (Early)	2770		2797		2463	5	2025	4	2244	5 *	2702		4972	1
1710	24539	3385	9	2542		1590		1354		1472		3187	7	3028	
1711	CSR 23 (IS)	4029	4 *	3767	3 *	1863		1419		1641		3924	2 *	3611	7
1712	24541	4133	2 *	3617	5 *	1003		912		957		3859	4 *	4278	4
1713	24536	2785		3835	2 *	1056		848		952		2678		1694	
1714	BPT 5204 (SC)	2815		2616		1575		1025		1300		2662		917	
1715	24547	3044		2671		2713	2	1994	5	2353	4 * 5%	2799		2139	
1716	Local Check	3651	6	2960	9	2150	7	1924	6	2037	7 *	3341	6	3444	8
1717	24556	2770		2872		1119		910		1014		2718		2250	
1718	FL 478 Check	1933		2647		1088		1174		1131		1594		2250	
	Exp Mean	**3216**		**3044**		**1904**		**1556**		**1730**		**2948**		**3227**	
	C.D. 5%	218		75		320		181				175		1224	
	C.V.%	4.76		1.73		11.82		8.18				4.18		26.68	
	Sowing Date	09-Jun		09-Jun		03-Jul		24-Jun				09-Jun		23-Jun	
	Planting Date	10-Jul		08-Jul		05-Aug		23-Jul				10-Jul		21-Jul	
	Local ©	CSR 36		CSR 36		Usar 2		Usar-2				CSR-36		CSR-43	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.2 Contd.: Grain Yield (kg/ha) of entries in AVT 1-AL&ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	III				Zone III Mean (2)		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		U.P.		U.P. (4)								
		MSD		Mean								
1701	22637			1403				1403		89	81	264
1702	24537	3800	9	3328	1 * 5%	4136	3 * 1%	3328	1 * 5%	108	103	295
1703	24545	4118	3	3068	4	4267	1 * 4%	3068	4	104	98	274
1704	23782	4483	1	3214	2 * 1%	4255	2 * 4%	3214	2 * 1%	99	89	269
1705	CSR 36 (Al)	2720		2307		2999		2307		109	104	261
1706	24538	3244		2898	6	3427		2898	6	100	84	261
1707	Jaya (YC)	3555		2572		3458	9	2572		104	88	239
1708	23784	3328		2816	7	3219		2816	7	99	81	277
1709	CSR 10 (Early)	3218		3169	3	4095	4	3169	3	100	77	235
1710	24539	4234	2	2551		3631	8	2551		99	90	259
1711	CSR 23 (IS)	4091	4	2746	8	3851	6	2746	8	99	92	265
1712	24541	3905	6	2524		4091	5	2524		101	95	243
1713	24536	3868	7	1866		2781		1866		112	84	249
1714	BPT 5204 (SC)	3064		1645		1990		1645		115	88	240
1715	24547	3539		2596	9	2839		2596	9	97	84	265
1716	Local Check	4083	5	2900	5	3763	7	2900	5	105	93	287
1717	24556	3805	8	2021		3028		2021		113	91	254
1718	FL 478 Check	3609		2030		2929		2030		98	82	219
	Exp Mean	**3686**		**2569**		**3457**		**2569**		**104**	**89**	**259**
	C.D. 5%	592									3	
	C.V.%	11.29									0.00	
	Sowing Date	21-Jun										
	Planting Date	19-Jul										
	Local ©	Narendra Usar 3										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.2 Contd.: Grain Yield (kg/ha) of entries in AVT 1-AL&ISTVT Normal under Alkalinity Kharif 2015

Entry No.	IET No.	II		VII				Zone VII Mean (1)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		PUN		TN		PUD								
		KPT		@AML		KRK								
1701	22637			4423		3694		3694		3694		101	118	292
1702	24537	6381	4	5098		5611	4	5611	4	5996	3	94	103	309
1703	24545	6988	1 …4%	4873		5083		5083		6036	2	92	110	327
1704	23782	5198		5360	8	5139		5139		5168		89	90	332
1705	CSR 36 (Al)	5433		4912		6014	3	6014	3	5723	6	99	100	313
1706	24538	5476		5407	6	5132		5132		5304	9	94	96	329
1707	Jaya (YC)	5370		5423	5	5188	9	5188	9	5279		95	95	336
1708	23784	5976	7	5547	3	2514		2514		4245		90	93	324
1709	CSR 10 (Early)	5387		5388	7	4375		4375		4881		86	79	332
1710	24539	6019	6	5983	2	3625		3625		4822		88	101	320
1711	CSR 23 (IS)	6732	2	5003		6674	1	6674	1	6703	1	93	111	305
1712	24541	5899	8	4443		5313	8	5313	8	5606	7	90	116	316
1713	24536	6619	3	5003		5347	6	5347	6	5983	4	99	93	331
1714	BPT 5204 (SC)	5413		5283	9	4493		4493		4953		108	89	320
1715	24547	5383		4443		3222		3222		4303		91	101	314
1716	Local Check	6351	5	6403	1	5556	5	5556	5	5953	5	95	96	366
1717	24556	5545	9	5283		5319	7	5319	7	5432	8	100	93	322
1718	FL 478 Check	4438		5458	4	6056	2	6056	2	5247		88	86	319
	Exp Mean	**5801**		**5208**		**4909**		**4909**		**5342**		**94**	**98**	**323**
	C.D. 5%	823		288		1075							0	
	C.V.%	9.98		3.90		15.43							0.00	
	Sowing Date	10-Jun		05-Aug		23-Jun								
	Planting Date	13-Jul		28-Aug		27-Jul								
	Local ©	PR 121		Trichy-1		Try-2								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.2 Contd.: Grain Yield (kg/ha) of entries in AVT 1-AL& ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II						Zone II Mean (2)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		HAR		HAR		HAR (2)								
		KRL(Saline)		PPT		Mean								
1701	22637													
1702	24537	3600	1	2768	1	3184	1 3%	3184	1 3%	3184	1 3%	106	83	280
1703	24545	3074	6	2347	6	2710	5	2710	5	2710	5	102	76	261
1704	23782	2770		1835		2302		2302		2302		96	64	214
1705	CSR 36 (Al)	3022	7	2149		2586	9	2586	9	2586	9	106	81	228
1706	24538	2074		2109		2092		2092		2092		97	71	206
1707	Jaya (YC)	963		998		980		980		980		100	70	207
1708	23784	3600	2	2643	3	3121	2 1%	3121	2 1%	3121	2 1%	97	72	307
1709	CSR 10 (Early)	2222		2052		2137		2137		2137		98	65	219
1710	24539	2703		2215		2459		2459		2459		97	79	233
1711	CSR 23 (IS)	3540	3	2667	2	3104	3	3104	3	3104	3	94	96	282
1712	24541	3392	4	2622	4	3007	4	3007	4	3007	4	95	78	276
1713	24536	2489		2282	9	2385		2385		2385		115	68	229
1714	BPT 5204 (SC)	2407		2381	5	2394		2394		2394		115	68	227
1715	24547	3229	5	2135		2682	6	2682	6	2682	6	92	74	280
1716	Local Check	2977	8	2303	8	2640	7	2640	7	2640	7	97	75	285
1717	24556	2859	9	2332	7	2595	8	2595	8	2595	8	112	70	255
1718	FL 478 Check	2703		2264		2484		2484		2484		95	71	255
	Exp Mean	**2801**		**2241**		**2381**		**2521**		**2521**		**101**	**74**	**250**
	C.D. 5%	307		211		181		175		175			0	
	C.V.%	6.58		5.67		6.23		6.01		6.01			0.00	
	Sowing Date	09-Jun		09-Jun										
	Planting Date	10-Jul		15-Jul										
	Local ©	CSR 23		CSR 23										

* Superior to Best Check % Superior over Best Check @ not included in means

Table 6.2 Contd.: Grain Yield (kg/ha) of entries in AVT 1-AL&ISTVT Normal under Inland Salinity Kharif 2015

Entry No.	IET No.	VI		VII		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		GU		KA						
		NWG		GNV						
1701	22637	1711		4556	9	3134		116	128	366
1702	24537	6176	1 …15%	6982	2 *	6579	1 * 20%	98	98	456
1703	24545	5283	3	7114	1 *	6198	2 13%	97	101	539
1704	23782	2232		3642		2937		93	85	459
1705	CSR 36 (Al)	4911	5	5950	5	5430	4	105	103	380
1706	24538	4018		6818	3	5418	5	99	87	389
1707	Jaya (YC)	3646		3997		3822		98	91	369
1708	23784	3274		3655		3465		89	77	475
1709	CSR 10 (Early)	4464	8	3537		4001		91	62	364
1710	24539	3646		5293	6	4469	9	93	104	462
1711	CSR 23 (IS)	4911	6	6068	4	5490	3	99	103	448
1712	24541	3423		3800		3611		96	110	342
1713	24536	4985	4	4260		4623	8	100	83	345
1714	BPT 5204 (SC)	4390	9	3445		3917		114	80	388
1715	24547	3423		4464		3943		99	86	375
1716	Local Check	5357	2	5227	7	5292	6	99	93	366
1717	24556	4762	7	5030	8	4896	7	112	88	365
1718	FL 478 Check	2455		4398		3427		88	82	378
	Exp Mean	**4059**		**4902**		**4481**		**99**	**92**	**404**
	C.D. 5%	1240		816		780				
	C.V.%	14.47		7.89		12.13				
	Sowing Date	19-Jun		20-Jul						
	Planting Date	17-Jul		26-Aug						
	Local ©	Dandi		CSR 22						

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.3: Days to 50% flowering of entries in AVT 1-AL&ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III				Zone III Mean(3)	Overall Mean (7)
		HAR	HAR	HAR (2)	U.P.	U.P.		U.P.	U.P.	U.P.	U.P. (5)		
		KRL(Sodic)	JND	Mean	NWB-KNP	BHJ-KNP		GBN	LCK	MSD	Mean		
1701	22637				88	90	89				89		89
1702	24537	115	120	118	105	103	111	117	99	96	104	104	108
1703	24545	112	125	118	105	88	107	115	96	90	99	100	104
1704	23782	102	110	106	104	92	102	104	90	89	96	94	99
1705	CSR 36 (Al)	113	122	117	104	105	111	115	108	97	106	107	109
1706	24538	105	113	109	91	92	100	109	99	92	97	100	100
1707	Jaya (YC)	109	117	113	106	92	106	113	94	99	101	102	104
1708	23784	106	113	109	92	85	99	109	96	90	94	98	99
1709	CSR 10 (Early)	104	116	110	100	92	103	109	90	91	96	97	100
1710	24539	103	113	108	104	90	103	105	91	87	95	94	99
1711	CSR 23 (IS)	101	112	107	105	87	101	104	91	93	96	96	99
1712	24541	105	114	109	104	92	103	108	94	94	98	99	101
1713	24536	122	128	125	93	98	110	125	119	103	107	115	112
1714	BPT 5204 (SC)	118	124	121	105	104	113	121	119	114	113	118	115
1715	24547	101	112	107	90	91	99	105	91	90	93	95	97
1716	Local Check	106	115	111	107	106	109	108	98	98	103	101	105
1717	24556	119	126	123	103	103	113	121	114	105	109	113	113
1718	FL 478 Check	103	115	109	101	85	101	105	94	87	94	95	98
	Exp Mean	**109**	**117**	**113**	**100**	**94**	**105**	**111**	**99**	**95**	**100**	**102**	**104**
	C.D. 5%	1	2		4	3		1	3	1			
	C.V.%	0.89	0.94		2.58	2.57		0.91	2.36	0.88			

Table No. 6.3 Contd.: Days to 50% flowering of entries in AVT 1-AL & ISTVT Normal under Alkalinity Kharif 2015

Entry No.	IET No.	II	VII		Zone VII Mean (2)	Overall Mean (3)
		PUN	TN	PUD		
		KPT	AML	KRK		
1701	22637		78	125	101	101
1702	24537	107	81	93	87	94
1703	24545	105	77	94	86	92
1704	23782	101	76	91	83	89
1705	CSR 36 (Al)	117	80	101	91	99
1706	24538	107	78	96	87	94
1707	Jaya (YC)	107	81	96	88	95
1708	23784	103	75	94	84	90
1709	CSR 10 (Early)	101	73	86	79	86
1710	24539	101	76	89	82	88
1711	CSR 23 (IS)	103	78	97	87	93
1712	24541	101	74	95	84	90
1713	24536	120	78	101	89	99
1714	BPT 5204 (SC)	124	78	123	100	108
1715	24547	101	78	94	86	91
1716	Local Check	109	83	93	88	95
1717	24556	118	78	104	91	100
1718	FL 478 Check	93	80	92	86	88
	Exp Mean	**107**	**78**	**98**	**88**	**94**
	C.D. 5%	2	4	2		
	C.V.%	1.04	3.33	1.79		

Table No. 6.4: Plant Height (cm) of entries in AVT 1-AL & ISTVT Normal under Alkalinity Kharif 2015

Entry No.	IET No.	II	VII		Zone VII Mean (2)	Overall Mean (3)
		PUN	TN	PUD		
		KPT	AML	KRK		
1701	22637		87	150	118	118
1702	24537	111	90	109	100	103
1703	24545	126	85	120	102	110
1704	23782	97	86	87	86	90
1705	CSR 36 (Al)	113	75	112	94	100
1706	24538	110	83	94	89	96
1707	Jaya (YC)	106	85	93	89	95
1708	23784	104	92	84	88	93
1709	CSR 10 (Early)	84	78	76	77	79
1710	24539	115	89	100	94	101
1711	CSR 23 (IS)	128	81	123	102	111
1712	24541	130	85	132	109	116
1713	24536	90	77	112	95	93
1714	BPT 5204 (SC)	90	82	94	88	89
1715	24547	106	88	108	98	101
1716	Local Check	92	92	105	98	96
1717	24556	96	81	103	92	93
1718	FL 478 Check	93	75	91	83	86
	Exp Mean	**105**	**84**	**105**	**95**	**98**

Table No. 6.3 Contd.: Days to 50% flowering of entries in AVT 1-AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zone II Mean (2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL(Saline)	PPT	Mean		
1701	22637					
1702	24537	103	109	106	106	106
1703	24545	100	103	102	102	102
1704	23782	96	96	96	96	96
1705	CSR 36 (AI)	107	106	106	106	106
1706	24538	96	99	97	97	97
1707	Jaya (YC)	97	102	100	100	100
1708	23784	95	99	97	97	97
1709	CSR 10 (Early)	94	101	98	98	98
1710	24539	94	100	97	97	97
1711	CSR 23 (IS)	93	95	94	94	94
1712	24541	95	96	95	95	95
1713	24536	114	116	115	115	115
1714	BPT 5204 (SC)	115	116	115	115	115
1715	24547	90	94	92	92	92
1716	Local Check	95	98	97	97	97
1717	24556	110	113	112	112	112
1718	FL 478 Check	93	96	95	95	95
	Exp Mean	**99**	**102**	**95**	**101**	**101**
	C.D. 5%	1	1			
	C.V.%	0.96	0.98			

Table No. 6.4 Contd.: Plant Height (cm) of entries in AVT 1-AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zone II Mean (2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL(Saline)	PPT	Mean		
1701	22637					
1702	24537	68	97	83	83	83
1703	24545	58	95	76	76	76
1704	23782	49	78	64	64	64
1705	CSR 36 (AI)	73	89	81	81	81
1706	24538	59	82	71	71	71
1707	Jaya (YC)	48	91	70	70	70
1708	23784	64	80	72	72	72
1709	CSR 10 (Early)	56	73	65	65	65
1710	24539	74	83	79	79	79
1711	CSR 23 (IS)	84	108	96	96	96
1712	24541	58	98	78	78	78
1713	24536	52	84	68	68	68
1714	BPT 5204 (SC)	58	78	68	68	68
1715	24547	66	82	74	74	74
1716	Local Check	62	87	75	75	75
1717	24556	63	76	70	70	70
1718	FL 478 Check	61	80	71	71	71
	Exp Mean	**62**	**86**	**70**	**74**	**74**

Table No. 6.3 Contd.: Days to 50% flowering of entries in AVT 1-AL & ISTVT Normal under Inland Salinity Kharif 2015

Entry No.	IET No.	VI	VII	Overall Mean (2)
		GU	KA	
		NWG	GNV	
1701	22637	142	90	116
1702	24537	98	97	98
1703	24545	99	94	97
1704	23782	94	92	93
1705	CSR 36 (AI)	105	104	105
1706	24538	99	99	99
1707	Jaya (YC)	103	93	98
1708	23784	93	85	89
1709	CSR 10 (Early)	98	84	91
1710	24539	92	93	93
1711	CSR 23 (IS)	100	98	99
1712	24541	94	98	96
1713	24536	103	98	100
1714	BPT 5204 (SC)	123	105	114
1715	24547	94	104	99
1716	Local Check	100	98	99
1717	24556	117	106	112
1718	FL 478 Check	92	83	88
	Exp Mean	**103**	**95**	**99**
	C.D. 5%	0	2	
	C.V.%	0.00	1.64	

Table No. 6.4 Contd.: Plant Height (cm) of entries in AVT 1-AL & ISTVT Normal under Inland Salinity Kharif 2015

Entry No.	IET No.	VI	VII	Overall Mean (2)
		GU	KA	
		NWG	GNV	
1701	22637	152	105	128
1702	24537	114	82	98
1703	24545	112	91	101
1704	23782	99	70	85
1705	CSR 36 (AI)	116	90	103
1706	24538	98	76	87
1707	Jaya (YC)	105	77	91
1708	23784	92	63	77
1709	CSR 10 (Early)	72	51	62
1710	24539	113	94	104
1711	CSR 23 (IS)	107	99	103
1712	24541	119	101	110
1713	24536	99	68	83
1714	BPT 5204 (SC)	92	68	80
1715	24547	91	80	86
1716	Local Check	93	92	93
1717	24556	98	79	88
1718	FL 478 Check	88	76	82
	Exp Mean	**103**	**81**	**92**

Table No. 6.4 Contd.: Plant Height (cm) of entries in AVT 1-AL&ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III				Zone III Mean (3)	Overall Mean (7)
		HAR	HAR	HAR (2)	U.P.	U.P.		U.P.	U.P.	U.P.	U.P. (5)		
		KRL(Sodic)	JND	Mean	NWB-KNP	BHJ-KNP		GBN	LCK	MSD	Mean		
1701	22637				83	78	81				81		81
1702	24537	132	43	88	101	96	93	128	131	87	109	115	103
1703	24545	124	45	84	86	82	84	120	119	111	104	117	98
1704	23782	106	47	77	85	84	81	102	105	90	93	99	89
1705	CSR 36 (Al)	121	52	87	103	101	94	120	126	102	110	116	104
1706	24538	93	51	72	87	82	78	89	92	94	89	92	84
1707	Jaya (YC)	102	43	73	89	81	79	100	105	99	95	101	88
1708	23784	92	45	69	84	79	75	90	89	87	86	89	81
1709	CSR 10 (Early)	87	46	66	88	83	76	83	78	73	81	78	77
1710	24539	106	49	78	86	80	80	101	106	100	95	102	90
1711	CSR 23 (IS)	115	52	84	83	78	82	112	108	97	96	106	92
1712	24541	112	53	83	87	77	82	109	111	115	100	112	95
1713	24536	90	40	65	96	93	80	87	86	98	92	90	84
1714	BPT 5204 (SC)	98	44	71	103	101	87	95	96	78	95	90	88
1715	24547	93	48	71	88	83	78	91	94	92	90	92	84
1716	Local Check	105	43	74	109	102	90	102	95	98	101	98	93
1717	24556	97	51	74	103	89	85	95	96	103	97	98	91
1718	FL 478 Check	94	46	70	83	81	76	91	82	96	87	90	82
	Exp Mean	**104**	**47**	**76**	**91**	**86**	**82**	**101**	**101**	**95**	**95**	**99**	**89**
	C.D. 5%			4			0				0	5	3

Table No. 6.5 : Panicles/ M² of entries in AVT 1-AL&ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III				Zone III Mean (3)	Overall Mean (7)
		HAR	HAR	HAR (2)	U.P.	U.P.		U.P.	U.P.	U.P.	U.P. (5)		
		KRL(Sodic)	JND	Mean	NWB-KNP	BHJ-KNP		GBN	LCK	MSD	Mean		
1701	22637				275	254	264				264		264
1702	24537	326	312	319	354	292	321	308	227	245	285	260	295
1703	24545	290	285	287	284	253	278	290	213	305	269	269	274
1704	23782	285	282	283	248	214	257	314	219	322	263	285	269
1705	CSR 36 (Al)	299	290	295	259	234	271	287	207	253	248	249	261
1706	24538	235	252	243	306	268	265	273	237	256	268	255	261
1707	Jaya (YC)	290	220	255	210	192	228	299	213	251	233	255	239
1708	23784	370	296	333	269	242	294	302	208	250	254	253	277
1709	CSR 10 (Early)	264	279	271	189	182	228	290	183	261	221	245	235
1710	24539	282	285	283	263	260	272	273	193	259	250	242	259
1711	CSR 23 (IS)	351	334	342	208	200	273	299	194	268	234	254	265
1712	24541	334	302	318	172	165	243	296	190	240	213	242	243
1713	24536	264	317	290	184	184	237	320	203	272	233	265	249
1714	BPT 5204 (SC)	270	267	268	224	208	242	273	179	262	229	238	240
1715	24547	282	273	277	307	270	283	299	197	225	259	240	265
1716	Local Check	308	302	305	300	295	301	299	206	302	280	269	287
1717	24556	229	255	242	268	253	251	243	183	349	259	258	254
1718	FL 478 Check	214	255	235	211	203	221	255	177	219	213	217	219
	Exp Mean	**288**	**283**	**285**	**252**	**231**	**263**	**290**	**202**	**267**	**248**	**253**	**259**
	C.D. 5%	11	9		29	23		9	24	40			
	C.V.%	2.59	2.20		8.26	6.94		2.28	8.22	10.48			

Table No. 6.5 Contd. : Panicles/ M² of entries in AVT 1-AL & ISTVT Normal under Alkalinity Kharif 2015

Entry No.	IET No.	II	VII		Zone VII Mean (2)	Overall Mean (3)
		PUN	TN	PUD		
		KPT	AML	KRK		
1701	22637		295	288	292	292
1702	24537	330	340	256	298	309
1703	24545	391	325	265	295	327
1704	23782	347	358	291	324	332
1705	CSR 36 (Al)	328	345	265	305	313
1706	24538	337	386	265	326	329
1707	Jaya (YC)	351	388	268	328	336
1708	23784	333	396	243	319	324
1709	CSR 10 (Early)	358	385	253	319	332
1710	24539	310	428	222	325	320
1711	CSR 23 (IS)	289	358	270	314	305
1712	24541	353	318	277	297	316
1713	24536	340	358	295	326	331
1714	BPT 5204 (SC)	337	378	246	312	320
1715	24547	353	318	272	295	314
1716	Local Check	340	458	301	379	366
1717	24556	310	378	279	328	322
1718	FL 478 Check	295	390	272	331	319
	Exp Mean	**335**	**367**	**268**	**317**	**323**
	C.D. 5%	62	20	71		
	C.V.%	12.94	3.91	18.63		

Table No. 6.5 Contd.: Panicles/ M² of entries in AVT 1-AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zone II Mean (2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL(Saline)	PPT	Mean		
1701	22637					
1702	24537	282	279	280	280	280
1703	24545	267	255	261	261	261
1704	23782	217	211	214	214	214
1705	CSR 36 (Al)	232	224	228	228	228
1706	24538	197	216	206	206	206
1707	Jaya (YC)	202	211	207	207	207
1708	23784	305	308	307	307	307
1709	CSR 10 (Early)	220	217	219	219	219
1710	24539	232	235	233	233	233
1711	CSR 23 (IS)	282	282	282	282	282
1712	24541	279	273	276	276	276
1713	24536	229	229	229	229	229
1714	BPT 5204 (SC)	217	238	227	227	227
1715	24547	296	264	280	280	280
1716	Local Check	296	273	285	285	285
1717	24556	264	246	255	255	255
1718	FL 478 Check	258	252	255	255	255
	Exp Mean	**251**	**248**	**236**	**250**	**250**
	C.D. 5%	12	10			
	C.V.%	3.33	2.93			

Table No. 6.5 Contd.: Panicles/ M² of entries in AVT 1-AL & ISTVT Normal under Inland Salinity Kharif 2015

Entry No.	IET No.	VI GU NWG	VII KA GNV	Overall Mean (2)
1701	22637	263	469	366
1702	24537	284	629	456
1703	24545	280	798	539
1704	23782	258	661	459
1705	CSR 36 (Al)	273	486	380
1706	24538	267	512	389
1707	Jaya (YC)	270	467	369
1708	23784	263	688	475
1709	CSR 10 (Early)	270	457	364
1710	24539	265	658	462
1711	CSR 23 (IS)	274	623	448
1712	24541	260	424	342
1713	24536	274	417	345
1714	BPT 5204 (SC)	270	507	388
1715	24547	265	484	375
1716	Local Check	278	455	366
1717	24556	273	457	365
1718	FL 478 Check	257	498	378
	Exp Mean	**269**	**538**	**404**
	C.D. 5%	4	30	
	C.V.%	0.94	3.97	

Table No. 6.6: Grain quality characteristics of entries in AVT1-AL&ISTVT, Kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	ASV	AC	GC
1701	22637	78.6	68.6	61.5	4.88	2.49	1.95	SB	VOC	4	26.95	43
1702	24537	80.5	70.3	49.9	6.14	2.51	2.44	LB	OC	4	27.51	50
1703	24545	76.6	68.1	62.5	5.86	2.16	2.71	MS	A	4	23.67	55
1704	23782	76.1	66.3	45.9	5.42	2.54	2.13	SB	VOC	7	24.22	52
1705	CSR-36	77.9	70.5	67.2	6.7	2.14	3.13	LS	VOC	4	25.19	47
1706	24538	77.9	65.8	40.3	5.08	2.04	2.49	SB	VOC	4	27.54	54
1707	JAYA	78.5	69.8	56.8	5.47	2.45	2.13	SB	VOC	7	25.54	22
1708	23784	76.4	62.1	31	5.41	2.2	2.45	SB	VOC	4	23.67	63
1709	CSR-10	79.2	68.9	49	4.76	2.5	1.9	SB	VOC	4	24.2	43
1710	24539	78.5	67.6	54	5.87	2.37	2.47	SB	OC	4	25.1	42
1711	CSR-23	77.5	68	56.7	6.61	2.09	3.16	LS	VOC	4	23.29	53
1712	24541	78	65.9	30	6.73	2.11	3.18	LS	VOC	5	23.67	24
1713	24536	76.9	67.2	65.5	5.61	2.05	2.73	MS	VOC	7	23.81	22
1714	BPT-5204	78.7	70.8	62.8	4.89	1.81	2.7	MS	A	4	24.14	22
1715	24547	77.9	66.5	43.6	6.34	2.26	2.8	LB	VOC	7	24.99	22
1717	24556	75.8	65	44.8	6.4	2.32	2.75	LB	VOC	5	26.51	47
1718	FL 478	78.1	62.2	46	6.52	2.28	2.85	LB	VOC	4	26.63	23

HULL: Hulling (%); Milling (%): HRR rice recovery (%);KL: Kernal length(mm); KB:Kernal breadth(mm);SS: short slender; L/B Length and breadth ratio; Grain Chalk:Grain Chalkiness;VOC:Very occasionally present; A: Absent;MS:Medium slender; ASV:Alkali spreading value; AC: Amylose content(%); GC:Gel consistency; LB Long bold; SB::short bold; LS: Long slender;

Table No. 6.7: Composition of entries in Initial Variety Trial - Alkaline and Inland Saline Tolerant Variety Trial (IVT - AL& ISTVT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
3901	25360	CSR 2013-IR 42-25	A69-1/IR 73718-23-2-1-3	MB
3902	25361	PAU 2K 10-23-54-14-44-40-367	BC2F5[PAU201/PAU3699-13-2-3-1// PAU 201]	LS
3903	25362	RP 5681-106-22-4-3	Swarna/CSR 36	MS
3904	25363	GNV 13-03	Selection from IRRI 126/AS 996/IRRI 125/ IR 77778-13-8-1-2-87	LS
3905	25364	NDRK 11-1	Saita/Annada	MS
3906	25365	CURE 105	Selection from land race of Sunderban	LB
3907	25366	***NPH 909***	NP 2001A/NPS70R	LS
3908	25367	RP 5898-39-4-2-3-1-B	RP Bio 226*1/CSR 27	MS
3909	**CSR 36 (Alkaline Check)**			
3910	25368	GNV-10-89	Selection from GGV-05-01/NES-07-03	MS
3911	25369	CSR 2013-IR 42-22	A69-1/IR 73718-23-2-1-4	MB
3912	25370	NDRK 11-3	Selection from Amahaur	MB
3913	25371	RP 5706-280-15-4-1	IR 64/CSR 36	MS
3914	**CSR 23 (Inland Saline Check)**			
3915	25372	CSR 2013-IR 42-20	IR 4630-22-2-5-1-3/IR 61920-3B-22-2-1	MB
3916	25373	NDRK 11-4	Azucena/IR 64	MB
3917	25374	RP 5710-310-4-3-2	RP Bio 226/ CSR 36	MS
3918	25375	RP 5898-24-6-1-1-1-1	RP Bio 226*1/CSR 27	MS
3919	25376	NDRK 50063	IR 71866-3R-1-2-1-B/IR 64	SB
3920	**Jaya (Yield Check)**			
3921	25377	NDRK 11-5	SELECTION FROM BW 267-3	MB
3922	25378	CSR 2013 M1- 10	IR 4630-22-2-5-1-3/IR 05N204	LS
3923	25379	OR(T)-9	CST 7-1 Mutant	LS
3924	25380	NDRK 50054	IR 20/R-55182-3B-14-3-2	MS
3925	25381	RP 5898-112-10-2-1-1	RP Bio 226*1/CSR 27	MS
3926	25382	NDRK 50060	NDRK 5078/ NARENDRA USAR 3	LS
3927	25383	RP 5898-122-5-2-1-1	RP Bio 226*1/CSR 27	SB
3928	25384	PAU 5445-2-1-2-1	F6[PAU 3699/PR 114 (Xa38)//PAU 201]	LS
3929	25385	NDRK 50051	JAYA/USAR -1	LB
3930	**CSR 10 (Early check)**			
3931	25386	NDRK 11-2	SELECTION FROM GUJRAT 70	MS
3932	25387	CSR 2013 M1-27	CHERIVIRUPPU/IR10205-37-1-3	MB
3933	**BPT 5204 (Sensitive Check)**			
3934	25388	RP 5898-136-8-4-2-1-1	RP Bio 226*1/CSR 27	LS
3935	25389	NDRK 50058	NDRK 5037/ NARENDRA USAR 3	SB
3936	**Local Check**			

Table No. 6.8 : Grain Yield (kg/ha) of entries in IVT AL & ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II								Zone II Mean (2)		III			
		PUN		HAR		HAR		U.P.				U.P.		U.P.	
		KPT		@KRL (Sodic)		JND @		NWB-KNP				GBN @		MSD	
3901	25360	3929		3933	5 *	2050		1701		2815		3009	8	3083	
3902	25361	5582	1 ...3%	2570		3174	9	2458	7	4020	1 * 4%	1901		3796	
3903	25362	4535		1637		2982		1589		3062		1545		3390	
3904	25363	4672		2207		2827		1602		3137		2136		4134	4
3905	25364	3927		2044		2080		3007	2	3467	9	2031		4220	2
3906	25365	1564		1948		1915		2361	8	1963		882		2944	
3907	25366	5143	4	3392	9	2751		2054		3598	6	2961		3503	
3908	25367	4420		1511		2679		1694		3057		663		2844	
3909	CSR 36 (Al)	3784		2570		3190	7	3023	1	3403		2209		4054	7
3910	25368	4348		1726		3153		2342	9	3345		1667		3363	
3911	25369	3594		4214	3 *	3628	5 *	2738	4	3166		3843	1 *	3049	
3912	25370	4856	8	3881	6	3103		2538	6	3697	5	3325	5	3296	
3913	25371	4294		1563		3943	1 *	1966		3130		1351		2863	
3914	CSR 23 (IS)			941		3156		1702		1702		356		2871	
3915	25372	5002	6	3703	8	2950		2045		3523	7	3187	7	3879	
3916	25373	4082		2222		3240	6	2229		3156		2233		4263	1
3917	25374	4512		1526		2618		1812		3162		1521		3439	
3918	25375	4473		2185		2812		1233		2853		1990		3118	
3919	25376	4762		1844		2518		1771		3266		1302		3183	
3920	Jaya (YC)	4530		2733		3161		638		2584		2629		4194	3
3921	25377	5054	5	2289		2762		1538		3296		2128		3994	8
3922	25378	4873	7	4333	1 *	3717	2 *	1689		3281		3665	2 *	2735	
3923	25379	3780		3370		2241		2323		3051		2953		3034	
3924	25380	3018		1452		2441		1077		2047		1424		3109	
3925	25381	4625		1311		2524		2313		3469	8	1173		3868	
3926	25382	3706		1592		2705		1902		2804		1448		3919	
3927	25383	4369		2437		3189	8	1686		3027		1319		2520	
3928	25384	4772	9	2252		2693		2859	3	3816	4	1424		3989	9
3929	25385	5183	3	4081	4 *	3647	4 *	2667	5	3925	2 * 1%	3560	3 *	3643	
3930	CSR 10 (EC)	4642		1992		2964		2042		3342		1537		2625	
3931	25386	4576		1785		2974		2130		3353		825		3720	
3932	25387	4657		4274	2 *	3699	3 *	1381		3019		3543	4 *	2821	
3933	BPT 5204 (SC)	3957		1829		2513		1397		2677		1448		3064	
3934	25388			1829		2395		2094		2094		1472		3278	
3935	25389	4691		3222		2666		1181		2936		2993	9	4128	5
3936	Local Check	5441	2	3807	7	2998		2318		3879	3 *	3276	6	4091	6
	Exp Mean	**4393**		**2506**		**2890**		**1975**		**3149**		**2081**		**3445**	
	C.D. 5%	623		97		118		219				118		498	
	C.V.%	10.11		2.75		2.91		7.90				4.04		10.30	
	Sowing Date	29-Jun		09-Jun		09-Jun		03-Jul				09-Jun		21-Jun	
	Planting Date	31-Jul		10-Jul		08-Jul		01-Aug				10-Jul		19-Jul	
	Local ©	PR 121		CSR 36		CSR 36						CSR 36		Narendra Usar 3	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.8 Contd.: Grain Yield (kg/ha) of entries in IVT AL & ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	U.P. (2) Mean		Zone III Mean (1)		Overall Mean (3)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
3901	25360	2392		3083		2904		109	82	321
3902	25361	3127	7	3796		3946	2	100	87	305
3903	25362	2489		3390		3171		110	82	315
3904	25363	2868		4134	4 * 1%	3469		102	90	298
3905	25364	3613	1 * 2%	4220	2 * 3%	3718	5	105	100	316
3906	25365	2652		2944		2290		107	85	290
3907	25366	2778		3503		3566	9	98	79	313
3908	25367	2269		2844		2986		106	74	289
3909	CSR 36 (AI)	3538	2	4054	7	3620	7	109	89	321
3910	25368	2852		3363		3351		100	84	296
3911	25369	2893		3049		3127		107	92	333
3912	25370	2917		3296		3564		106	89	332
3913	25371	2414		2863		3041		102	77	323
3914	CSR 23 (IS)	2287		2871		2287		119	87	287
3915	25372	2962	9	3879		3642	6	103	79	301
3916	25373	3246	4	4263	1 * 4%	3525		102	99	317
3917	25374	2625		3439		3254		103	89	324
3918	25375	2175		3118		2941		106	79	300
3919	25376	2477		3183		3238		103	87	302
3920	Jaya (YC)	2416		4194	3 * 3%	3121		112	83	295
3921	25377	2766		3994	8	3529		110	79	273
3922	25378	2212		2735		3099		106	75	286
3923	25379	2678		3034		3045		110	91	305
3924	25380	2093		3109		2401		112	81	287
3925	25381	3090	8	3868		3602		106	83	298
3926	25382	2910		3919		3176		100	83	280
3927	25383	2103		2520		2858		106	86	293
3928	25384	3424	3	3989	9	3873	3	106	82	298
3929	25385	3155	6	3643		3831	4	107	81	301
3930	CSR 10 (EC)	2333		2625		3103		97	75	317
3931	25386	2925		3720		3475		105	83	304
3932	25387	2101		2821		2953		99	86	307
3933	BPT 5204 (SC)	2230		3064		2806		109	77	301
3934	25388	2686		3278		2686		104	78	280
3935	25389	2654		4128	5	3333		105	79	288
3936	Local Check	3204	5	4091	6	3950	1	106	83	306
	Exp Mean	**2710**		**3445**		**3250**		**105**	**84**	**303**
	C.D. 5%								8	
	C.V.%								0.00	
	Sowing Date									
	Planting Date									
	Local ©									

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.8 Contd. : Grain Yield (kg/ha) of entries in IVT AL & ISTVT Moderate Alkaline Stress Kharif 2015

Entry No.	IET No.	VII PUD KRK		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
3901	25360	3799		98	125	220
3902	25361	5722	5	100	106	218
3903	25362	4472		101	94	229
3904	25363	4403		96	109	259
3905	25364	4882		92	110	259
3906	25365	3972		105	146	227
3907	25366	5868	2	94	97	232
3908	25367	3868		111	98	230
3909	CSR 36 (AI)	5104		103	110	246
3910	25368	5764	3	93	114	226
3911	25369	3861		114	117	270
3912	25370	4097		101	108	289
3913	25371	4514		101	110	236
3914	CSR 23 (IS)	4861		112	102	261
3915	25372	4431		96	110	246
3916	25373	5340	9	99	135	263
3917	25374	4611		95	105	259
3918	25375	5729	4	102	104	228
3919	25376	5139		92	109	236
3920	Jaya (YC)	4424		101	94	230
3921	25377	5458	7	103	106	225
3922	25378	5563	6	101	130	271
3923	25379	5139		105	145	242
3924	25380	4382		96	95	250
3925	25381	3819		109	105	224
3926	25382	4097		100	92	244
3927	25383	3194		104	125	245
3928	25384	4306		99	112	215
3929	25385	5417	8	100	111	193
3930	CSR 10 (EC)	4542		87	81	251
3931	25386	4278		98	103	247
3932	25387	4264		89	90	237
3933	BPT 5204 (SC)	4090		112	91	303
3934	25388	6090	1 *	105	128	244
3935	25389	4271		85	86	234
3936	Local Check	4271		91	116	263
	Exp Mean	**4668**		**100**	**109**	**243**
	C.D. 5%	857		5		59
	C.V.%	13.10		3.90		17.42
	Sowing Date	23-Jun				
	Planting Date	27-Jul				
	Local ©	Try-2				

* Superior to Best Check % Superior over Best Check

Table No. 6.8 Contd. : Grain Yield (kg/ha) of entries in IVT AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II						Zone II Mean (2)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		HAR		HAR		HAR (2)								
		KRL (Saline)		PPT		Mean								
3901	25360	2889		2321		2605		2605		2605		104	66	397
3902	25361	2578		2159		2369		2369		2369		95	74	396
3903	25362	696		1861		1279		1279		1279		105	76	377
3904	25363	985		1999		1492		1492		1492		93	78	359
3905	25364	785		2283		1534		1534		1534		99	69	364
3906	25365	1822		908		1365		1365		1365		92	72	326
3907	25366	2518		1977		2248		2248		2248		94	66	359
3908	25367	2844		2284		2564		2564		2564		96	65	320
3909	CSR 36 (Al)	3007	7	1898		2453		2453		2453		102	69	346
3910	25368	2733		893		1813		1813		1813		96	66	339
3911	25369	3422	2 *	2709	4 *	3066	3 * 13%	3066	3 * 13%	3066	3 * 13%	96	67	331
3912	25370	3000	8	2247		2624	9	2624	9	2624	9	100	69	314
3913	25371	2911		1907		2409		2409		2409		97	64	301
3914	CSR 23 (IS)	2578		2334		2456		2456		2456		108	67	310
3915	25372	3044	6	2427		2736	7 1%	2736	7 1%	2736	7 1%	97	61	334
3916	25373	2896		2587	6	2742	6 1%	2742	6 1%	2742	6 1%	98	75	358
3917	25374	2637		2501	7	2569		2569		2569		98	67	312
3918	25375	2770		2166		2468		2468		2468		97	63	268
3919	25376	2733		2441		2587		2587		2587		103	74	280
3920	Jaya (YC)	2755		2469	8	2612		2612		2612		108	65	270
3921	25377	2851		2347		2599		2599		2599		106	56	271
3922	25378	3459	1 *	2827	1 *	3143	1 * 16%	3143	1 * 16%	3143	1 * 16%	97	67	314
3923	25379	2533		2391		2462		2462		2462		100	73	318
3924	25380	2733		2451	9	2592		2592		2592		111	64	286
3925	25381	2489		2033		2261		2261		2261		99	60	317
3926	25382	2896		2590	5	2743	5 1%	2743	5 1%	2743	5 1%	98	66	318
3927	25383	3051	5	2171		2611		2611		2611		100	70	353
3928	25384	2644		2213		2429		2429		2429		100	68	394
3929	25385	3296	4 *	2757	3 *	3026	4 * 12%	3026	4 * 12%	3026	4 * 12%	105	67	305
3930	CSR 10 (EC)	2503		2091		2297		2297		2297		95	60	290
3931	25386	2422		2200		2311		2311		2311		101	72	324
3932	25387	3385	3 *	2824	2 *	3105	2 * 15%	3105	2 * 15%	3105	2 * 15%	94	67	311
3933	BPT 5204 (SC)	2489		2370		2429		2429		2429		96	67	321
3934	25388	2578		2351		2464		2464		2464		99	65	315
3935	25389	2822		2355		2588		2588		2588		104	62	326
3936	Local Check	2978	9	2429		2704	8	2704	8	2704	8	98	72	261
	Exp Mean	**2631**		**2244**		**2438**		**2438**		**2438**		**99**	**67**	**325**
	C.D. 5%	181		166		125		125		125		1		10
	C.V.%	4.23		4.55		4.48		4.48		4.48		1.18		2.79
	Sowing Date	09-Jun		09-Jun										
	Planting Date	10-Jul		15-Jul										
	Local ©	CSR 23		CSR 23										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.8 Contd. : Grain Yield (kg/ha) of entries in IVT AL & ISTVT Normal Kharif 2015

Entry No.	IET No.	VI GU NWG		VII KA GNV		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
3901	25360	4095	8	6187	2	5141	2 9%	87	85	371
3902	25361	6095	1 * ...49%	3577		4836	7 3%	104	83	346
3903	25362	3714		6042	4	4878	6 4%	102	81	343
3904	25363	3429		6443	1 *	4936	5 5%	100	95	356
3905	25364	3238		3820		3529		94	96	363
3906	25365	5429	2 * ...33%	4780		5104	3 8%	104	96	402
3907	25366	3714		4405		4060		92	81	418
3908	25367	4286	7 ...5%	4195		4240		117	82	409
3909	CSR 36 (AI)	3143		5549	7	4346		100	89	385
3910	25368	3143		4201		3672		95	89	347
3911	25369	4476	4 ...9%	6167	3	5322	1 13%	118	104	365
3912	25370	3714		4984		4349		112	99	377
3913	25371	3048		4320		3684		102	103	316
3914	CSR 23 (IS)	4762	3 ...16%	3228		3995		118	118	354
3915	25372	3810		4320		4065		98	89	336
3916	25373	4476	5 ...9%	4484		4480		103	101	384
3917	25374	2667		4306		3487		87	89	404
3918	25375	3810		4451		4130		109	85	341
3919	25376	2952		4122		3537		98	90	383
3920	Jaya (YC)	4095	9	3445		3770		104	87	389
3921	25377	4381	6 ...7%	4688		4534		111	90	407
3922	25378	4000		5943	5	4972	4 6%	102	93	376
3923	25379	3524		5819	6	4671	9	110	109	387
3924	25380	2095		3425		2760		104	91	389
3925	25381	3048		3879		3463		114	85	383
3926	25382	3619		4885		4252		102	107	377
3927	25383	3619		5273	9	4446		111	83	412
3928	25384	2857		4241		3549		88	80	351
3929	25385	2952		2985		2969		79	86	429
3930	CSR 10 (EC)	3524		3024		3274		82	92	374
3931	25386	2667		2682		2675		105	90	390
3932	25387	2476		3958		3217		97	82	424
3933	BPT 5204 (SC)	3905		3333		3619		121	72	379
3934	25388	4000		4083		4041		117	91	425
3935	25389	2000		5095		3548		99	90	387
3936	Local Check	4095		5325	8	4710	8	98	89	399
	Exp Mean	**3635**		**4491**		**4063**		**102**	**91**	**380**
	C.D. 5%	1284		678		876		2		39
	C.V.%	17.40		7.44		15.29		1.32		7.21
	Sowing Date	23-Jun		20-Jul						
	Planting Date	03-Aug		26-Aug						
	Local ©	Dandi		CSR 22						

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.8 Contd.: Grain Yield (kg/ha) of entries in IVT AL & ISTVT Severe Alkaline Stress Kharif 2015

Entry No.	IET No.	II		III				Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		U.P.		U.P.		U.P. (2)						
		BHJ-KNP		LCK		Mean						
3901	25360	1291	2	222	6 *	756	2	756	2	114	68	127
3902	25361	1675	1 *	333	3 *	1004	1	1004	1	104	63	149
3903	25362	1165	4	56		610	6	610	6	113	58	136
3904	25363			222	7 *	222		222		94	50	78
3905	25364			389	1 *	389	9	389	9	111	40	79
3906	25365			111		111		111		94	60	75
3907	25366	1213	3	59		636	5	636	5	101	46	89
3908	25367			244	5 *	244		244		99	39	30
3909	CSR 36 (AI)	719	8			719	3	719	3	102	48	69
3910	25368			111		111		111		103	40	65
3911	25369			167	*	167		167		98	41	30
3912	25370			42		42		42		99	32	22
3913	25371			83		83		83		99	40	33
3914	CSR 23 (IS)										35	
3915	25372	1160	5	167	*	663	4	663	4	107	61	97
3916	25373	856	7	56		456	8	456	8	105	68	75
3917	25374			44		44		44		99	42	28
3918	25375									99	44	11
3919	25376			144		144		144		101	51	76
3920	Jaya (YC)			139		139		139		109	51	45
3921	25377			181	*	181		181		105	50	124
3922	25378			122		122		122		110	31	33
3923	25379			194	8 *	194		194		101	42	129
3924	25380			350	2 *	350		350		110	66	62
3925	25381			93		93		93		94	41	50
3926	25382									100	39	72
3927	25383			111		111		111		98	52	42
3928	25384			189	*	189		189		102	46	52
3929	25385										42	
3930	CSR 10 (EC)										45	
3931	25386			194	9 *	194		194		108	38	21
3932	25387			122		122		122		104	37	28
3933	BPT 5204 (SC)			133		133		133		102	29	17
3934	25388			333	4 *	333		333		100	37	48
3935	25389			128		128		128		102	33	30
3936	Local Check	1008	6	83		546	7	546	7	104	67	73
	Exp Mean	**1136**		**161**		**257**		**366**		**103**	**49**	**71**
	C.D. 5%	542		72								
	C.V.%	32.46		31.64								
	Sowing Date	03-Jul		23-Jun								
	Planting Date	01-Aug		21-Jul								
	Local ©	Usar 2		CSR 43								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.9 : Days to 50% flowering of entries in IVT AL & ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III			Zone III Mean (2)	Overall Mean (6)
		PUN	HAR	HAR	HAR (2)	U.P.		U.P.	U.P.	U.P. (3)		
		KPT	KRL (Sodic)	JND	Mean	NWB-KNP		GBN	MSD	Mean		
3901	25360	104	111	120	116	104	110	114	102	107	108	109
3902	25361	106	95	102	99	100	101	97	97	98	97	100
3903	25362	114	110	116	113	103	111	115	103	107	109	110
3904	25363	104	96	105	100	104	102	101	100	101	100	102
3905	25364	101	102	117	109	104	106	111	96	104	104	105
3906	25365	124	95	102	99	102	106	100	120	107	110	107
3907	25366	100	96	105	101	94	99	103	91	96	97	98
3908	25367	110	100	106	103	107	106	103	110	106	106	106
3909	CSR 36 (AI)	114	105	112	108	104	109	109	108	107	108	109
3910	25368	98	100	107	103	98	101	105	91	98	98	100
3911	25369	124	97	102	100	106	107	100	115	107	108	107
3912	25370	110	102	107	105	105	106	107	106	106	106	106
3913	25371	103	102	105	104	99	102	103	101	101	102	102
3914	CSR 23 (IS)		113	130	121	108	117	125	119	117	122	119
3915	25372	107	99	106	103	102	104	103	102	102	103	103
3916	25373	104	101	108	105	99	103	105	98	101	101	102
3917	25374	108	98	107	102	102	104	102	99	101	100	103
3918	25375	110	102	110	106	106	107	105	102	104	104	106
3919	25376	99	105	118	111	94	104	113	90	99	101	103
3920	Jaya (YC)	107	113	127	120	103	112	123	101	109	112	112
3921	25377	109	109	118	114	108	111	114	101	108	108	110
3922	25378	107	99	115	107	103	106	110	103	106	107	106
3923	25379	115	105	114	109	106	110	109	109	108	109	110
3924	25380	110	113	122	118	105	113	116	104	108	110	112
3925	25381	109	103	109	106	105	106	106	105	105	106	106
3926	25382	102	100	106	103	99	102	101	94	98	98	100
3927	25383	106	103	114	109	104	107	107	105	105	106	106
3928	25384	105	104	114	109	104	107	113	98	105	105	106
3929	25385	104	108	117	112	100	107	114	99	104	106	107
3930	CSR 10 (EC)	102	96	103	100	94	99	99	89	94	94	97
3931	25386	108	104	112	108	93	104	109	103	102	106	105
3932	25387	94	96	109	102	99	99	106	90	98	98	99
3933	BPT 5204 ((SC)	117	99	107	103	109	108	103	121	111	112	109
3934	25388		103	113	108	99	105	106	101	102	104	104
3935	25389	100	107	117	112	94	104	113	97	101	105	105
3936	Local Check	109	106	115	111	93	106	108	103	101	106	106
	Exp Mean	**107**	**103**	**112**	**107**	**102**	**106**	**108**	**102**	**104**	**105**	**105**
	C.D. 5%	2	2	1		3		2	1			
	C.V.%	1.21	1.08	0.94		2.03		1.04	0.82			

Table No. 6.9 Contd. : Days to 50% flowering of entries in IVT AL & ISTVT Moderate Alkaline Stress Kharif 2015

Entry No.	IET No.	VII
		PUD
		KRK
3901	25360	98
3902	25361	100
3903	25362	101
3904	25363	96
3905	25364	92
3906	25365	105
3907	25366	94
3908	25367	111
3909	CSR 36 (AI)	103
3910	25368	93
3911	25369	114
3912	25370	101
3913	25371	101
3914	CSR 23 (IS)	112
3915	25372	96
3916	25373	99
3917	25374	95
3918	25375	102
3919	25376	92
3920	Jaya (YC)	101
3921	25377	103
3922	25378	101
3923	25379	105
3924	25380	96
3925	25381	109
3926	25382	100
3927	25383	104
3928	25384	99
3929	25385	100
3930	CSR 10 (EC)	87
3931	25386	98
3932	25387	89
3933	BPT 5204 ((SC)	112
3934	25388	105
3935	25389	85
3936	Local Check	91
	Exp Mean	**100**
	C.D. 5%	5
	C.V.%	3.90

Table No. 6.10 : Plant Height (cm) of entries in IVT AL & ISTVT Moderate Alkaline Stress Kharif 2015

Entry No.	IET No.	VII
		PUD
		KRK
3901	25360	125
3902	25361	106
3903	25362	94
3904	25363	109
3905	25364	110
3906	25365	146
3907	25366	97
3908	25367	98
3909	CSR 36 (AI)	110
3910	25368	114
3911	25369	117
3912	25370	108
3913	25371	110
3914	CSR 23 (IS)	102
3915	25372	110
3916	25373	135
3917	25374	105
3918	25375	104
3919	25376	109
3920	Jaya (YC)	94
3921	25377	106
3922	25378	130
3923	25379	145
3924	25380	95
3925	25381	105
3926	25382	92
3927	25383	125
3928	25384	112
3929	25385	111
3930	CSR 10 (EC)	81
3931	25386	103
3932	25387	90
3933	BPT 5204 ((SC)	91
3934	25388	128
3935	25389	86
3936	Local Check	116
	Exp Mean	**109**

Table No. 6.11 : Panicles/ M^2 of entries in IVT AL & ISTVT Moderate Alkaline Stress Kharif 2015

Entry No.	IET No.	VII
		PUD
		KRK
3901	25360	220
3902	25361	218
3903	25362	229
3904	25363	259
3905	25364	259
3906	25365	227
3907	25366	232
3908	25367	230
3909	CSR 36 (AI)	246
3910	25368	226
3911	25369	270
3912	25370	289
3913	25371	236
3914	CSR 23 (IS)	261
3915	25372	246
3916	25373	263
3917	25374	259
3918	25375	228
3919	25376	236
3920	Jaya (YC)	230
3921	25377	225
3922	25378	271
3923	25379	242
3924	25380	250
3925	25381	224
3926	25382	244
3927	25383	245
3928	25384	215
3929	25385	193
3930	CSR 10 (EC)	251
3931	25386	247
3932	25387	237
3933	BPT 5204 ((SC)	303
3934	25388	244
3935	25389	234
3936	Local Check	263
	Exp Mean	**243**
	C.D. 5%	59
	C.V.%	17.42

Table No. 6.9 Contd. : Days to 50% flowering of entries in IVT AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zone II Mean(2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL (Saline)	PPT	Mean		
3901	25360	101	107	104	104	104
3902	25361	94	95	95	95	95
3903	25362	104	106	105	105	105
3904	25363	92	94	93	93	93
3905	25364	98	99	99	99	99
3906	25365	90	93	92	92	92
3907	25366	94	95	94	94	94
3908	25367	95	97	96	96	96
3909	CSR 36 (AI)	101	103	102	102	102
3910	25368	96	96	96	96	96
3911	25369	95	97	96	96	96
3912	25370	99	101	100	100	100
3913	25371	96	98	97	97	97
3914	CSR 23 (IS)	107	109	108	108	108
3915	25372	96	97	97	97	97
3916	25373	98	98	98	98	98
3917	25374	97	99	98	98	98
3918	25375	95	99	97	97	97
3919	25376	101	104	103	103	103
3920	Jaya (YC)	107	110	108	108	108
3921	25377	105	107	106	106	106
3922	25378	96	98	97	97	97
3923	25379	99	101	100	100	100
3924	25380	109	112	111	111	111
3925	25381	98	100	99	99	99
3926	25382	97	98	98	98	98
3927	25383	98	101	100	100	100
3928	25384	99	101	100	100	100
3929	25385	103	106	105	105	105
3930	CSR 10 (EC)	94	95	95	95	95
3931	25386	99	103	101	101	101
3932	25387	94	95	94	94	94
3933	BPT 5204 ((SC)	95	97	96	96	96
3934	25388	99	100	99	99	99
3935	25389	102	105	104	104	104
3936	Local Check	99	98	98	98	98
	Exp Mean	**98**	**100**	**99**	**99**	**99**
	C.D. 5%	2	2	1	1	1
	C.V.%	1.16	1.23	1.19	1.18	1.18

Table No. 6.9 Contd. : Days to 50% flowering of entries in IVT AL & ISTVT Normal Kharif 2015

Entry No.	IET No.	VI	VII	Overall Mean (2)
		GU	KA	
		NWG	GNV	
3901	25360	75	98	87
3902	25361	109	99	104
3903	25362	106	99	102
3904	25363	101	99	100
3905	25364	99	88	94
3906	25365	121	87	104
3907	25366	94	89	92
3908	25367	119	114	117
3909	CSR 36 (AI)	93	107	100
3910	25368	98	91	95
3911	25369	118	117	118
3912	25370	112	111	112
3913	25371	106	98	102
3914	CSR 23 (IS)	121	114	118
3915	25372	105	92	98
3916	25373	109	96	103
3917	25374	76	98	87
3918	25375	119	99	109
3919	25376	98	99	98
3920	Jaya (YC)	112	95	104
3921	25377	109	112	111
3922	25378	106	99	102
3923	25379	112	108	110
3924	25380	105	103	104
3925	25381	119	110	114
3926	25382	105	99	102
3927	25383	115	107	111
3928	25384	79	96	88
3929	25385	71	87	79
3930	CSR 10 (EC)	75	88	82
3931	25386	112	99	105
3932	25387	99	95	97
3933	BPT 5204 ((SC)	128	114	121
3934	25388	123	111	117
3935	25389	97	101	99
3936	Local Check	99	98	98
	Exp Mean	**104**	**100**	**102**
	C.D. 5%	0	4	2
	C.V.%	0.00	1.89	1.32

Table No. 6.10 Contd. : Plant Height (cm) of entries in IVT AL & ISTVT Normal Kharif 2015

Entry No.	IET No.	VI	VII	Overall Mean (2)
		GU	KA	
		NWG	GNV	
3901	25360	83	88	85
3902	25361	85	80	83
3903	25362	84	78	81
3904	25363	95	95	95
3905	25364	103	90	96
3906	25365	101	90	96
3907	25366	86	76	81
3908	25367	85	80	82
3909	CSR 36 (AI)	80	99	89
3910	25368	93	85	89
3911	25369	109	99	104
3912	25370	99	99	99
3913	25371	125	80	103
3914	CSR 23 (IS)	125	111	118
3915	25372	74	104	89
3916	25373	93	109	101
3917	25374	88	90	89
3918	25375	87	84	85
3919	25376	91	88	90
3920	Jaya (YC)	94	80	87
3921	25377	92	89	90
3922	25378	92	95	93
3923	25379	107	112	109
3924	25380	91	91	91
3925	25381	86	83	85
3926	25382	111	103	107
3927	25383	87	78	83
3928	25384	86	73	80
3929	25385	86	86	86
3930	CSR 10 (EC)	97	87	92
3931	25386	97	82	90
3932	25387	87	78	82
3933	BPT 5204 ((SC)	82	61	72
3934	25388	96	85	91
3935	25389	76	104	90
3936	Local Check	86	91	89
	Exp Mean	**93**	**89**	**91**

Table No. 6.9Contd. : Days to 50% flowering of entries in IVT AL & ISTVT Severe Alkaline Stress Kharif 2015

Entry No.	IET No.	II	III		Overall Mean (2)
		U.P.	U.P.	U.P. (2)	
		BHJ-KNP	LCK	Mean	
3901	25360	112	115	114	114
3902	25361	114	93	104	104
3903	25362	115	112	113	113
3904	25363		94	94	94
3905	25364		111	111	111
3906	25365		94	94	94
3907	25366	102	100	101	101
3908	25367		99	99	99
3909	CSR 36 (AI)	101	104	102	102
3910	25368		103	103	103
3911	25369		98	98	98
3912	25370		99	99	99
3913	25371		99	99	99
3914	CSR 23 (IS)				
3915	25372	113	100	107	107
3916	25373	109	100	105	105
3917	25374		99	99	99
3918	25375		99	99	99
3919	25376		101	101	101
3920	Jaya (YC)		109	109	109
3921	25377		105	105	105
3922	25378		110	110	110
3923	25379		101	101	101
3924	25380		110	110	110
3925	25381		94	94	94
3926	25382		100	100	100
3927	25383		98	98	98
3928	25384		102	102	102
3929	25385				
3930	CSR 10 (EC)				
3931	25386		108	108	108
3932	25387		104	104	104
3933	BPT 5204 ((SC)		102	102	102
3934	25388		100	100	100
3935	25389		102	102	102
3936	Local Check	108	100	104	104
	Exp Mean	**109**	**102**	**94**	**103**
	C.D. 5%	4	2		
	C.V.%	2.54	1.55		

Table No. 6.10 Contd. : Plant Height (cm) of entries in IVT AL & ISTVT Severe Alkaline Stress Kharif 2015

Entry No.	IET No.	II	III		Overall Mean (2)
		U.P.	U.P.	U.P. (2)	
		BHJ-KNP	LCK	Mean	
3901	25360	94	41	68	68
3902	25361	86	40	63	63
3903	25362	78	37	58	58
3904	25363		50	50	50
3905	25364		40	40	40
3906	25365		60	60	60
3907	25366	53	39	46	46
3908	25367		39	39	39
3909	CSR 36 (AI)	55	41	48	48
3910	25368		40	40	40
3911	25369		41	41	41
3912	25370		32	32	32
3913	25371		40	40	40
3914	CSR 23 (IS)		35	35	35
3915	25372	74	48	61	61
3916	25373	99	38	68	68
3917	25374		42	42	42
3918	25375		44	44	44
3919	25376		51	51	51
3920	Jaya (YC)		51	51	51
3921	25377		50	50	50
3922	25378		31	31	31
3923	25379		42	42	42
3924	25380		66	66	66
3925	25381		41	41	41
3926	25382		39	39	39
3927	25383		52	52	52
3928	25384		46	46	46
3929	25385		42	42	42
3930	CSR 10 (EC)		45	45	45
3931	25386		38	38	38
3932	25387		37	37	37
3933	BPT 5204 ((SC)		29	29	29
3934	25388		37	37	37
3935	25389		33	33	33
3936	Local Check	93	40	67	67
	Exp Mean	**79**	**42**	**46**	**49**

Table No. 6.10 Contd. : Plant Height (cm) of entries in IVT AL & ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III			Zone III Mean	Overall Mean (6)
		PUN	HAR	HAR	HAR (2)	U.P.		U.P.	U.P.	U.P. (3)		
		KPT	KRL (Sodic)	JND	Mean	NWB-KNP		GBN	MSD	Mean		
3901	25360	85	88	66	77	101	85	78	74	84	76	82
3902	25361	91	89	69	79	102	88	83	88	91	86	87
3903	25362	84	83	69	76	74	77	82	98	85	90	82
3904	25363	101	92	76	84	81	88	89	104	91	96	90
3905	25364	111	98	76	87	114	100	92	110	105	101	100
3906	25365	95	88	69	78	87	85	80	90	86	85	85
3907	25366	91	92	69	81	63	79	76	85	75	80	79
3908	25367	87	74	65	70	69	74	69	82	73	76	74
3909	CSR 36 (AI)	102	86	68	77	87	86	82	110	93	96	89
3910	25368	100	88	66	77	73	82	83	96	84	89	84
3911	25369	97	85	68	76	119	92	78	108	102	93	92
3912	25370	104	89	68	79	101	90	81	90	91	85	89
3913	25371	85	82	65	73	74	76	74	84	77	79	77
3914	CSR 23 (IS)		85	66	76	83	78	80	120	94	100	87
3915	25372	91	82	62	72	79	79	74	85	79	80	79
3916	25373	111	97	79	88	114	100	82	111	102	97	99
3917	25374	98	88	70	79	97	88	75	105	92	90	89
3918	25375	83	83	65	74	84	79	77	83	81	80	79
3919	25376	99	94	70	82	86	87	88	88	87	88	87
3920	Jaya (YC)	96	86	65	76	71	79	83	95	83	89	83
3921	25377	81	86	60	73	86	78	72	86	81	79	79
3922	25378	87	86	64	75	57	73	76	78	70	77	75
3923	25379	117	84	71	77	83	89	83	111	92	97	91
3924	25380	97	75	63	69	85	80	72	95	84	84	81
3925	25381	86	90	65	77	84	81	76	98	86	87	83
3926	25382	99	83	71	77	74	81	74	100	83	87	83
3927	25383	94	87	72	79	98	88	76	90	88	83	86
3928	25384	86	82	68	75	92	82	72	93	86	83	82
3929	25385	101	81	70	75	76	82	74	86	79	80	81
3930	CSR 10 (EC)	89	75	68	71	74	76	69	75	73	72	75
3931	25386	96	84	70	77	77	82	74	95	82	84	83
3932	25387	88	91	67	79	98	86	86	84	89	85	86
3933	BPT 5204 ((SC)	77	93	72	83	63	76	83	74	73	79	77
3934	25388		79	62	71	84	75	72	90	82	81	78
3935	25389	85	77	63	70	98	81	69	80	82	75	79
3936	Local Check	77	95	63	79	85	80	82	98	88	90	83
	Exp Mean	**93**	**86**	**68**	**77**	**85**	**83**	**78**	**93**	**85**	**85**	**84**
	C.D. 5%				0		0			5	6	8
	C.V.%				0.00		0.00			0.00	0.00	0.00

Table No. 6.10 Contd. : Plant Height (cm) of entries in IVT AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zone II Mean (2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL (Saline)	PPT	Mean		
3901	25360	57	75	66	66	66
3902	25361	65	83	74	74	74
3903	25362	72	79	76	76	76
3904	25363	74	83	78	78	78
3905	25364	59	78	69	69	69
3906	25365	64	80	72	72	72
3907	25366	60	72	66	66	66
3908	25367	63	66	65	65	65
3909	CSR 36 (AI)	61	77	69	69	69
3910	25368	59	73	66	66	66
3911	25369	62	71	67	67	67
3912	25370	66	72	69	69	69
3913	25371	58	69	64	64	64
3914	CSR 23 (IS)	60	74	67	67	67
3915	25372	54	69	61	61	61
3916	25373	69	80	75	75	75
3917	25374	61	72	67	67	67
3918	25375	58	68	63	63	63
3919	25376	65	83	74	74	74
3920	Jaya (YC)	56	73	65	65	65
3921	25377	48	64	56	56	56
3922	25378	60	73	67	67	67
3923	25379	70	76	73	73	73
3924	25380	59	69	64	64	64
3925	25381	56	64	60	60	60
3926	25382	59	74	66	66	66
3927	25383	66	75	70	70	70
3928	25384	65	71	68	68	68
3929	25385	63	70	67	67	67
3930	CSR 10 (EC)	55	64	60	60	60
3931	25386	66	78	72	72	72
3932	25387	66	69	67	67	67
3933	BPT 5204 ((SC)	62	71	67	67	67
3934	25388	57	72	65	65	65
3935	25389	55	69	62	62	62
3936	Local Check	59	86	72	72	72
	Exp Mean	**61**	**73**	**67**	**67**	**67**

Table No. 6.11: Panicles/ M² of entries in IVT AL & ISTVT Alkalinity Kharif 2015

Entry No.	IET No.	II					Zone II Mean (4)	III			Zone III Mean (2)	Overall Mean (6)
		PUN	HAR	HAR	HAR (2)	U.P.		U.P.	U.P.	U.P. (3)		
		KPT	KRL (Sodic)	JND	Mean	NWB-KNP		GBN	MSD	Mean		
3901	25360	348	282	375	329	257	316	343	318	306	330	321
3902	25361	327	252	308	280	295	296	326	321	314	323	305
3903	25362	368	229	417	323	236	312	320	318	291	319	315
3904	25363	323	217	331	274	239	278	361	314	304	337	298
3905	25364	355	229	364	296	315	316	355	279	316	317	316
3906	25365	327	229	326	277	264	286	311	281	285	296	290
3907	25366	347	267	393	330	279	321	293	297	290	295	313
3908	25367	317	258	337	298	169	270	287	365	274	326	289
3909	CSR 36 (AI)	330	258	340	299	306	309	337	356	333	346	321
3910	25368	290	258	314	286	316	295	299	297	304	298	296
3911	25369	323	252	405	329	310	323	346	364	340	355	333
3912	25370	327	308	364	336	313	328	305	376	331	341	332
3913	25371	388	205	375	290	285	313	314	371	323	342	323
3914	CSR 23 (IS)		144	375	260	276	265	285	356	305	320	287
3915	25372	325	234	305	270	269	283	308	366	314	337	301
3916	25373	315	299	337	318	272	306	317	361	317	339	317
3917	25374	380	240	408	324	265	323	331	323	306	327	324
3918	25375	345	293	405	349	216	315	287	254	252	271	300
3919	25376	350	264	367	315	210	298	308	313	277	311	302
3920	Jaya (YC)	342	305	346	326	146	285	232	398	259	315	295
3921	25377	315	243	287	265	188	258	314	291	264	303	273
3922	25378	342	243	352	298	255	298	255	270	260	262	286
3923	25379	320	241	320	280	302	296	290	357	316	323	305
3924	25380	320	246	378	312	141	271	261	373	258	317	287
3925	25381	343	238	361	299	274	304	255	317	282	286	298
3926	25382	315	226	320	273	260	280	276	287	274	281	280
3927	25383	320	287	343	315	233	296	287	289	270	288	293
3928	25384	317	249	361	305	324	313	282	255	287	268	298
3929	25385	338	264	340	302	294	309	290	277	287	284	301
3930	CSR 10 (EC)	351	302	343	323	272	317	326	311	303	318	317
3931	25386	399	264	308	286	255	307	258	338	284	298	304
3932	25387	417	235	320	277	189	290	375	308	291	342	307
3933	BPT 5204 ((SC)	347	270	387	328	179	296	296	329	268	313	301
3934	25388		255	370	312	196	274	267	315	259	291	280
3935	25389	345	270	352	311	179	286	285	296	253	290	288
3936	Local Check	360	308	302	305	253	306	299	314	289	307	306
	Exp Mean	**340**	**255**	**351**	**303**	**251**	**299**	**302**	**321**	**291**	**312**	**303**
	C.D. 5%	74	22	28		24		24	39			
	C.V.%	15.48	6.29	5.72		6.80		5.76	8.63			

Table No. 6.11 Contd. : Panicles/ M² of entries in IVT AL & ISTVT Inland Salinity Kharif 2015

Entry No.	IET No.	II			Zonal II Mean(2)	Overall Mean (2)
		HAR	HAR	HAR (2)		
		KRL (Saline)	PPT	Mean		
3901	25360	299	496	397	397	397
3902	25361	325	466	396	396	396
3903	25362	323	431	377	377	377
3904	25363	311	408	359	359	359
3905	25364	288	440	364	364	364
3906	25365	302	349	326	326	326
3907	25366	293	425	359	359	359
3908	25367	235	405	320	320	320
3909	CSR 36 (Al)	278	414	346	346	346
3910	25368	276	402	339	339	339
3911	25369	232	431	331	331	331
3912	25370	317	311	314	314	314
3913	25371	249	352	301	301	301
3914	CSR 23 (IS)	267	352	310	310	310
3915	25372	264	405	334	334	334
3916	25373	273	443	358	358	358
3917	25374	261	364	312	312	312
3918	25375	238	299	268	268	268
3919	25376	243	317	280	280	280
3920	Jaya (YC)	235	305	270	270	270
3921	25377	217	326	271	271	271
3922	25378	320	308	314	314	314
3923	25379	302	334	318	318	318
3924	25380	238	334	286	286	286
3925	25381	279	355	317	317	317
3926	25382	270	367	318	318	318
3927	25383	305	402	353	353	353
3928	25384	258	531	394	394	394
3929	25385	267	343	305	305	305
3930	CSR 10 (EC)	258	323	290	290	290
3931	25386	308	340	324	324	324
3932	25387	296	326	311	311	311
3933	BPT 5204 ((SC)	293	349	321	321	321
3934	25388	243	387	315	315	315
3935	25389	229	422	326	326	326
3936	Local Check	267	254	261	261	261
	Exp Mean	**274**	**375**	**325**	**325**	**325**
	C.D. 5%	51	40	41	10	10
	C.V.%	11.41	6.56	10.97	2.79	2.79

Table No. 6.11 Contd. : Panicles/ M² of entries in IVT AL & ISTVT Normal Kharif 2015

Entry No.	IET No.	VI	VII	Overall Mean (2)
		GU	KA	
		NWG	GNV	
3901	25360	273	468	371
3902	25361	283	410	346
3903	25362	270	417	343
3904	25363	268	444	356
3905	25364	267	458	363
3906	25365	279	526	402
3907	25366	270	567	418
3908	25367	273	546	409
3909	CSR 36 (AI)	267	503	385
3910	25368	269	425	347
3911	25369	274	457	365
3912	25370	271	483	377
3913	25371	267	365	316
3914	CSR 23 (IS)	275	433	354
3915	25372	270	401	336
3916	25373	274	494	384
3917	25374	264	543	404
3918	25375	266	417	341
3919	25376	266	501	383
3920	Jaya (YC)	272	507	389
3921	25377	272	541	407
3922	25378	272	481	376
3923	25379	268	507	387
3924	25380	261	518	389
3925	25381	267	499	383
3926	25382	269	484	377
3927	25383	269	556	412
3928	25384	264	437	351
3929	25385	267	592	429
3930	CSR 10 (EC)	270	479	374
3931	25386	264	516	390
3932	25387	265	583	424
3933	BPT 5204 ((SC)	271	488	379
3934	25388	271	578	425
3935	25389	255	518	387
3936	Local Check	272	527	399
	Exp Mean	**269**	**491**	**380**
	C.D. 5%	8	78	39
	C.V.%	1.38	7.84	7.21

Table No. 6.11 Contd. : Panicles/ M² of entries in IVT AL & ISTVT Severe Alkaline Stress Kharif 2015

Entry No.	IET No.	II	III		Overall Mean (2)
		U.P.	U.P.	U.P. (2)	
		BHJ-KNP	LCK	Mean	
3901	25360	159	95	127	127
3902	25361	148	150	149	149
3903	25362	171	100	136	136
3904	25363		78	78	78
3905	25364		79	79	79
3906	25365		75	75	75
3907	25366	149	30	89	89
3908	25367		30	30	30
3909	CSR 36 (AI)	130	8	69	69
3910	25368		65	65	65
3911	25369		30	30	30
3912	25370		22	22	22
3913	25371		33	33	33
3914	CSR 23 (IS)				
3915	25372	166	28	97	97
3916	25373	139	12	75	75
3917	25374		28	28	28
3918	25375		11	11	11
3919	25376		76	76	76
3920	Jaya (YC)		45	45	45
3921	25377		124	124	124
3922	25378		33	33	33
3923	25379		129	129	129
3924	25380		62	62	62
3925	25381		50	50	50
3926	25382		72	72	72
3927	25383		42	42	42
3928	25384		52	52	52
3929	25385				
3930	CSR 10 (EC)				
3931	25386		21	21	21
3932	25387		28	28	28
3933	BPT 5204 ((SC)		17	17	17
3934	25388		48	48	48
3935	25389		30	30	30
3936	Local Check	131	15	73	73
	Exp Mean	**149**	**52**	**58**	**71**
	C.D. 5%	18	29		
	C.V.%	8.25	39.50		

ADVANCE VARIETY TRIAL-1-COASTAL SALINE TOLERANT VARIETY TRIAL (AVT-1-CSTVT)

Locations : **10** **Entries** : **16**

Checks : **CST 7-1 and FL 478 with *Saltol* 1 (Coastal saline checks), CSR 10 (Early saline tolerant check), Jaya (yield check), local check and BPT 5204 (Salt sensitive check)** **Table** : **6.12**

Advance variety trial - Coastal Saline Tolerant Variety Trial (AVT-1-CSTVT) constituted with 16 entries of which one entry (IET 23837) was in 3rd year of testing; nine entries in 2nd year of testing (IET Nos. 24425, 24441, 24430, 24419, 24436, 24424, 24439, 24426 and 24434) and 6 checks namely CST 7-1 and FL 478 with *Saltol* 1 (Coastal saline), Jaya (Yield), CSR 10 (Early saline tolerant), local check and BPT 5204 (Salt sensitive check).

The trial was sent to 10 coastal saline centres for evaluation. Only 9 centres namely Cuttack (Odisha), Canning town and Gosaba (West Bengal), Chorao island (Goa), Machilipatnam (Andhra Pradesh), Panvel (Maharashtra) and Port Blair (Andaman and Nicobar Islands), Danti/ Navsari (Gujarat) and Vyttila (Kerala) provided the data. At Machilipatnam CSTVT entries were planted in the end of September due to delay in the release of water from NSP canal. Therefore the entries were grown in irrigated dry conditions and consequently low yields were obtained. At Panvel crop was affected by drought during booting and grain filling stages.

The location-wise details on soil stress parameters (pH and ECe are as follow.

Locations with coastal saline stress

S.No	Locations / State	pH	ECe (dSm^{-1})
1	ICAR Goa	6.22 – 7.18	1.36 – 8.72
2	NRRI, Cuttack (Odisha)	5.9 to 6.0	6.8 to 8.5
3	Panvel (Maharashtra)	7 - 8	2.17 – 4.63
4	Danti /Navsari(Gujarat)	8.52	4.78
5	Vyttila (Kerala)	3.5	7.2
6	Machilipatnam	7.35	-

Locations considered as moderate stress under coastal salinity

S.No	Locations / State	pH	ECe (dSm^{-1})
1	Gosaba (West Bengal)	6.5	3.5 – 4.5
2	Canning town (West Bengal)	6.5	7.89

Location not considered for analysis of mean

S.No	Locations / State	pH	ECe (dSm^{-1})
1	Port Blair (Andaman and Nicobar Islands)	5.62	4.5

At Cuttack, Panvel, Navsari, Goa, Machilipatnam and Vyttila coastal saline stress was noticed whereas at Port Blair though moderate stress was reported as per the ECe and pH but yield was very poor and no reason was given, hence not included in mean. The moderate stress in Gosaba and Canning was found. Experimental results were discussed as per the degree of stress mentioned below.

Performance of entries in overall mean (Coastal saline stress)

The overall mean yield of the entries ranged from 1193 kg/ha (IET 24436) to 3411 kg/ha (IET 24430). Days to 50% flowering ranged from 92 days (FL 478) to 124 days (IET 24426). Plant height ranged from 97 cm (CSR 10) to 144 cm (IET 24424) (Tables 6.13, 6.14, 6.15 and 6.16).

Among the checks, local check was the highest yielder (3025 kg/ha) followed by CSR 10 (2679 kg/ha), CST 7-1 (2111 kg/ha) and FL 478 (1906 kg/ha). The performance of early duration entries was compared with the best check among CSR 10, FL 478 and local check whereas the late and medium entries are compared with the best check among CST 7-1 and local checks. The entry IET 24430 (CR 2839-1-S-11-1-B2-B-46-2B) with 3411 kg/ha was superior by 12.7% in mean yield over the best check (local).

Performance of promising entries in overall mean under Coastal Saline stress in AVT 1-CSTVT Kharif 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over the best check (LC)
1	24430 CR 2839-1-S-11-1-B2-B-46-2B Swarna/FL 496	3411 103 LB	12.7 (LC)
	Local check (best check)	**3025** **97**	
	CST 7-1 (Coastal saline)	2111 116	
	CSR 10 (Coastal saline)	2679 99	
	Jaya (Yield check)	3067 101	
	FL 478 (Coastal Saline)	1906 92	
	BPT 5204	1721 119	

IET 24430 (CR 2839-1-S-11-1-B2-B-46-2B) derived from the cross Swarna/FL 496 occupied 1st rank (3411 kg/ha) in overall mean yield with long bold grains and 103 days flowering duration. It showed yield superiority over the best check (local check) with 12.7 % yield advantage. Quality wise, it recorded medium head rice recovery (53.6 %), desirable alkali spreading value (4) and high amylose content (27.7 %) with medium GC (40 mm) Table 6.17).

On overall mean basis IET 24430 (CR 2839-1-S-11-1-B2-B-46-2B) outperformed the best check (local) by 12.7 %. Hence it was promoted to for third year of testing under coastal salinity stress

Performance of entries in the zones under coastal saline stress

The trial was evaluated in eastern, western and southern zones and the performance of entries zone- wise was presented below.

Eastern Zone – Zone 3

In this zone CSTVT trial was conducted at one location (Cuttack) in Odisha. Two entries, IET 24425 and IET 24439 were found promising with required yield advantage of 75.6 % and 51.1 % over the best check (Local) respectively. Hence may be promoted in zone 3 for third year of testing.

Performance of entries in Eastern zone (Zone 3)

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check in region 3 (LC)
1	24425 MCM-109 MTU 2716/BPT 5204	5072 128 MS	75.6 (LC)
2	24439 RP 5899-47-39-2-2-2-1 RP Bio 226*1/Jarava	4367 125 MS	51.1 (LC)
	Local Check (Best Check)	**2889** **116**	
	CST 7-1 (Coastal saline)	1567 127	
	CSR 10	1150 122	
	Jaya	2311 122	
	FL 478	1617 126	
	BPT 5204	2144 120	

Bold italic: Best check and over the best check; LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

Western zone – Zone 6

In zone 6, CSTVT was conducted at 3 states namely Goa State (Goa), Gujarat (Navsari) and Maharashtra (Panvel). At Navsari IET 24424 and IET 24426 could not flower. At Panvel drought has affected the crop at booting and grain filling stage.

IET 24434 (IR 83421-6-B-3-1-1-CR 3364-S-2B-14-2B) from the cross IRRI 126/IRRI 135 ranked 1st (3630 kg/ha) in Western zone . It had 97 days to 50 % flowering possessing long slender grains. It showed yield improvement of 22 % over the best check

(Local) in zone 6. State- wise, this culture recorded superior yield exhibiting yield advantage of 20% and 15 % over local check in Gujarat and Goa states only and promoted to 3rd year of testing.

Performance of promising entries in Western zone (Zone 6) in AVT 1-CSTVT Coastal Salinity, Kharif 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check in region 6 (LC)
1	24434 IR 83421-6-B-3-1-1-CR 3364-S-2B-14-2B IRRI 126/IRRI 135	3630 97 LS	22.2 (LC)
	Local Check (Best Check)	**2969** **95**	
	CST 7-1(Coastal saline)	1977 116	
	CSR 10	3274 97	
	Jaya	3254 100	
	FL 478	1695 92	

Based on zonal performance in western zone (Z 6) , IET 24434 (22.2 %) was promoted to 3rd year of testing in AVT-2- CSTVT trial.

Southern zone Z 7:

In zone 7, CSTVT trial was conducted in Kerala (Vyttila). Three entries namely 24441, 24430 and 24425 were found promising in this zone with required yield advantage of ≥ 10% over the best check (LC). So promoted to 3rd year of testing in AVT-2-CSTVT in zone 7.

The data from two locations namely Port Blair and Machilipatnam was not considered for analysis because at Andamans though the reported stress was moderate (pH 5.62 and ECe 4.5 dSm^{-1} and yield was very poor, while at Machilipatnam salinity was associated with drought. Therefore, data from these locations analysed separately. The overall mean yield of the entries ranged from 329 kg/ha (IET 24424) to 2140 kg/ha (IET 24434). Days to 50% flowering ranged from 97 days (IET 24441) to 125 days (IET 24425). Plant height ranged from 83 cm (BPT 5204) to 121 cm (IET 24425). The detailed data onyield, plant height, panicle/sq.m and days to 50% flowering are given in tables 6.13 to 6.16, while cooking quality data are presented in table 6.17.

Performance of promising entries in southern zone (Zone 7) in AVT 1-CSTVT Coastal Salinity, Kharif 2015

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over best check in region 6 (LC)
1	24441 DRRH 102	5004 89 LS	106.3 (CSR 10)
2	24430 CR 2839-1-S-11-1-B2-B-46-2B Swarna/FL 496	4954 93 LB	48.8 (LC)
4	24425 MCM – 109 MTU 2716/BPT 5204	3689 86 MS	52.1 (CSR 10)
	Local Check(Best Check)	**3328** **86**	
	CST 7-1(Coastal saline)	3058 104	
	CSR 10	**2425** **86**	
	Jaya	3262 83	
	FL 478	2828 73	

Local check was the highest yielder (1342 kg/ha) compared to FL 478 (1193 kg/ha) and the CST 7-1 (486 kg/ha) the specified coastal saline checks. Hence the performance of entries was compared with local check. The entries IET 24425 (MCM 109) with 2791 kg/ha and IET 23837(Gosaba 9-2) with 2781 kg/ha were superior in mean yield over the best check.

Performance of promising entries in overall AVT 1 CSTVT – Severe Coastal Saline stress, Kharif 15

Rank	IET No. / designation / cross combination	GY (Kg/ha)/ DFF/ GT	Yield advantage % over best check
1	24434 IR 83421-6-B-3-3-1-1- CR 3364-S-2B-14-2B IRRI 126/IRRI 135	2140 108 LS	59.4 (LC)
2	24441 DRRH 102 (Hybrid)	1975 97 LS	47.1 (LC)
4	24430 CR 2839-1-S-11-1-B2-B-46-2B Swarna/FL 496	1770 106 LB	31.8 (LC)
	Local Check (Best Check)	**1342** **118**	
	CST 7-1(Coastal salinity)	486 108	
	CSR 10	1358 102	
	JAYA	947 108	

Bold italic: Best check and over the best check;, LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

Three years performance of IET 23837 during 2013-2015

S.NO	IETNo/Designation/cross combination	Year	Coastal salinity stress	
			Yield Kg/ha	Yield advantage (%) over the best check
1	23837 GOSABA 9-2	2013 (1st Year)	3200	20.4
		2014 (2nd year)	2781	14
		2015 (3rd year)	3199	5.75

The entry IET 23837 **(**GOSABA 9-2) completed 3 years of testing under coastal salinity during 2013 to 2015. It was found promising in overall mean yield continuously for 3 years *ie*, 2013, 2014 and 2015. Over the best check, IET 23837 showed yield gain of 20.4 % (Local check), 14 % (Local check) and 5.75% (Local check) during 2013, 2014 and 2015 respectively. However the performance of IET 23837 across states revealed inconsistency during 3 years. In the first year (2013) it could show yield gain in none of the states. In the second year (2014), it was superior in West Bengal and AP with 20.3% and 83.6% over CST 7-1 respectively. But in the third year (2015) it showed yield improvement altogether in different states such as Goa, Odisha , Gujarat and Kerala with 12.7%, 13.4 %, 20.6% and , 32.6% over local check, respectively. Because of the inconsistent performance across states in 3 years , the entry is discontinued.

State wise performance of promising entries IET 23837 during 2013-2015 under coastal salinity

S. No	IET. No	Year	Alkalinity						
			Yield advantage (%) over best check						
			WB	AP	Goa	OD	MH	GU	KE
1	23837	2013	-	-	-	-	-	-	-
		2014	20.3 (CST 7-1)	83.6 (CST 7-1)	-	-	-	-	-
		2015	-	-	12.7 (LC)	13.4 (LC)	-	20.6 (LC)	32.6 (LC)

Performance of entries in moderate Coastal saline stress

Two locations namely Gosaba and Canning recorded moderate coastal saline stress. The overall mean yield of the entries ranged from 3230 kg/ha (FL 478) to 5796 kg/ha (IET 24441). Days to 50% flowering ranged from 84 days (FL 478) to 122 days (IET 24426). Plant height ranged from 72 cm (CSR 10) to 121 cm (IET 24426) (Tables 6.13, 6.14, 6.15) and 6.16). Grain quality data is presented in table 6.17.

Among checks CST 7-1 check was the highest yielder (4749 kg/ha) compared to local check (4558 kg/ha) and CSR 10 (3669 kg/ha). The performance of entries was compared with CST7-1 and CSR 10 depending on duration of entry. The entries IET 24441 (DRRH 102), IET 24426 (CR 2218-41-2-1-1-S-B3-B) and IET 24425 (MCM-109) with 5796 Kg/ha , 5124 kg/ha and 5003 kg/ha, respectively were superior in mean yield over the best check, hence discussed below.

IET 24441 (DRRH 102) ranked 1st (5796 kg/ha) in overall mean yield under moderate stress with long slender grains and 86 days flowering duration. It showed yield superiority over the best check CSR 10 with 57.97% yield advantage. Quality wise, it recorded low head rice recovery (27.5 %), desirable alkali spreading value (4) and intermediate amylose content (26.01 %).

IET 24426 (CR 2218-41-2-1-1-S-B3-B) derived from the cross stood 2nd (5124 kg/ha) in overall mean yield. It possessed long bold grains with 122 days flowering duration. It showed yield gain of 7.8 % over CST 7-1, the best check. Quality wise, it recorded high head rice recovery (70.5 %), desirable alkali spreading value (4) and intermediate amylose content (23.9 %).

Performance of promising entries in overall mean under Moderate coastal saline stress, Kharif 2015 AVT 1- CSTVT

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv(%) over the best check (CSR 10/CST 7-1)	Remarks
1	24441 DRRH 102	5796 86 LS	57.9 (CSR 10)	Dropped due to Low HRR (27.5%)
2	24426 CR 2218-41-2-1-1-S-B3-B Savitri/Pateni	5124 122 LB	7.8 (CST 7-1)	
3	24425 MCM-109 MTU 2716/BPT 5204	5003 117 MS	5.3 (CST 7-1)	
	Local check	4558 86		
	CST 7-1(Coastal salinity) (Best Check)	**4749** **98**		
	CSR 10 (Early check)	**3669** **85**		
	Jaya	3612 91		

IET 24425 (MCM-109), a derivative of the cross MTU 2716/BPT 5204 ranked 3rd (5003 kg/ha) in overall mean yield with medium slender grains and 117 days flowering duration. It showed yield superiority over the best check (local check) by 5.3 % . Quality wise, it recorded high head rice recovery (69.5%), desirable alkali spreading value (7) and intermediate amylose content (22.08 %) with hard GC (25 mm)

On overall mean basis, three entries IET 24426 (CR 2218-41-2-1-1-S-B3-B) and IET 24425 (MCM-109) registered > 5% yield advantage over the best check (CSR 10/CST 7-1). Therefore they were promoted to AVT-2-CSTVT.

List of superior entries in AVT1- CSTVT

	IET No	Remarks
Coastal saline stress		
Overall	IET 24430	Promoted to 3rd year of testing
Eastern zone (Zone 3)	IET 24425 IET 24439	Promoted to 3rd year of testing
Western zone (Zone 6)	IET 24434	Promoted to 3rd year of testing
Southern zone (Zone 7)	IET 24441 IET 24430 IET 24425	Dropped due to low HRR (27.5) Promoted to 3rd year of testing Promoted to 3rd year of testing
Moderate coastal saline		
Overall mean	IET 24426 IET 24441 IET 24425	Promoted to 3rd year of testing Dropped due to low HRR (27.5) Promoted to 3rd year of testing

INITIAL VARIETY TRIAL- COASTAL SALINE TOLERANT VARIETY TRIAL (IVT-CSTVT)

Locations : **10** **Entries** : **64**

Checks : **CST 7-1(Coastal saline check), CSR 10 (Early saline tolerant check), Jaya (yield check),BPT 5204 and local check** **Table** : **6.18**

IVT-CSTVT was constituted with 64 entries including 5 checks namely CST 7-1 (Coastal saline), Jaya (Yield), CSR 10 (Early saline tolerant), BPT 5204 (sensitive check) and local check.

Of the 10 coastal saline locations data was received from 7 centres viz., Canning town and Gosaba (West Bengal), Chorao island (Goa), Machilipatnam (Andhra Pradesh), Panvel (Maharashtra), Danti (Gujarat) and Vytilla (Kerala). Data was not received from the remaining three centres, Cuttack, Port Blair (Andaman Nicobar) and Sirsi (Karnataka). At Panvel CO43 (Recurrent aprent), IET 25080, BPT 5204 and IET 16904 could not flower.

Information on soil stress parameters in cntres are mentioned below.

Locations with coastal saline stress

S.No	Locations / State	pH	ECe (dSm^{-1})
1	ICAR Goa	6.22-7.18	1.36-8.72
2	Vyttila (Kerala)	3-5.5	5.9 to 6.6
3	Machilipatnam (A.P)	7.35	-

Locations with moderate stress under coastal salinity

S.No	Locations / State	pH	ECe ($dSm^{-1)}$
1	Gosaba (West Bengal)	6.5	3.5 - 4.5
2	Canning town (West Bengal)	6.5	7.89
3	Panvel (Maharashtra)	7 - 8	2.17 – 5.78
4	Danti (Gujarat)	**8.52**	**4.78**

Performance of entries under coastal salinity

The overall mean yield of the entries ranged from 386 kg/ha (IET 25057) to 2538 kg/ha (CSR 10). Days to 50% flowering ranged from 93 days (IET 23795) to 125 days (IET25078)). Panicles /m^2 ranged from 169 (IET 25057) to 349 (IET 25061), while plant height ranged from 76 cm (CSR 10) to 143 cm (IET 25050) (Tables 6.19, 6.20, 6.21 and 6.22).

The test entries need to be compared with the best check between specific coastal salinity and local check for yield superiority. Any test entry giving ≥ 5% yield superiority over the best coastal saline check would be promoted to next stage in three tier testing of AICRIP system. The early duration entries are suggested to be compared with CSR 10 for yield improvement. Since CSR10 a check for salinity tolerance ranked 1st with 2538 kg/ha on overall mean yield basis hence none of the entries discussed for their performance.

Performance of entries in zones under costal salinity

The trial was evaluated in Western (Zone 6) and Southern (Zone 7) zones and the performance of entries zone- wise was presented below.

Western zone - Zone 6

In this zone IVT- CSTVT trial was conducted at Goa and Panvel. The stress at Panvel was moderate hence only Goa centre was considered. Five entries, IET 25077 with 169%, IET 23795 with 156.7% and IET 25091 with 128.5%, IET 25075 with 111.7% and IET 25083 with 98.8% of yield advantage over the best check (local check) were found to be superior.

IET 25077 (DRRH 106 a hybrid ranked 1st in western region (3632 kg/ha) with long slender grains and 112 days to 50% flowering duration.It showed yield superiority (169.0%) over the best check (local check).

IET 23795(GNV 11-14(IR 78806-B-B 16-1-2-2-AJY-1) derived from the cross PSBRC 86/IR 64 ranked 2nd with 3466 kg/ha yield possessing long bold grains and 99 days to 50% flowering duration. It showed 156.7% yield gain over the best check (local check).

Performance of entries in Western zone (Zone 6)

Rank	IET No. /Designation/ Cross combination	GY/FD/GT	Yield adv (%) over best check in zone 6 (Local check)
1	25077 DRRH 106 (HYBRID)	3632 112 LS	169.0 (LC)
2	23795 (REPEAT) GNV 11-14(IR 78806-B-B 16-1-2-2 AJY 1) PSBRC 86/IR 64	3466 99 LB	156.74 (LC)
3	25091 KAU CUL 27-2 Mutant of VTL-4	3085 112 MB	128.51 (LC)
4	25075 NVSR-6137 JAYA/GR-6	2858 105 LS	111.70 (LC)
5	25083 KAU CUL 51-5 Mutant of VTL-3	2684 113 MB	98.81 (LC)
	Local Check (Best Check)	**1350** **91**	
	CST 7-1	535 121	
	CSR 10	1815 93	
	Jaya	101	
	BPT 5204	1003 126	

Bold italic: Best check and over the best check; LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

IET 25091 (KAU CUL 27-2) derived from the cross Mutant of VTL-4 ranked 3rd (3085 kg/ha) with medium bold grains and 112days to 50% flowering duration. It showed yield superiority of 128.5% over the best check (local check).

IET 25075 (NVSR 6137) derived from the cross Jaya/GR-6 ranked 4th (2858 kg/ha) with long slender grains and 105days to 50% flowering duration. It exhibited yield superiority of 111.7% over the best check (local check).

IET 25083(KAU CUL 51-5) a mutant of VTL-3 ranked 5th (2684 kg/ha) with medium bold grains and 113days to 50% flowering duration. It showed yield superiority over all the checks with 98.8% yield advantage over the best check (local check).

Based on performance of entries in zone 6 (Western) twenty entries namely IET 25051 (55.5%), IET 23795 (156.7%), IET 25054 (29.9%), IET 25055 (60.2%), IET 25058 (44.8%), IET 25059 (67.6%), IET 25060 (37.6%), IET 25066 (46.7%), IET 25068 (16.6%), IET 25074 (44.4 %), IET 25075 (111.7%), IET 25077 (169 %), IET 25079 (90.7%), IET 25083(98.8%), IET 25089 (26.3%), IET 25091 (128.5%) ,IET 25095 (51.0%), IET 25096 (34.1%),IET 25097 (14.3%) and IET 25100 (51.85%) were superior to the best check. (local check). Therefore they were promoted to second year of testing under AVT-1 coastal salinity.

Southern Zone (Zone 7)

In zone 7, IVT- CSTVT trial was conducted in 2 states namely Kerala (Vytilla) and Andhra Pradesh (Machilipatnam). In this zone ***nineteen entries i.e IET 25049 (70.5%), IET 25050 (69%), IET 25051 (53.6%), IET 25054 (71.3%), IET 25056 (34%), IET 25067 (54.9%), IET 25068 (23.4%), IET 25074 (16.8%), IET 25078 (24.2%), IET 25083 (62%), IET 25086 (19%), IET 25087 (45%), IET 25089 (23%), IET 25094 (10%), IET 16904 (20.2%), IET 25097 (12.8%), IET 25100 (88.6%), IET 25101 (41.6%) and IET 25102 (28%) exhibited Yield superiority over the best check. (local check). Therefore they were promoted to second year of testing under AVT-1 coastal salinity.***

Performance of entries under Moderate coastal saline stress

The Moderate coastal saline Tolerent Variety Trial was sent to 4 locations namely Gosaba (West Bengal), Canning town (West Bengal), Panvel (Maharashtra) and Danti (Gujarat). Under Moderate coastal saline, the overall mean grain yield ranged from 2435 kg/ha (IET 25064) to 5702 kg/ha (IET 25076). Days to 50% flowering ranged from 86 days (IET 23795) to 123 days (IET 25049) Whereas panicles/m^2 ranged from 293(IET 25083) to 445 (IET 225073).

Local check was the best check with 5477 kg/ha yield. None of the entries were found superior in yield over best check. ***Hence none of the entries are promoted to AVT-2 – CSTVT***

Performance of NILs (IET 25061, 25062,25063,25070,25071 & 25072) in IVT & CSTVT trial under Coastal Saline.

IET No.	Coastal saline						Moderate Coastal saline					
	Yield (kg/ha)	% yield gain over					Yield (kg/ha)	% yield gain over				
		RP	CST 7-1	BPT 5204	LC	BC (Jaya)		RP	BPT 5204	Jaya	CST7-1	BC (LC)
25061	753	7	-	-	-	-	4600		10	-	-	-
25062	788	12	5.7	-	-	-	5331		27.7	15	6.8	-
25063	784	12	5.2	-	-	-	3147		-	-	-	-
CO43(Recurrent Parental)	702		-	-	-	-	5357		28	16	7	-
25070	559	-	-	-	-	-	4161		-	-	-	-
25071	1108	58	48	3.26	-	-	3786		-	-	-	-
25072	838	19	12.5	-	-	-	3685		-	-	-	-
ImprovedWhite Ponny(RP)	703						4418		6	-	-	-
Checks												
Jaya	1390						4627					
CST 7-1 –(best check under coastal saline)	745						4991					
Local Check	1330						5477					
BPT5204 (Sambamahsuri)	1073						4176					

Bold italic: Best check and over the best check; NC-National check, RC-Regional check, LC-Local check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

Performance of NILs under Coastal Salinity:

The NILs in background of CO 43 Sub1 developed by introgressing of Saltol through MAS. Three entries viz., IET 25062 (CO 43 Sub1 13-6), IET 25062 (CO 43 Sub1 9-2-4) and IET 25063 (CO 43 Sub1 91-27) in background of CO 43 sub1 and IET 25070, IET 25071 and IET 25072 the NILs with saltol in back ground of Improved White Ponni were evaluated under coastal saline conditions along with their recurrent parent, coastal saline checks CST 7-1, CSR 10, Yield check-Jaya and sensitive check- BPT 5204. Under the coastal salinity, the stress at tillering and reproductive stage was observed at Goa, Vyttila and Machilipatnam, while moderate stress at reproductive was observed at Gosaba, Canning, Panvel and Navasari. The data was analyzed accordingly. At Machilipatnam the salinity and drought both affected the performance of entries. Under saline stress though the performance of the NILs were almost similar to recurrent parent. IET 25061, IET 25062, IET 25063 and RP (CO 43 Sub1) yielded 753, 788, 784 and 702 kg/ha, respectively, but IET 25062 and IET 25063 showed around 12% more yield than RP. While under moderate stress all were inferior to recurrent parent.

While among the NIL in background of Improved White Ponni, only IET 25071 (Improved White Ponny Saltol 5-36) performed better with yield of 1108 kg/ha with 58% yield superiority over recurrent parent. While under moderate stress all the entries showed poor yield than the recurrent parent. The performance of NILs are presented in table. Quality wise IET 25062 recorded medium head rice recovery (51.7%), desirable alkali spreading value (4) and high amylose content (28.92%) resembling the recurrent parent (CO 43). Another entry IET 25071 indicated high HRR (68.5%), desirable ASV (4) and intermediate amylose content (23.93%). Among the NIL in background of CO 43 Sub1 IET 25062 may be repeated. While IET 25071 in background of White Ponny may be promoted for second year of testing.

Table 6.12 : Composition of entries in Advance Variety Trial 1- Coastal Saline Tolerant Variety Trial (AVT 1- CSTVT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
2nd year of testing				
1801	24425	MCM-109	MTU 2716/BPT 5204	MS
3rd year of testing				
1802	23837	Gosaba 9-2	IR05F 102 / IR 66946-3R-178-1-1	LB
2nd year of testing				
1803	24441	***DRR H 102 (Hybrid)***	-	LB
1804	**Jaya (yield check)**			
1805	24430	CR 2839-1-S-11-1-B2-B-46-2B	Swarna/ FL 496	LB
1806	**BPT 5204 (Sensitive Check)**			
1807	24419	MCM- 108	BPT 5204/ MTU 4871	MS
1808	24436	RP 5715-350-3-11-2-1	Swarna / CST 7-1	MS
1809	**CST 7-1 (Coastal saline)**			
1810	24424	CN 1953-3-5	Annada/Nona Bokra	SB
1811	**CSR 10(Early)**			
1812	24439	RP 5899-47-39-2-2-2-1	RP Bio 226*1/ Jarava	MS
1813	**Local Check**			
1814	24426	CR 2218-41-2-1-1-S-B3-B	Savitri/Pateni	SB
1815	24434	IR 83421-6-B-3-3-1-1-CR 3364-S-2B-14-2B	IRRI 126/IRRI 135	LB
1816	**FL 478 Check with Saltol 1**			

Table No. 6.13: Grain Yield (kg/ha) of entries in AVT 1-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	III		VI						Zone VI Mean (3)		VII		Overall Mean (5)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		OD		MH		GU		GOA				KE						
		CTK		PNV		NVS		GOA				VTL						
1801	24425	5072	1 * ...76%	718				1464		1091	*	3689	4	2736	7 *	116	115	223
1802	23837	3278	3 ...13%	1069		4215	3	3016	3	2767	6 *	4416	3 *	3199	2 * 6%	103	111	241
1803	24441	2950	4 ...2%	926		3825	5	2989	4	2580	7 *	5004	1 *	3139	4 * 4%	103	116	214
1804	Jaya (YC)	2311		2172	9	3900	4	3691	1 *	3254	3 *	3262	6	3067	5 * 1%	101	102	234
1805	24430	2817	8	4252	1 * ...23%	3074	7	1960	9	3095	4 *	4954	2 *	3411	1 * 13%	103	109	233
1806	BPT 5204 (SC)	2144		2388	8	1658	8	1792		1946	*	624		1721	*	119	100	225
1807	24419	2850	7	3017	4	793		896		1569	*	1684		1848	*	118	121	236
1808	24436	1700		1397		560		800		919	*	1509		1193	*	123	109	224
1809	CST 7-1 (CS)	1567		3453	3	928		1549		1977	9 *	3058	8	2111	*	116	120	244
1810	24424	2117						303		303	*	2140		1520	*	116	144	205
1811	CSR 10(EC)	1150		2469	7	4986	1	2365	8	3274	2 *	2425		2679	9 *	99	97	228
1812	24439	4367	2 * ...51%	2539	6	1581	9	2520	6	2213	8 *	2440		2689	8 *	114	117	253
1813	Local Check	2889	6	2739	5	3493	6	2675	5	2969	5 *	3328	5	3025	6 *	97	111	281
1814	24426	2444	9	270				757		514	*	3194	7	1666	*	124	116	206
1815	24434	2906	5 ...1%	3588	2 ...4%	4223	2	3080	2	3630	1 * 11%	1947		3149	3 * 4%	102	112	260
1816	FL 478 Check	1617		1431		1235		2419	7	1695	*	2828	9	1906	*	92	97	232
	Exp Mean	**2636**		**2162**		**2652**		**2017**		**2254**		**2906**		**2472**		**109**	**112**	**235**
	C.D. 5%	682		212		420		537				653					6	
	C.V.%	18.16		6.89		11.05		18.70				15.77						
	Sowing Date	13-Jun		13-Jun		12-Jun		09-Jun				06-Jun						
	Planting Date	08-Aug		21-Jul		08-Jul		13-Jul				26-Jun						
	Local ©	Luna Barial		Panvel-1		Dandi		Korgut				VTL-6						

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.13 Contd.: Grain Yield (kg/ha) of entries in AVT 1-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III						Zone III Mean (2)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		W.B		W.B		W.B (2)								
		GSB		CNG		Mean								
1801	24425	5107	3	4898	4	5003	3 * 5%	5003	3 * 5%	5003	3 * 5%	117	111	348
1802	23837	4545	9	4734	5	4640	6	4640	6	4640	6	88	105	330
1803	24441	6173	1 *	5420	1	5796	1 * 22%	5796	1 * 22%	5796	1 * 22%	86	120	362
1804	Jaya (YC)	3227		3997		3612		3612		3612		91	97	347
1805	24430	3143		4691	6	3917		3917		3917		87	100	370
1806	BPT 5204 (SC)	4602	7	4141		4371		4371		4371		107	95	465
1807	24419	4770	5	4026		4398	9	4398	9	4398	9	122	105	389
1808	24436	3311		3764		3538		3538		3538		98	104	333
1809	CST 7-1 (CS)	4574	8	4925	3	4749	4	4749	4	4749	4	98	112	422
1810	24424	2609		3985		3297		3297		3297		98	161	390
1811	CSR 10(EC)	4405		2932		3669		3669		3669		85	72	384
1812	24439	4938	4	4531	8	4735	5	4735	5	4735	5	100	115	394
1813	Local Check	4770	6	4346	9	4558	7	4558	7	4558	7	86	108	393
1814	24426	5219	2	5030	2	5124	2 * 8%	5124	2 * 8%	5124	2 * 8%	122	121	396
1815	24434	4181		4640	7	4410	8	4410	8	4410	8	88	105	382
1816	FL 478 Check	3676		2784		3230		3230		3230		84	85	318
	Exp Mean	**4328**		**4303**		**4315**		**4315**		**4315**		**97**	**107**	**376**
	C.D. 5%	506		1164									4	
	C.V.%	8.21		18.99									0.00	
	Sowing Date	08-Jul		01-Jul										
	Planting Date	04-Aug		03-Aug										
	Local ©	Gosaba-5		CSR 4										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.13 Contd.: Grain Yield (kg/ha) of entries in AVT 1-CSTVT Severe Coastal Salinity Kharif 2015

Entry No.	IET No.	VII				Zonal VII Mean (1)		Overall Mean (1)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		A&N		A.P.								
		POB		@MPM								
1801	24425	1276	8	1200	9	1276	8	1276	8	125	121	7
1802	23837	1852	3 * …36%	2271	2	1852	3 * …36%	1852	3 * …36%	107	101	6
1803	24441	1975	2 * …45%	925		1975	2 * …45%	1975	2 * …45%	97	91	6
1804	Jaya (YC)	947		2200	3	947		947		108	100	6
1805	24430	1770	4 * …30%	1850	6	1770	4 * …30%	1770	4 * …30%	106	98	6
1806	BPT 5204 (SC)	1004		1122		1004		1004		98	83	6
1807	24419	1350	6	1669	8	1350	6	1350	6	103	93	5
1808	24436	1111		1864	5	1111		1111		106	113	6
1809	CST 7-1 (CS)	486		211		486		486		108	101	6
1810	24424	329		1021		329		329		103	119	5
1811	CSR 10(EC)	1358	5	938		1358	5	1358	5	102	103	4
1812	24439	741		869		741		741		103	103	6
1813	Local Check	1342	7	2013	4	1342	7	1342	7	118	118	7
1814	24426	1193	9	2273	1	1193	9	1193	9	99	111	7
1815	24434	2140	1 * …58%	1738	7	2140	1 * …58%	2140	1 * …58%	108	116	6
1816	FL 478 Check	1193		1005		1193		1193		121	106	6
	Exp Mean	**1254**		**1448**		**1254**		**1254**		**107**	**105**	**6**
	C.D. 5%	243		490		243		243			0	
	C.V.%	11.64		20.29		11.64		11.64			0.00	
	Sowing Date	17-Jun		30-Jul								
	Planting Date	20-Jul		18-Sep								
	Local ©	CARI Dhan 5		MTU 1061								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No.6.14: Days to 50% Flowering of entries in AVT 1-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	III	VI			Zone VI Mean (3)	VII	Overall Mean (5)
		OD	MH	GU	GOA		KE	
		CTK	PNV	NVS	GOA		VTL	
1801	24425	128	125		124	124	86	116
1802	23837	124	95	103	103	100	93	103
1803	24441	131	94	101	101	99	89	103
1804	Jaya (YC)	122	94	103	102	100	83	101
1805	24430	130	89	99	104	97	93	103
1806	BPT 5204 (SC)	125	111	126	124	120	110	119
1807	24419	124	113	123	124	120	105	118
1808	24436	132	129	125	123	125	108	123
1809	CST 7-1 (CS)	127	113	116	119	116	104	116
1810	24424	125	112		125	119	101	116
1811	CSR 10(EC)	122	92	103	95	97	86	99
1812	24439	125	96	123	123	114	104	114
1813	Local Check	116	92	100	92	95	86	97
1814	24426	130	132		124	128	111	124
1815	24434	129	88	101	102	97	93	102
1816	FL 478 Check	126	77	93	89	86	73	92
	Exp Mean	**126**	**103**	**109**	**111**	**107**	**95**	**109**
	C.D. 5%	2	1	2	4		2	
	C.V.%	1.31	0.99	1.37	2.38		1.51	

Table No. 6.14 Contd.: Days to 50% Flowering of entries in AVT 1-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zone III Mean (2)	Overall Mean (2)
		W.B	W.B	W.B (2)		
		GSB	CNG	Mean		
1801	24425	113	121	117	117	117
1802	23837	81	94	88	88	88
1803	24441	80	92	86	86	86
1804	Jaya (YC)	85	96	91	91	91
1805	24430	81	92	87	87	87
1806	BPT 5204 (SC)	99	114	107	107	107
1807	24419	116	128	122	122	122
1808	24436	81	114	98	98	98
1809	CST 7-1 (CS)	81	114	98	98	98
1810	24424	81	114	98	98	98
1811	CSR 10(EC)	80	90	85	85	85
1812	24439	93	107	100	100	100
1813	Local Check	81	90	86	86	86
1814	24426	116	128	122	122	122
1815	24434	79	96	88	88	88
1816	FL 478 Check	78	90	84	84	84
	Exp Mean	**89**	**105**	**97**	**97**	**97**
	C.D. 5%	0	1			
	C.V.%	0.00	0.89			

Table No. 6.15 : Plant Height (cm) of entries in AVT 1-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zone III Mean (2)	Overall Mean (2)
		W.B	W.B	W.B (2)		
		GSB	CNG	Mean		
1801	24425	124	97	111	111	111
1802	23837	116	94	105	105	105
1803	24441	135	105	120	120	120
1804	Jaya (YC)	105	90	97	97	97
1805	24430	108	91	100	100	100
1806	BPT 5204 (SC)	102	88	95	95	95
1807	24419	115	95	105	105	105
1808	24436	112	95	104	104	104
1809	CST 7-1 (CS)	125	98	112	112	112
1810	24424	165	157	161	161	161
1811	CSR 10(EC)	75	68	72	72	72
1812	24439	121	109	115	115	115
1813	Local Check	120	97	108	108	108
1814	24426	140	102	121	121	121
1815	24434	115	96	105	105	105
1816	FL 478 Check	94	76	85	85	85
	Exp Mean	**117**	**97**	**107**	**107**	**107**
	C.D. 5%			4	4	4

Table No. 6.15 Contd.: Plant Height (cm) of entries in AVT 1-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	III	VI			Zone VI Mean (3)	VII	Overall Mean (5)
		OD	MH	GU	GOA		KE	
		CTK	PNV	NVS	GOA		VTL	
1801	24425	124	112		118	115	107	115
1802	23837	135	102	98	111	103	107	111
1803	24441	126	116	115	117	116	106	116
1804	Jaya (YC)	125	97	88	108	98	92	102
1805	24430	127	98	94	105	99	119	109
1806	BPT 5204 (SC)	119	94	79	99	91	110	100
1807	24419	123	104	117	117	112	142	121
1808	24436	132	99	74	110	94	127	109
1809	CST 7-1 (CS)	136	119	112	115	116	116	120
1810	24424	128	125		155	140	168	144
1811	CSR 10(EC)	133	82	78	93	84	97	97
1812	24439	119	125	98	120	114	123	117
1813	Local Check	125	88	95	133	105	114	111
1814	24426	120	107		114	110	123	116
1815	24434	118	111	111	117	113	105	112
1816	FL 478 Check	127	91	89	100	93	77	97
	Exp Mean	**126**	**104**	**96**	**114**	**106**	**115**	**112**
	C.D. 5%					0		6

Table No. 6.16: Panicles/ M² of entries in AVT 1-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	III	VI			Zone VI Mean (3)	VII	Overall Mean (4)
		OD	MH	GU	GOA		KE	
		CTK	PNV	NVS	GOA		@ VTL	
1801	24425	227	233		209	221	8	223
1802	23837	190	252	319	205	259	13	241
1803	24441	175	185	317	178	227	13	214
1804	Jaya (YC)	148	210	372	205	262	14	234
1805	24430	174	245	352	163	253	16	233
1806	BPT 5204 (SC)	151	203	332	213	250	16	225
1807	24419	167	307	273	196	259	13	236
1808	24436	148	219	332	196	249	10	224
1809	CST 7-1 (CS)	152	315	321	187	274	13	244
1810	24424	179	275		161	218	12	205
1811	CSR 10(EC)	141	254	313	205	257	11	228
1812	24439	215	291	330	178	266	14	253
1813	Local Check	199	311	383	233	309	12	281
1814	24426	160	311		147	229	11	206
1815	24434	166	285	376	213	292	11	260
1816	FL 478 Check	147	284	308	187	260	10	232
	Exp Mean	**171**	**261**	**333**	**192**	**257**	**12**	**235**
	C.D. 5%	23	22	38	23		2	
	C.V.%	9.42	5.96	8.04	8.58		9.26	

Table No. 6.14 Contd. : Days to 50% Flowering of entries in AVT 1- CSTVT Severe Coastal Salinity Kharif 2015

Entry No.	IET No.	VII		Zone VII Mean (1)	Overall (1)
		A&N	A.P.		
		POB	@MPM		
1801	24425	125	106	125	125
1802	23837	107	113	107	107
1803	24441	97	107	97	97
1804	Jaya (YC)	108	113	108	108
1805	24430	106	99	106	106
1806	BPT 5204 (SC)	98	132	98	98
1807	24419	103	114	103	103
1808	24436	106	106	106	106
1809	CST 7-1 (CS)	108	113	108	108
1810	24424	103	113	103	103
1811	CSR 10(EC)	102	135	102	102
1812	24439	103	134	103	103
1813	Local Check	118	125	118	118
1814	24426	99	112	99	99
1815	24434	108	113	108	108
1816	FL 478 Check	121	104	121	121
	Exp Mean	**107**	**115**	**107**	**107**
	C.D. 5%	2	1	2	
	C.V.%	1.07	0.72	1.27	

Table No. 6.15 Contd.: Plant Height (cm) of entries in AVT 1- CSTVT Severe Coastal Salinity Kharif 2015

Entry No.	IET No.	VII		Zonal VII Mean (1)	Overall Mean (1)
		A&N	A.P.		
		POB	@MPM		
1801	24425	121	74	121	121
1802	23837	101	71	101	101
1803	24441	91	66	91	91
1804	Jaya (YC)	100	63	100	100
1805	24430	98	66	98	98
1806	BPT 5204 (SC)	83	65	83	83
1807	24419	93	88	93	93
1808	24436	113	60	113	113
1809	CST 7-1 (CS)	101	75	101	101
1810	24424	119	88	119	119
1811	CSR 10(EC)	103	60	103	103
1812	24439	103	73	103	103
1813	Local Check	118	71	118	118
1814	24426	111	70	111	111
1815	24434	116	78	116	116
1816	FL 478 Check	106	67	106	106
	Exp Mean	**105**	**71**	**105**	**105**

Table No. 6.16 Contd.: Panicles/ M² of entries in AVT 1-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zone III Mean (2)	Overall Mean (2)
		W.B GSB	W.B CNG	W.B (2) Mean		
1801	24425	330	366	348	348	348
1802	23837	231	430	330	330	330
1803	24441	297	426	362	362	362
1804	Jaya (YC)	264	430	347	347	347
1805	24430	330	410	370	370	370
1806	BPT 5204 (SC)	363	566	465	465	465
1807	24419	330	447	389	389	389
1808	24436	264	403	333	333	333
1809	CST 7-1 (CS)	330	514	422	422	422
1810	24424	330	451	390	390	390
1811	CSR 10(EC)	231	537	384	384	384
1812	24439	264	524	394	394	394
1813	Local Check	297	490	393	393	393
1814	24426	330	462	396	396	396
1815	24434	264	500	382	382	382
1816	FL 478 Check	231	404	318	318	318
	Exp Mean	**293**	**460**	**376**	**376**	**376**
	C.D. 5%	0	117			

Table No. 6.16 Contd.: Panicles/ M² of entries in AVT 1- CSTVT Severe Coastal Salinity Kharif 2015

Entry No.	IET No.	VII	
		A&N @POB	A.P. @MPM
1801	24425	7	233
1802	23837	6	248
1803	24441	6	190
1804	Jaya (YC)	6	249
1805	24430	6	38
1806	BPT 5204 (SC)	6	247
1807	24419	5	168
1808	24436	6	309
1809	CST 7-1 (CS)	6	15
1810	24424	5	144
1811	CSR 10(EC)	4	154
1812	24439	6	108
1813	Local Check	7	294
1814	24426	7	222
1815	24434	6	358
1816	FL 478 Check	6	39
	Exp Mean	**6**	**188**
	C.D. 5%	0	111
	C.V.%	3.31	35.35

Table 6.17: Grain quality characteristics of entries in AVT-1 CSTVT Kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chake	ASV	AC	GC
1801	24425	78.6	71.7	69.5	5.22	1.86	2.8	MS	A	7	22.08	25
1802	23837	79.5	67.1	50.6	6.16	2.22	2.77	LB	VOC	4	23.73	44
1803	24441	79.6	68.1	27.5	6.14	2.14	2.86	LB	VOC	4	26.01	41
1804	JAYA	79.8	67.4	45.4	5.53	2.5	2.21	SB	VOC	7	25.66	22
1805	24430	79.6	67.8	53.6	6.18	2.22	2.78	LB	VOC	4	27.72	40
1806	BPT5204	79.6	68.8	55.9	4.95	1.85	2.67	MS	A	4	24.93	23
1807	24419	78.8	70.3	67.8	5.2	2.07	2.51	MS	A	7	24.11	35
1808	24436	78	69.2	64.1	5.34	1.93	2.76	MS	VOC	4	24.52	22
1809	CST 7-1	77.7	69.4	65.9	6.22	2.41	2.58	LB	VOC	4	24.11	52
1810	24424	79.6	65.1	56.6	5.2	2.57	2.02	SB	VOC	4	26.31	25
1811	CSR-10	79	65.4	39.9	5.18	2.54	2.03	SB	VOC	4	24.28	22
1812	24439	80.6	70.7	53	5.46	1.9	2.87	MS	VOC	4	26.34	22
1813	L.C.											
1814	24426	80.2	71.8	70.5	5.77	2.44	2.36	SB	VOC	4	23.99	23
1815	24434	76	66	55.3	6.09	2.14	2.84	LB	VOC	4	21.91	61
1816	FL478	78.1	61.9	45.1	6.47	2.33	2.77	LB	OC	4	25.37	22

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Trial 6.18: Composition of entries in Initial Variety Trial - Coastal Saline Tolerant Variety Trial (IVT - CSTVT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
4001	25049	CR 3903-161-1-2-2	Santepheap/IR 82810-407//IR 71700-247-1-1-2	MB
4002	25050	CN-2004-6-4-5	FL 478/JAYA	LB
4003	25051	GOA R 2015 -IR 87848-301-2-1-3-B	A 69-1/IR 55179-3B-11-3	LS
4004	25052	CR 3883-3-1-5-2-1-2	Annapurna/FL478//Annapurna	MS
4005	23795 (Repeat)	GNV 11-14 (IR 78806-B-B-16-1-2-2-AJY 1)	PSB RC 86 / IR 64	LB
4006	25053	CR 2845-S-1-1-3B	Swarna Sub 1/SR 26B	MS
4007	25054	CSR 2013-IR 42-35	A 69-1/IR 55179-3B-11-3	LB
4008	25055	KS -12	Selection from local landrace korgut	LB
4009	25056	CR3890-35-1-3-4	CN 1920/Savitri//IR 71700-247-1-1-2	MS
4010	25057	MCM-110	MTU4870XMTU2716	MS
4011	25058	NVSR-6100	Dandi/GR-7	LB
4012	16885	CIARI Dhan-5	BTS 24 (Somaclone of Pokkali)	SB
4013	25059	RP 5898-140-8-2-1-1	RP Bio 226*1/CSR 27	MS
4014	25060	TR 11-085	ADT 43/IR 68114	MS
4015	25061	CO 43Sub1 13-6	CO 43/FR13A	MS
4016	25062	CO43Sub1 9-2-4	CO 43/ FR13A	MS
4017	**CO43 (Recurrent Parent)**			MS
4018	25063	CO 43Sub1 91-27	CO 43/ FR13A	MS
4019	**CST 7-1 (Coastal Saline Check)**			

Entry No.	IET No.	Designation	Cross Combination	Grain type
4020	25064	MCM-113	BPT5204/ MTU 4870	LS
4021	25065	CR-2859-S-B-2-1-2B-1	Varshadhan/FL496	LB
4022	25066	CN-2019-2-1-1	Type 3/Basmati 370//Bhutnath	LS
4023	25067	GOA R 2015- IR 87848-301-2-1-1-B	A 69-1/IR 55179-3B-11-3	LS
4024	25068	CSR 2013-IR 42-17	IR 4630-22-2-5-1-3/IR05N204	LS
4025	**Jaya (Yield Check)**			
4026	25069	RP 5898-31-14-6-3-2-1	RP Bio 226*1/CSR 27	MS
4027	25070	Improved White Ponny SALTOL 5-35	Improved White Ponni / FL 478	MS
4028	25071	Improved White Ponny SALTOL 5-36	Improved White Ponni / FL 478	MS
4029	**Improved White Ponny (RP)**			MS
4030	25072	Improve white ponny SALTOL 5-45	Improved White Ponni / FL 478	MS
4031	25073	RP 5898-71-19-8-2-1-1	RP Bio 226*1/CSR 27	MS
4032	25074	TR 13-083	ADT 43/FL478///ADT 43	MS
4033	25075	NVSR-6137	JAYA/GR-6	LS
4034	25076	HHZ 5-Y4-SAL1-Y1-3953-1	Huang-Hua-Zhan*2/0M1723	MB
4035	25077	***DRRH 106 (Hybrid)***	-	LS
4036	25078	CR2839-1-S-10-B2-B-43-3B-2	Swarna/FL496	MS
4037	25079	CSR 2013-IR 42-16	IR 4630-22-2-5-1-3/IR05N204	LS
4038	25080	MCM-117	MTU2716XBPT5204	MS
4039	**CSR 10 (Early Check)**			
4040	25081	CR2845-S-3-3B-1	Swarna Sub 1/SR 26B	LS
4041	25082	CSR 2013-IR 42-21	IR 4630-22-2-5-1-3/IR72046-B-R-8-3-1-3	LB
4042	25083	KAU CUL. 51-5	Mutant of VTL-3	MB
4043	25084	CR3881-4-1-5-4-3-1	Naveen/FL496//Naveen	MS
4044	25085	RP 5898-30-11-8-4-2-1	RP Bio 226*1/CSR 27	LS
4045	**BPT 5204 (Sensitive Check)**			
4046	25086	CR3878-245-1-1-5	Gayatri/FL496	MS
4047	25087	RP 5898-135-13-4-1-1-1	RP Bio 226*1/CSR 27	MS
4048	25088	IR 84649-81-4-B-B-CR3397-S-4B-1	IR05F102/IR66946-3R-156-1-2	LS
4049	25089	MCM-114	BPT5204/ MTU 4870	MS
4050	25090	CR 2839-1-1-1-S-1-B-B-35-2B-1	Swarna/FL496	MS
4051	25091	KAU CUL. 27-2	Mutant of VTL-4	MB
4052	25092	CR 2851-S-1-7-3B-2	Gayatri/SR26B	MS
4053	25093	NVSR-6128	GR-103/GR-11	MS
4054	25094	CR3884-244-8-7-4-1-3	Khandagiri/FL378	MS
4055	**Local Check**			
4056	25095	CR3881-M-3-1-5-3-1-1	Naveen/FL 496//Naveen	MS
4057	16904	CIARI Dhan-4	BTS 13 (Somaclone of Pokkali)	SB
4058	25096	CR2838-SR-27	IR64/FL478	LS
4059	25097	TR 13-069	ADT 43/FL478///ADT 43	MS
4060	25098	CR3884-244-8-5-11-1-1	Khandagiri/FL 378	MS
4061	25099	CR3900-193-9-9-6	Savitri/R.Mahsuri-1//IR71700-247-1-1-2	MB
4062	25100	TR 09-27	Mutant of TRY2	LS
4063	25101	CR 2459-23-2-1-1-S-B1-2B-1	Gayatri/Rahspunjar	MB
4064	25102	CR 3900-193-9-13-2	Savitri/Rajendra Mahsuri// IR 71700-247-1-1-2	MB

Table No. 6.19: Grain Yield (kg/ha) of entries in IVT-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III						Zone III Mean (2)			VI				Zone VI Mean (2)		Overall Mean (4)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		W.B		W.B		W.B (2)					MH		GU								
		GSB		CNG		Mean					PNV		NVS								
4001	25049	4722		3694		4208		4208			867		896		881		2545		123	114	381
4002	25050	3125		4390		3758		3758			1644		3889		2767		3262		110	130	303
4003	25051	3472		4190		3831		3831			5133	...4%	4773		4953		4392		97	110	353
4004	25052	3542		4662		4102		4102			5333	...8%	3824		4578		4340		90	129	356
4005	23795	1667		3502		2585		2585			5556	8 * ...12%	3833		4695		3640		86	113	366
4006	25053	6458	1 *	5291		5875	1 * 20%	5875	1 * 20%		1422		5189		3306		4590		114	139	298
4007	25054	6111	2 *	3906		5009	9 * 2%	5009	9 * 2%		3956		4110		4033		4521		91	109	377
4008	25055	3264		5959	3	4612		4612			4533		6822	3	5678		5145		101	111	365
4009	25056	3403		5774	7	4588		4588			2511		4684		3598		4093		100	119	420
4010	25057	3472		5370		4421		4421			2267		1967		2117		3269		100	115	381
4011	25058	3681		5581		4631		4631			5467	9 * ...10%	6115	7	5791	9	5211	8	96	99	398
4012	16885	4306		5026		4666		4666			1133		3426		2280		3473		114	102	357
4013	25059	3472		5993	2	4732		4732			5644	7 * ...14%	4853		5249		4991		96	106	378
4014	25060	4653		3217		3935		3935			3533		3058		3296		3615		84	77	348
4015	25061	4792		5405		5098	5 * 4%	5098	5 * 4%				3603		3603		4600		118	104	367
4016	25062	5139	7	5532		5335	3 * 9%	5335	3 * 9%				5322		5322		5331	5	119	107	377
4017	CO43 (RP)	5208	5 *	4815		5012	8 * 2%	5012	8 * 2%				6047	8	6047	2	5357	4	114	110	374
4018	25063	3681		3884		3782		3782					1876		1876		3147		119	97	346
4019	CST 7-1 (CS)	4306		5114		4710		4710			4956		5588		5272		4991		115	112	387
4020	25064	3542		3175		3358		3358			489		2536		1512		2435		119	102	363
4021	25065	3194		5727	9	4461		4461			1222		2848		2035		3248		118	145	356
4022	25066	3194		3602		3398		3398			5111	...3%	4676		4894		4146		90	109	319
4023	25067	2778		5019		3898		3898			5444	...10%	5525		5485		4691		89	110	417
4024	25068	2778		5126		3952		3952			3911		7486	1	5699		4825		95	102	340
4025	Jaya (YC)	3750		4538		4144		4144			4933		5286		5110		4627		99	95	367
4026	25069	3472		5235		4353		4353			2689		6019		4354		4354		106	93	406
4027	25070	2986		5285		4136		4136			4089		4285		4187		4161		102	133	377
4028	25071	3403		4914		4158		4158			4333		2494		3414		3786		103	141	433
4029	Improved White Ponny (RP)	4722		4722		4722		4722			3578		4650		4114		4418		111	117	387
4030	25072	3750		4753		4252		4252			3156		3080		3118		3685		112	135	412
4031	25073	4097		4248		4173		4173			1800		5815		3807		3990		108	101	445
4032	25074	2292		4114		3203		3203			4756		5167		4961		4082		89	104	402
4033	25075	5208	6 *	5243		5226	4 * 6%	5226	4 * 6%		3200		5926		4563		4894		101	111	343
4034	25076	5000	9	5836	6	5418	2 * 10%	5418	2 * 10%		5711	6 * ...15%	6260	6	5986	5	5702		97	107	385
4035	25077	3542		5535		4538		4538			6333	2 * ...28%	5451		5892	7	5215		90	103	344
4036	25078	3681		4515		4098		4098			1267		4314		2791		3444		119	104	330
4037	25079	3542		4916		4229		4229			6644	1 * ...34%	5998		6321		5275		104	102	366
4038	25080	4097		4631		4364		4364					3818		3818		4182		116	108	322
4039	CSR 10 (EC)	3403		3901		3652		3652			3111		4130		3620		3636		89	73	427
4040	25081	3194		5565		4380		4380			1622		2122		1872		3126		114	132	333
4041	25082	4097		5942	4	5020	6 * 2%	5020	6 * 2%		4467		5882		5175		5097		101	120	350
4042	25083	3264				3264		3264			4444		2023		3234		3244		95	102	293
4043	25084	3472		6395	1 *	4934	1%	4934	1%		6200	3 * ...25%	5433		5817	8	5375		98	123	400
4044	25085	2847		4778		3813		3813			3489		5467		4478		4145		107	94	393
4045	BPT 5204 (SC)	3542		3709		3625		3625					5276		5276		4176		106	91	382
4046	25086	4167		5541		4854		4854					2295		2295		4001		111	151	352
4047	25087	3889		4185		4037		4037					5715		5715		4596		105	87	412
4048	25088	3819		4711		4265		4265			1378		5753		3565		3915		103	95	345
4049	25089	3750		5084		4417		4417			2711		4243		3477		3947		106	102	358
4050	25090	4028		4940		4484		4484			3956		5356		4656		4570		107	101	361
4051	25091	2986				2986		2986			5756	5 * ...16%	2899		4327		3880		92	113	357
4052	25092	3333		5772	8	4552		4552			2178		5855		4016		4284		114	102	364
4053	25093	3403		4023		3713		3713			5333	...8%	5552		5443		4578		99	91	353
4054	25094	2847		5919	5	4383		4383			5111	...3%	6749	4	5930	6	5156	9	98	112	404
4055	Local Check	4861		4956		4908		4908			4956		7136	2	6046	3	5477	2	91	105	369
4056	25095	2917		5327		4122		4122			3578		6025	9	4802		4462		93	117	371
4057	16904	4306		4653		4479		4479					3472		3472		4143		111	112	319
4058	25096	3333		4327		3830		3830			5378	...9%	4328		4853		4342		86	83	362
4059	25097	2986		3965		3476		3476			5911	4 * ...19%	5463		5687		4581		93	88	410
4060	25098	3264		5065		4165		4165			3200		6455	5	4827		4496		98	130	363
4061	25099	5417	4 *	4617		5017	7 2%	5017	7 * 2%				5316		5316		5117		112	119	305
4062	25100	3750		3467		3608		3608					6021		6021	4	4413		92	92	346
4063	25101	5764	3 *	4067		4915		4915			4067		1620		2843		3879		122	118	385
4064	25102	5139	8	4810		4974	1%	4974	1%		2356		3514		2935		3954		111	116	349
	Exp Mean	**3832**		**4809**		**4313**		**4313**			**3808**		**4619**		**4252**		**4283**		**103**	**109**	**368**
	C.D. 5%	326		913							383		696								
	C.V.%	6.10		13.60							7.20		10.80								
	Sowing Date	08-Jul		16-Jul							16-Jun		27-Jun								
	Planting Date	04-Aug		11-Aug							23-Jul		02-Aug								
	Local ©	Gosaba-5		Canning 7									Dandi								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.19 Contd.: Grain Yield (kg/ha) of entries in IVT-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	VI		VII				Zone VII Mean (1)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		GOA		KE		A.P.								
		GOA		VTL		MPM @								
4001	25049			2236	5	2121	6	2236	5	2236	6	116	110	273
4002	25050	612		2218	6	1250		2218	6	1415		116	143	227
4003	25051	2100	9 …16%	2014	9	1510		2014	9	2057	8	96	96	253
4004	25052	1450		454		625		454		952		103	110	230
4005	23795	3466	2 * …91%	1014		1302		1014		2240	5	93	101	237
4006	25053	1292		1427		1250		1427		1360		113	128	249
4007	25054	1754		2246	4	1354		2246	4	2000	9	100	94	239
4008	25055	2164	8 …19%	1059		1875		1059		1612		108	96	263
4009	25056	1223		1768		1167		1768		1495		110	104	243
4010	25057	620		152		1824		152		386		110	88	169
4011	25058	1956	…8%	604		1406		604		1280		106	89	227
4012	16885	529		718		2032		718		624		115	109	235
4013	25059	2263	7 * …25%	1146		1510		1146		1704		107	97	230
4014	25060	1858	…2%	684		573		684		1271		96	82	206
4015	25061	491		1014		2093	8	1014		753		122	100	349
4016	25062	403		1173		1875		1173		788		124	108	310
4017	CO43 (RP)	800		604		1948		604		702		122	107	240
4018	25063			784		1927		784		784		124	110	217
4019	CST 7-1 (CS)	535		955		2312	2	955		745		124	112	237
4020	25064			929		2083	9	929		929		119	109	233
4021	25065	281		1027		990		1027		654		116	134	181
4022	25066	1981	…9%	800		990		800		1391		103	101	190
4023	25067	758		2032	8	1406		2032	8	1395		96	100	317
4024	25068	1575		1618		2073		1618		1596		107	97	272
4025	Jaya (YC)	1931	…6%	848		2000		848		1390		101	90	279
4026	25069	565		2434	3	1580		2434	3	1499		118	89	281
4027	25070	598		520		1875		520		559		121	118	253
4028	25071	1120		1096		1063		1096		1108		119	121	283
4029	Improved White Ponny (RP)	613		793		1354		793		703		121	118	277
4030	25072			838		1344		838		838		123	124	290
4031	25073	704		784		2145	5	784		744		118	103	243
4032	25074	1963	…8%	1532		1146		1532		1747		109	93	231
4033	25075	2858	4 * …58%	295		990		295		1576		102	98	221
4034	25076	1634		675		1021		675		1154		108	101	190
4035	25077	3632	1 * …100%	1246		1563		1246		2439	2	106	95	245
4036	25078	903		1629		1656		1629		1266		125	101	263
4037	25079	2575	6 * …42%	852		1354		852		1713		109	108	200
4038	25080	831		725		1354		725		778		118	102	189
4039	CSR 10 (EC)	1815		3261	1	750		3261	1	2538	1	96	76	287
4040	25081	652		729		708		729		690		115	129	196
4041	25082	609		743		1656		743		676		108	120	227
4042	25083	2684	5 * …48%	2125	7	1978		2125	7	2405	3	104	99	265
4043	25084	832		443		1146		443		637		104	102	255
4044	25085	705		1129		2375	1	1129		917		118	99	287
4045	BPT 5204 (SC)	1003		1143		2156	4	1143		1073		117	96	256
4046	25086			1563		1354		1563		1563		115	118	234
4047	25087	701		1902		1301		1902		1302		116	106	229
4048	25088	656		1054		1510		1054		855		112	94	287
4049	25089	1706		1614		1010		1614		1660		121	104	270
4050	25090	861		1143		990		1143		1002		114	105	228
4051	25091	3085	3 * …70%	1268		2115	7	1268		2177	7	108	103	279
4052	25092	606		543		1771		543		574		110	95	268
4053	25093	584		546		781		546		565		114	93	267
4054	25094	700		1446		1198		1446		1073		106	96	280
4055	Local Check	1350		1311		1792		1311		1330		102	120	245
4056	25095	2039	…12%	423		1365		423		1231		103	104	287
4057	16904	865		1577		1458		1577		1221		110	105	271
4058	25096	1819		734		1302		734		1276		95	84	271
4059	25097	1544		1479		625		1479		1511		98	95	258
4060	25098	845		1161		625		1161		1003		109	116	203
4061	25099	510		714		2271	3	714		612		118	100	204
4062	25100	2050	…13%	2473	2	667		2473	2	2262	4	100	94	229
4063	25101	379		1857		885		1857		1118		110	114	229
4064	25102	726		1679		2052		1679		1202		116	111	269
	Exp Mean	**1311**		**1203**		**1465**		**1203**		**1255**		**111**	**104**	**248**
	C.D. 5%	396		115		413		108		201			0	
	C.V.%	18.69		5.90		17.42		5.55		14.11			0.00	
	Sowing Date					30-Jul								
	Planting Date					18-Sep								
	Local ©					MTU 1061								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 6.20: Days to 50% Flowering of entries in IVT-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zonal III Mean (2)	VI		Zonal VI Mean(2)	Overall Mean (4)
		W.B	W.B	W.B (2)		MH	GU		
		GSB	CNG	Mean		PNV	NVS		
4001	25049	119	116	118	118	135	124	129	123
4002	25050	104	107	106	106	124	105	114	110
4003	25051	113	83	98	98	102	90	96	97
4004	25052	77	79	78	78	119	87	103	90
4005	23795	77	81	79	79	93	95	94	86
4006	25053	119	116	118	118	129	91	110	114
4007	25054	82	81	82	82	102	98	100	91
4008	25055	90	99	95	95	110	107	108	101
4009	25056	90	88	89	89	115	107	111	100
4010	25057	90	88	89	89	114	109	111	100
4011	25058	90	88	89	89	102	105	103	96
4012	16885	112	112	112	112	117	116	116	114
4013	25059	86	83	85	85	112	103	107	96
4014	25060	78	81	80	80	89	89	89	84
4015	25061	113	112	113	113	126	120	123	118
4016	25062	113	112	113	113	131	119	125	119
4017	CO43 (RP)	112	112	112	112		118	118	114
4018	25063	113	116	115	115	127	121	124	119
4019	CST 7-1 (CS)	104	112	108	108	125	121	123	115
4020	25064	113	117	115	115	125	121	123	119
4021	25065	113	107	110	110	131	119	125	118
4022	25066	82	79	81	81	102	97	100	90
4023	25067	81	79	80	80	103	93	98	89
4024	25068	80	88	84	84	112	100	106	95
4025	Jaya (YC)	90	92	91	91	108	105	106	99
4026	25069	98	99	99	99	120	107	113	106
4027	25070	90	92	91	91	114	111	112	102
4028	25071	90	92	91	91	121	109	115	103
4029	Improved White Ponny (RP)	98	103	101	101	129	113	121	111
4030	25072	104	105	105	105	124	114	119	112
4031	25073	104	99	102	102	121	108	114	108
4032	25074	77	81	79	79	102	94	98	89
4033	25075	113	92	103	103	103	96	100	101
4034	25076	90	95	93	93	101	101	101	97
4035	25077	77	83	80	80	100	100	100	90
4036	25078	112	117	115	115	133	116	124	119
4037	25079	103	92	98	98	114	107	110	104
4038	25080	112	117	115	115		118	118	116
4039	CSR 10 (EC)	78	81	80	80	103	93	98	89
4040	25081	112	107	110	110	122	117	119	114
4041	25082	80	99	90	90	119	108	113	101
4042	25083	80		80	80	115	90	103	95
4043	25084	86	88	87	87	116	104	110	98
4044	25085	97	99	98	98	121	110	115	107
4045	BPT 5204 (SC)	104	107	106	106		107	107	106
4046	25086	104	107	106	106	116	116	116	111
4047	25087	98	95	97	97	120	108	114	105
4048	25088	90	95	93	93	123	106	114	103
4049	25089	82	112	97	97	118	114	116	106
4050	25090	104	107	106	106	109	109	109	107
4051	25091	82		82	82	104	90	97	92
4052	25092	112	105	109	109	131	109	120	114
4053	25093	90	99	95	95	101	107	104	99
4054	25094	82	92	87	87	113	105	109	98
4055	Local Check	82	83	83	83	105	93	99	91
4056	25095	88	95	92	92	100	90	95	93
4057	16904	112	107	110	110		113	113	111
4058	25096	77	81	79	79	99	89	94	86
4059	25097	82	88	85	85	104	97	101	93
4060	25098	88	88	88	88	116	100	108	98
4061	25099	112	112	112	112		113	113	112
4062	25100	77	81	79	79		117	117	92
4063	25101	125	121	123	123	100	144	122	122
4064	25102	112	105	109	109	116	113	114	111
	Exp Mean	**96**	**98**	**97**	**97**	**114**	**106**	**110**	**103**
	C.D. 5%	0	1			2	3		
	C.V.%	0.00	0.87			0.95	2.28		

Table No. 6.20 Contd.: Days to 50% Flowering of entries in IVT-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	VI	VII		Zone VII Mean (2)	Overall Mean (3)
		GOA	KE	A.P.		
		GOA	VTL	MPM		
4001	25049	124	107	117	112	116
4002	25050	123	109	117	113	116
4003	25051	103	94	91	93	96
4004	25052	98	97	115	106	103
4005	23795	99	90	91	91	93
4006	25053	124	109	105	107	113
4007	25054	99	94	107	101	100
4008	25055	104	102	117	110	108
4009	25056	108	105	117	111	110
4010	25057	107	102	122	112	110
4011	25058	99	102	117	110	106
4012	16885	124	104	117	111	115
4013	25059	102	103	117	110	107
4014	25060	91	102	96	99	96
4015	25061	124	112	131	121	122
4016	25062	126	115	131	123	124
4017	CO43 (RP)	120	114	133	123	122
4018	25063	124	118	131	124	124
4019	CST 7-1 (CS)	121	119	131	125	124
4020	25064	126	110	122	116	119
4021	25065	122	109	116	113	116
4022	25066	93	97	121	109	103
4023	25067	99	97	92	94	96
4024	25068	106	97	117	107	107
4025	Jaya (YC)	101	97	106	102	101
4026	25069	122	109	122	116	118
4027	25070	122	109	131	120	121
4028	25071	121	106	130	118	119
4029	Improved White Ponny (RP)	122	110	132	121	121
4030	25072	127	110	131	121	123
4031	25073	120	104	131	118	118
4032	25074	99	99	130	115	109
4033	25075	105	106	96	101	102
4034	25076	105	106	112	109	108
4035	25077	112	94	113	104	106
4036	25078	127	117	131	124	125
4037	25079	104	106	117	111	109
4038	25080	125	116	113	115	118
4039	CSR 10 (EC)	93	94	100	97	96
4040	25081	124	109	113	111	115
4041	25082	114	109	102	105	108
4042	25083	113	97	101	99	104
4043	25084	102	94	117	106	104
4044	25085	121	115	118	117	118
4045	BPT 5204 (SC)	126	102	122	112	117
4046	25086	123	105	117	111	115
4047	25087	117	109	122	116	116
4048	25088	116	106	114	110	112
4049	25089	125	106	133	119	121
4050	25090	120	111	112	112	114
4051	25091	112	107	106	107	108
4052	25092	121	107	102	105	110
4053	25093	114	110	117	114	114
4054	25094	111	102	106	104	106
4055	Local Check	91	97	118	108	102
4056	25095	96	95	117	106	103
4057	16904	123	90	118	104	110
4058	25096	93	93	100	97	95
4059	25097	101	97	97	97	98
4060	25098	104	106	116	111	109
4061	25099	126	106	121	114	118
4062	25100	94	102	103	103	100
4063	25101	125	89	117	103	110
4064	25102	121	109	117	113	116
	Exp Mean	**112**	**104**	**115**	**110**	**111**
	C.D. 5%	4	1	1		
	C.V.%	2.60	0.62	0.69		

Table No. 6.20: Days to 50% Flowering of entries in IVT-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	VI	VII		Zone VII Mean (2)	Overall Mean (3)
		GOA	KE	A.P.		
		GOA	VTL	MPM		
4001	25049	124	107	117	112	116
4002	25050	123	109	117	113	116
4003	25051	103	94	91	93	96
4004	25052	98	97	115	106	103
4005	23795	99	90	91	91	93
4006	25053	124	109	105	107	113
4007	25054	99	94	107	101	100
4008	25055	104	102	117	110	108
4009	25056	108	105	117	111	110
4010	25057	107	102	122	112	110
4011	25058	99	102	117	110	106
4012	16885	124	104	117	111	115
4013	25059	102	103	117	110	107
4014	25060	91	102	96	99	96
4015	25061	124	112	131	121	122
4016	25062	126	115	131	123	124
4017	CO43 (RP)	120	114	133	123	122
4018	25063	124	118	131	124	124
4019	CST 7-1 (CS)	121	119	131	125	124
4020	25064	126	110	122	116	119
4021	25065	122	109	116	113	116
4022	25066	93	97	121	109	103
4023	25067	99	97	92	94	96
4024	25068	106	97	117	107	107
4025	Jaya (YC)	101	97	106	102	101
4026	25069	122	109	122	116	118
4027	25070	122	109	131	120	121
4028	25071	121	106	130	118	119
4029	Improved White Ponny (RP)	122	110	132	121	121
4030	25072	127	110	131	121	123
4031	25073	120	104	131	118	118
4032	25074	99	99	130	115	109
4033	25075	105	106	96	101	102
4034	25076	105	106	112	109	108
4035	25077	112	94	113	104	106
4036	25078	127	117	131	124	125
4037	25079	104	106	117	111	109
4038	25080	125	116	113	115	118
4039	CSR 10 (EC)	93	94	100	97	96
4040	25081	124	109	113	111	115
4041	25082	114	109	102	105	108
4042	25083	113	97	101	99	104
4043	25084	102	94	117	106	104
4044	25085	121	115	118	117	118
4045	BPT 5204 (SC)	126	102	122	112	117
4046	25086	123	105	117	111	115
4047	25087	117	109	122	116	116
4048	25088	116	106	114	110	112
4049	25089	125	106	133	119	121
4050	25090	120	111	112	112	114
4051	25091	112	107	106	107	108
4052	25092	121	107	102	105	110
4053	25093	114	110	117	114	114
4054	25094	111	102	106	104	106
4055	Local Check	91	97	118	108	102
4056	25095	96	95	117	106	103
4057	16904	123	90	118	104	110
4058	25096	93	93	100	97	95
4059	25097	101	97	97	97	98
4060	25098	104	106	116	111	109
4061	25099	126	106	121	114	118
4062	25100	94	102	103	103	100
4063	25101	125	89	117	103	110
4064	25102	121	109	117	113	116
	Exp Mean	**112**	**104**	**115**	**110**	**111**
	C.D. 5%	4	1	1		
	C.V.%	2.60	0.62	0.69		

Table No. 6.21: Plant Height (cm) of entries in IVT-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zone III Mean (2)	VI		Zone VI Mean (2)	Overall Mean (4)
		W.B	W.B	W.B (2)		MH	GU		
		GSB	CNG	Mean		PNV	NVS		
4001	25049	152	95	124	124	98	110	104	114
4002	25050	152	134	143	143	91	143	117	130
4003	25051	118	106	112	112	112	106	109	110
4004	25052	140	125	132	132	132	119	125	129
4005	23795	130	109	120	120	107	105	106	113
4006	25053	155	130	143	143	138	131	135	139
4007	25054	112	106	109	109	121	97	109	109
4008	25055	110	101	105	105	117	117	117	111
4009	25056	130	108	119	119	114	124	119	119
4010	25057	128	105	117	117	116	109	112	115
4011	25058	109	92	101	101	98	97	97	99
4012	16885	115	97	106	106	93	102	98	102
4013	25059	118	101	110	110	106	99	103	106
4014	25060	85	76	81	81	72	76	74	77
4015	25061	115	95	105	105	109	99	104	104
4016	25062	125	98	111	111	99	106	102	107
4017	CO43 (RP)	124	93	109	109		112	112	110
4018	25063	122	87	105	105	82	99	90	97
4019	CST 7-1 (CS)	134	100	117	117	96	118	107	112
4020	25064	120	87	103	103	86	117	101	102
4021	25065	165	128	146	146	120	166	143	145
4022	25066	112	105	109	109	106	113	109	109
4023	25067	118	104	111	111	113	107	110	110
4024	25068	108	93	101	101	98	109	103	102
4025	Jaya (YC)	105	88	96	96	92	96	94	95
4026	25069	110	85	98	98	87	90	89	93
4027	25070	140	115	127	127	137	139	138	133
4028	25071	152	117	135	135	138	157	147	141
4029	Improved White Ponny (RP)	130	111	121	121	90	138	114	117
4030	25072	138	117	128	128	146	139	143	135
4031	25073	106	87	97	97	116	95	106	101
4032	25074	112	86	99	99	115	102	108	104
4033	25075	118	103	110	110	114	107	111	111
4034	25076	114	99	106	106	106	108	107	107
4035	25077	110	92	101	101	104	106	105	103
4036	25078	128	90	109	109	88	110	99	104
4037	25079	118	97	107	107	93	100	97	102
4038	25080	124	94	109	109		105	105	108
4039	CSR 10 (EC)	82	67	75	75	74	68	71	73
4040	25081	163	125	144	144	96	143	120	132
4041	25082	120	108	114	114	126	128	127	120
4042	25083	118		118	118	88	101	94	102
4043	25084	125	112	119	119	127	129	128	123
4044	25085	105	85	95	95	94	91	93	94
4045	BPT 5204 (SC)	112	76	94	94		86	86	91
4046	25086	165	127	146	146	157	155	156	151
4047	25087	108	84	96	96	57	100	79	87
4048	25088	110	81	95	95	104	87	95	95
4049	25089	124	91	107	107	87	107	97	102
4050	25090	126	82	104	104	93	104	98	101
4051	25091	135		135	135	102	101	102	113
4052	25092	120	96	108	108	86	105	96	102
4053	25093	94	80	87	87	93	96	95	91
4054	25094	125	99	112	112	102	120	111	112
4055	Local Check	116	102	109	109	94	107	101	105
4056	25095	118	112	115	115	116	123	120	117
4057	16904	122	90	106	106		124	124	112
4058	25096	82	75	78	78	80	97	88	83
4059	25097	92	81	86	86	86	93	89	88
4060	25098	150	107	129	129	138	125	132	130
4061	25099	140	92	116	116		125	125	119
4062	25100	100	86	93	93		89	89	92
4063	25101	155	114	134	134	67	138	103	118
4064	25102	118	94	106	106	127	124	126	116
	Exp Mean	**122**	**99**	**111**	**111**	**104**	**112**	**108**	**109**
	C.D. 5%			14	14			0	

Table No. 6.22: Panicles/ M² of entries in IVT-CSTVT Moderate Coastal Salinity Kharif 2015

Entry No.	IET No.	III			Zonal III Mean (2)	VI		Zone VI Mean (2)	Overall Mean (4)
		W.B	W.B	W.B (2)		MH	GU		
		GSB	CNG	Mean		PNV	NVS		
4001	25049	330	451	390	390	359	385	372	381
4002	25050	264	387	326	326	385	175	280	303
4003	25051	297	446	372	372	403	265	334	353
4004	25052	264	484	374	374	372	305	338	356
4005	23795	264	417	341	341	436	348	392	366
4006	25053	330	373	351	351	305	186	245	298
4007	25054	264	482	373	373	437	327	382	377
4008	25055	297	532	414	414	345	287	316	365
4009	25056	396	627	512	512	366	291	328	420
4010	25057	396	509	453	453	338	281	309	381
4011	25058	330	521	425	425	396	347	371	398
4012	16885	330	455	393	393	372	272	322	357
4013	25059	264	538	401	401	448	261	354	378
4014	25060	198	476	337	337	315	401	358	348
4015	25061	363	391	377	377	323	394	358	367
4016	25062	330	391	360	360	407	380	393	377
4017	CO43 (RP)	330	451	390	390		341	341	374
4018	25063	264	373	318	318	340	406	373	346
4019	CST 7-1 (CS)	297	476	387	387	469	306	388	387
4020	25064	330	438	384	384	371	315	343	363
4021	25065	363	391	377	377	353	318	335	356
4022	25066	264	335	300	300	417	259	338	319
4023	25067	396	443	419	419	453	376	415	417
4024	25068	264	454	359	359	347	296	321	340
4025	Jaya (YC)	264	435	350	350	412	358	385	367
4026	25069	330	554	442	442	299	442	371	406
4027	25070	264	532	398	398	416	295	355	377
4028	25071	297	535	416	416	464	437	450	433
4029	Improved White Ponny (RP)	330	528	429	429	373	318	345	387
4030	25072	330	595	462	462	408	316	362	412
4031	25073	264	684	474	474	453	381	417	445
4032	25074	264	527	396	396	455	360	407	402
4033	25075	297	475	386	386	320	280	300	343
4034	25076	264	572	418	418	432	271	351	385
4035	25077	264	464	364	364	382	265	323	344
4036	25078	330	329	329	329	366	297	332	330
4037	25079	264	532	398	398	406	262	334	366
4038	25080	264	410	337	337		294	294	322
4039	CSR 10 (EC)	231	673	452	452	440	366	403	427
4040	25081	264	505	385	385	310	254	282	333
4041	25082	264	535	400	400	342	260	301	350
4042	25083	231		231	231	311	337	324	293
4043	25084	264	660	462	462	416	259	337	400
4044	25085	198	602	400	400	429	345	387	393
4045	BPT 5204 (SC)	264	511	387	387		372	372	382
4046	25086	330	480	405	405	321	277	299	352
4047	25087	297	638	468	468	356	357	356	412
4048	25088	198	494	346	346	335	356	345	345
4049	25089	264	465	365	365	420	283	351	358
4050	25090	363	443	403	403	336	302	319	361
4051	25091	264		264	264	466	341	404	357
4052	25092	264	549	407	407	344	298	321	364
4053	25093	264	464	364	364	376	308	342	353
4054	25094	264	619	442	442	420	313	366	404
4055	Local Check	264	561	412	412	334	319	326	369
4056	25095	297	519	408	408	324	342	333	371
4057	16904	264	373	318	318		320	320	319
4058	25096	231	549	390	390	375	292	333	362
4059	25097	264	672	468	468	431	274	352	410
4060	25098	231	521	376	376	380	319	350	363
4061	25099	264	376	320	320		275	275	305
4062	25100	264	502	383	383		272	272	346
4063	25101	396	412	404	404	385	347	366	385
4064	25102	330	353	341	341	336	377	356	349
	Exp Mean	**289**	**492**	**389**	**389**	**381**	**316**	**347**	**368**
	C.D. 5%	0	126			26	33		
	C.V.%	0.00	18.42			4.86	7.39		

Table No. 6.21: Plant Height (cm) of entries in IVT-CSTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	VI	VII		Zone VII Mean (2)	Overall Mean (3)
		GOA	KE	A.P.		
		GOA	VTL	MPM		
4001	25049	121	124	86	105	110
4002	25050	163	146	119	132	143
4003	25051	109	103	74	89	96
4004	25052	127	128	76	102	110
4005	23795	111	113	80	96	101
4006	25053	150	147	88	117	128
4007	25054	104	105	74	89	94
4008	25055	109	100	79	89	96
4009	25056	124	110	77	94	104
4010	25057	126	55	82	69	88
4011	25058	105	95	67	81	89
4012	16885	116	119	92	106	109
4013	25059	110	107	74	90	97
4014	25060	81	106	59	82	82
4015	25061	108	106	87	97	100
4016	25062	120	108	97	103	108
4017	CO43 (RP)	121	107	92	100	107
4018	25063	126	117	87	102	110
4019	CST 7-1 (CS)	131	115	90	102	112
4020	25064	120	113	93	103	109
4021	25065	168	139	95	117	134
4022	25066	110	115	78	96	101
4023	25067	115	114	72	93	100
4024	25068	111	105	75	90	97
4025	Jaya (YC)	104	100	66	83	90
4026	25069	105	96	65	81	89
4027	25070	129	138	87	113	118
4028	25071	140	141	81	111	121
4029	Improved White Ponny (RP)	139	137	79	108	118
4030	25072	137	145	91	118	124
4031	25073	113	131	65	98	103
4032	25074	111	96	72	84	93
4033	25075	124	95	75	85	98
4034	25076	111	114	78	96	101
4035	25077	111	108	67	87	95
4036	25078	107	109	87	98	101
4037	25079	126	115	83	99	108
4038	25080	123	103	80	92	102
4039	CSR 10 (EC)	79	105	44	74	76
4040	25081	161	139	86	113	129
4041	25082	138	130	91	110	120
4042	25083	111	105	80	93	99
4043	25084	124	104	77	90	102
4044	25085	104	123	70	96	99
4045	BPT 5204 (SC)	81	138	70	104	96
4046	25086	130	137	86	112	118
4047	25087	139	134	44	89	106
4048	25088	106	105	70	88	94
4049	25089	123	113	75	94	104
4050	25090	113	131	69	100	105
4051	25091	104	124	80	102	103
4052	25092	118	101	66	83	95
4053	25093	97	119	62	90	93
4054	25094	116	102	69	86	96
4055	Local Check	157	125	79	102	120
4056	25095	120	118	74	96	104
4057	16904	114	128	73	100	105
4058	25096	99	89	63	76	84
4059	25097	107	117	61	89	95
4060	25098	129	142	76	109	116
4061	25099	134	69	96	82	100
4062	25100	90	139	53	96	94
4063	25101	135	122	86	104	114
4064	25102	121	134	80	107	111
	Exp Mean	**119**	**116**	**77**	**97**	**104**

Table No. 6.22: Panicles/ M² of entries in IVT- CTVT Coastal Salinity Kharif 2015

Entry No.	IET No.	VI	VII		Zonal VII Mean (2)	Overall (3)
		GOA	KE	A.P.		
		GOA	VTL	MPM		
4001	25049	172	386	260	323	273
4002	25050	185	310	185	248	227
4003	25051	287	231	242	237	253
4004	25052	211	356	122	239	230
4005	23795	221	271	218	244	237
4006	25053	215	281	251	266	249
4007	25054	215	274	228	251	239
4008	25055	198	353	237	295	263
4009	25056	284	264	182	223	243
4010	25057	182	99	226	163	169
4011	25058	224	287	169	228	227
4012	16885	175	284	245	264	235
4013	25059	175	320	195	258	230
4014	25060	231	277	110	194	206
4015	25061	201	597	249	423	349
4016	25062	195	498	238	368	310
4017	CO43 (RP)	172	327	223	275	240
4018	25063	198	198	254	226	217
4019	CST 7-1 (CS)	231	224	255	240	237
4020	25064	191	267	242	254	233
4021	25065	142	238	164	201	181
4022	25066	122	284	165	224	190
4023	25067	264	521	167	344	317
4024	25068	191	383	241	312	272
4025	Jaya (YC)	175	403	258	330	279
4026	25069	238	380	227	303	281
4027	25070	198	350	212	281	253
4028	25071	257	422	169	296	283
4029	Improved White Ponny (RP)	224	426	180	303	277
4030	25072	224	416	229	322	290
4031	25073	228	304	198	251	243
4032	25074	228	231	234	233	231
4033	25075	178	290	196	243	221
4034	25076	155	215	200	207	190
4035	25077	257	261	218	240	245
4036	25078	218	383	187	285	263
4037	25079	168	198	234	216	200
4038	25080	191	158	217	188	189
4039	CSR 10 (EC)	320	353	189	271	287
4040	25081	195	241	151	196	196
4041	25082	198	221	261	241	227
4042	25083	290	254	250	252	265
4043	25084	231	323	210	267	255
4044	25085	211	383	267	325	287
4045	BPT 5204 (SC)	205	337	227	282	256
4046	25086	215	277	211	244	234
4047	25087	205	234	249	242	229
4048	25088	198	413	250	331	287
4049	25089	215	409	188	298	270
4050	25090	248	300	138	219	228
4051	25091	211	393	233	313	279
4052	25092	218	383	204	293	268
4053	25093	198	422	179	301	267
4054	25094	254	399	186	293	280
4055	Local Check	224	300	210	255	245
4056	25095	281	376	206	291	287
4057	16904	195	370	249	309	271
4058	25096	188	406	220	313	271
4059	25097	257	363	155	259	258
4060	25098	215	297	98	198	203
4061	25099	191	172	249	210	204
4062	25100	264	290	132	211	229
4063	25101	228	274	187	230	229
4064	25102	191	373	242	307	269
	Exp Mean	**214**	**321**	**209**	**265**	**248**
	C.D. 5%	36	46	45		
	C.V.%	12.08	10.28	15.40		

Table 6.23: Grain quality characteristics of entries in IVT- CSTVT Kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chake	ASV	AC	GC
4015	25061	78	65.1	55.1	5.17	2,42	2.13	SB	VOC	4	29.56	57
4016	25062	78.3	63.41	51.7	5.01	2.27	2.2	SB	VOC	4	28.95	46
4017	CO 43 (RP)	80	66.4	53.1	4.98	2.28	2.18	SB	VOC	4	27.07	45
4018	25063	77.9	63.5	51.1	5.07	2.36	2.14	SB	VOC	4	28.62	47
4019	CST 7-1	79.9	65.4	54.4	5.9	2.55	2.31	SB	OC	5	24.49	22
4025	Jaya (YC)	78.6	67.4	63.6	5.51	2.46	2.23	SB	VOC	7	26.25	22
4027	25070	76	65.3	61.6	5.22	1.82	2.86	MS	A	4	25.4	22
4028	25071	76.9	71.9	68.5	5.18	1.84	2.81	MS	VOC	4	23.93	22
4029	Imp. White Ponny	76.8	67.4	63.8	5.28	1.87	2.82	MS	A	4	25.16	22
4030	25072	76	65	60.1	4.89	1.84	2.65	MS	A	4	24.61	22
4039	CSR 10 (Early)	77.6	66.2	43.9	5.09	2.46	2.06	SB	VOC	4	24.4	24
4045	BPT 5205 (Sensitive)	77.8	68.6	57.9	4.93	1.82	2.7	MS	A	4	24.08	22

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

VARIETY TRIALS-HILLS

The variety trials under hill ecology were conducted in different elevations to identify high yielding cultures with cold, drought tolerance and resistance to pests and diseases under irrigated as well as rainfed uplands. The early and medium duration trials were evaluated under irrigated transplanted conditions whereas the upland trials were conducted at direct seeded rainfed situation. The trials were evaluated under low hills (≤ 950 msl), medium hills (951 to 1500 msl) and high hills (≥ 1501 msl). The trial was sent for evaluation at Malan, ICAR-Barapani, CAU-Barapani, Lamphalpet, Wangbal, Majhera, CAU-Imphal, Daulakhan, Sirsi and Ponnampet under low hills; Rajouri, Palampur, Almora, Bageshwar, Kalimpong, Gangtok, Gudalur and Chintapalli under medium hills; Katrain, Khudwani, Shalimar, Wadura, Bandipore, Pombay and Ranichouri under high hills.

A total of 6 trials namely IVT-E(H), AVT-1E(H), IVT-M(H), AVT-1M(H), IVT-U(H) and AVT-1U(H) were conducted with 18, 15, 13, 11, 9 and 9 entries respectively. Each trial was evaluated at low, medium and high hills: IVT-E(H) and AVT-1E(H) at 11 locations (3 low, 5 medium, 3 high), IVT M(H) and AVT-1M(H) at 10 locations (6 low, 3 medium, 1 high), IVT-U(H) at 8 locations (5 low, 3 medium), AVT-1-U(H) at 7 locations (5 low, 2 medium). The trials were sent to 25 locations to conduct 84 experiments. The data received 57 experiments from 20 locations indicating 70.24%.

List of centers and elevations.

Location	State	Elevation (msl)
Low Hills (≤950 msl)		
Northern		
Malan	Himachal Pradesh	950 msl
Daulakhan	Himachal Pradesh	350 msl
Imphal CAU	Manipur	774 msl
Lamphelpat-ICAR	Manipur	774 msl
Umium (Barapani)-ICAR	Meghalaya	940 msl
CAU, Barapani	Meghalaya	940 msl
Majhera	Uttarakhand	905 msl
Southern		
Sirsi	Karanataka	619 msl
Ponnampet	Karnataka	867 msl
Medium Hills (951-1500 msl)		
Northern		
Palampur	Himachal Pradesh	1290 msl
Rajouri	Jammu & Kashmir	960 msl
Gangtok	Sikkim	1320 msl
Almora-ICAR	Uttarakhand	1250 msl
Bageshwar	Uttarakhand	1320 msl
Kalimpong	West Bengal	1208 msl
Southern		
Chintapalli	Andhra Pradesh	1300 msl
Gudalur	Tamil Nadu	1300 msl
High Hills (≥ 1501 msl)		
Katrain	Himachal Pradesh	1525 msl
Khudwani	Jammu & Kashmir	1560 msl
Wadura	Jammu & Kashmir	1560 msl
Shalimar	Jammu & Kashmir	1610 msl
Bandipore	Jammu & Kashmir	1680 msl
Pombay	Jammu & Kashmir	2000 msl
Ranichouri	Uttarakhand	2100 msl

ADVANCE VARIETY TRIAL -1- EARLY (Hills) AVT - 1- EH

Locations : 11 **Entries :** 15
Checks **Vivekdhan 86 (National), Shalimar Rice 3 (Zonal)** **Table: 7.1**
Local check

AVT-1-EH trial was conducted at 11 locations : two in northern low hills at Malan (950 msl), Daulakhan(774msl), one in southern low hills at Ponnampet (867 msl) and four in northern medium hills at Almora (1250 msl), Rajouri (960 msl), Palampur (1290 msl) and Kalinpong (1208 msl), one in medium southern hills Chintapalli (1300 msl) and three in high hills at Khudwani (1560 msl), Pombay (1560 msl), Shalimar (1610 msl). The trial was constituted with 12 test entries and 3 checks *ie*., Vivekdhan 86 (National), Shalimar Rice 3 (Regional) and local check. The 12 test entries, 10 entries were in second year and three are in third year of testing.

The overall mean Grain yield across altitudes ranged from 2545 kg/ha (IET 24179) to 4938 kg/ha (IET 24195). The mean flowering duration ranged from 84 days (Shalimar rice 3) to 106 days (IET 23518). The panicles/m^2 ranged from 231 (IET 24195) to 370 (IET 24193), while plant height ranged from 70 cm (IET 24179) to 95 cm (Shalimar rice 3) (Tables 7.2, 7.3, 7.4 and 7.5). The performance of entries were discussed elevation wise. Under medium hills the experimental mean yield at Palampur and Rajouri was low 1916 and 1185 kg/ha respectively due to cold at reproductive stage hence not included in over all mean.under different elevations are given below.

Low hills (≤ 950 msl)

a. Northern hills

The mean grain yield of the test entries ranged from 1790 kg/ha (IET 24179) to 3541 kg/ha (IET 24195). Days to 50% flowering ranged from 83 days (Shalimar Rice 3) to 99 days (IET 24179, IET 23518 and local check), panicles/m^2 ranged from 164 (IET 24196) to 309 (IET 24179) and plant height ranged from 75 cm (IET 24192) to 90 cm (IET 22952 and local check). Among the checks, national check was the best check (2522 kg/ha). Of the 12 test entries 6 entries (IET 24195, 24196, 24189, 24197, 22957 and 23518 yielded 40, 28, 23, 23, 14, and 12 % higher than the best check respectively. The performance of top ranking entries are discussed below.

Performance of promising entries at low altitude (northern hills) in AVT-1-EH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (NC)
1	24195 TRC 2013-11-IR 84898-B-171-CRA43-1 IR 78877-208-B-1-2/IR78878-53-2-2-2	3541 95 SB	40.0
2	24196 TRC 2014-6-IR 83929-B-B-132-2 IR 78878-53-2-2-2/CT6510-24-1-2	3221 91 LB	28.0
3	24189 VL 31850 VL 30424/IR 78525	3112 91 LS	23.0
	Vivekdhan 86 (National check)	**2522** **92**	
	Shalimar Rice 3 (Regional check)	2185 83	
	Local check	2395 90	

IET 24195 (TRC 2013-11-IR 84898-B-171-CRA43-1) a derivative from the cross IR 78877-208-B-1-2/IR78878-53-2-2-2 ranked first with grain yield of 3541 kg/ha. It showed 40 % yield advantage over the best check (National check) with 1st rank at Malan (3504 kg/ha) and Daulakhan (3577 kg/ha). It possessed 46.7 % HRR, short bold grains and low ASV (3), low AC (16.98%) and hard GC (31 mm) indicating good cooking quality for hill areas (Table 7.6).

The second ranking entry IET 24196 (TRC 2014-6-IR 83929-B-B-132-2) recorded 3221 kg/ ha yield. It was developed from the cross IR 78878-53-2-2-2/CT6510-24-1-2. It exhibited 28 % yield superiority over the best check (National check) on regional mean. It ranked 3rd with significantly higher yield (3447 kg/ha) than best check in Daulakhan location. It has 91 days of flowering duration. It has HRR (37.5%), long bold grains, intermediate AC (21.85%) and GC (48 mm) and high ASV indicating acceptable cooking quality.

The third ranking entry, IET 24189 (VL 31850), a derivative from the cross VL 30424/IR 78525 gave 23 % yield advantage over the best check (National check) with a mean yield of 3112 kg/ha. It has 91 days to 50 % flowering duration. It showed significantly yield (3341 kg/ha) to best check at Daulakhan. It is a long slender grain with 48 % HRR, intermediate Ac (22.49%), hard GC (22 mm) and hard GC (22 mm) and high ASV indicating acceptable cooking quality.

b. Southern hills

The AVT-1-EH trial was conducted in low altitude hills at one location namely Ponnampet in Karnataka. The mean Grain yield of the entries ranged from 2722 kg/ha (IET 24193) to 5173 kg/ha (IET 24195). The flowering duration, panicles/m^2 and plant height of the entries ranged from 85 days (regional check) to 115 days (IET 24179), 305 panicles /m^2 (IET 24195) to 581 (IET 24179) and 60 cm (IET 22957) to 91 cm (IET 24195) respectively. Among the checks, regional check was the best check (3649 kg/ha).

Performance of promising entries at low altitude (Southern) hills in AVT-1- EH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (RC)
1	24195 TRC 2013-11/IR 84898-B-171-CRA43-1 IR 78877-208-B-1-2/IR78878-53-2-2-2	5173 94 SB	42.0
2	24196 TRC 2014-6/IR 83929-B-B-132-2 IR 78878-53-2-2-2/CT6510-24-1-2	5060 96 LB	39.0
3	24192 UPR 3879-4-1-1 UPRI 2001-9/S.1113	4568 96 LS	25.0
	Vivekdhan 86 (National check)	3167 101	
	Shalimar Rice 3 (Regional check)	**3649** **85**	
	Local check	3096 114	

IET 24195 (TRC 2013-11-IR 84898-B-171-CRA43-1) a derivative of the cross IR 78877-208-B-1-2/IR78878-53-2-2-2 occupied first rank in grain yield (5173 kg/ha). It showed 42 % yield

advantage over the best check (Regional check). It possessed short bold grains and 94 days flowering duration. It has moderate HRR (46.7%), low AC (16.98%), hard GC (31.0mm) and low ASV (3).

The second ranking entry IET 24196 (TRC 2014-6/IR 83929-B-B-132-2) recorded 5060 kg/ ha yield. It was developed from the cross IR 78878-53-2-2-2/CT6510-24-1-2. It exhibited 39 % yield superiority over the best check (Regional check) possessing long bold grains and 96 days flowering duration. It has low HRR (37.5%), intermediate AC (21.85%) and GC (48 mm) very occasional chalki grains with high ASV (7).

The third ranking entry, IET 24192 (UPR 3879-4-1-1), a derivative from the cross UPRI 2001-9/S.1113 gave 25 % higher yield over the best check with a mean yield of 4568 kg/ha. It has long slender grains, with 96 days to 50% flowering. It has high HRR (64.3%), high AC (26.45%), hard GC (22 mm) and low ASV.

Based on yield superiority over best check, under low elevation IET 24195, IET 24189, IET 24197 and IET 24192 promoted for 3rd year of testing in AVT-2 E-H. the entry IET 24196 have also yielded 28 % higher than the best check in northern hills and 39 % higher in southern hills but it has very low head rice recovery (37.5%) hence dropped.

Medium altitude (951-1500 msl)

a. Northern hills

The mean grain yield ranged from 2766 kg/ha (IET 24179) to 7125 kg/ha (IET 24188). Among the checks regional check was the top yielder (5768 kg/ha) followed by national check (3877 kg/ha) and local check (3564 kg/ha). The mean flowering duration ranged from 76 days (Local check) to 96 days (IET 23518); plant height ranged from 72 cm (IET 24179) to 110 cm (IET 22952) whereas panicles/m^2 ranged from 245 (IET 24196) to 340 (IET 24189).

Performance of promising entries at medium altitude in AVT-1– EH, Kharif-2014

Rank	**IET No. / Designation / Cross combination**	**GY (kg/ha)/ days to 50% flowering/ grain type**	**Percentage of yield advantage over the best check (RC)**
1	24188 UPR 2872 UPR 2143/AC19146//VL30424	7125 91 LS	24.0
2	24195 TRC 2013-11/IR 84898-B-171-CRA43-1 IR 78877-208-B-1-2/IR78878-53-2-2-2	6794 92 SB	18.0
3	24183 UPR 2873 UPR 2143/AC 19146//VL30425	6715 91 LS	16.0
	Vivekdhan 86 (NC)	3877 86	
	Shalimar Rice 3 (RC)	**5768** **79**	
	Local check	3564 76	

IET 24188 (UPR 2872) a derivative of the cross UPR 2143/AC19146//VL30424 occupied first rank in grain yield (7125 kg/ha). It showed 24 % yield advantage over the best check. It possessed long slender grains and 91 days to 50% flowering duration. It has high HRR (56.6%), very occasional chalki grains, intermediate AC (23.58%) and hard GC (22 mm) with low ASV (4) indicating acceptable cooking quality.

IET 24195 (TRC 2013-11-IR 84898-B-171-CRA43-1) a derivative of the cross IR 78877-208-B-1-2/IR78878-53-2-2-2 ranked 2rd rank in grain yield (6794 kg/ha). It showed 18 % yield advantage over the best check. It possessed short bold grains and 92 days flowering duration. It has moderate HRR (46.7%), low AC (16.98%), hard GC (31 mm) and low ASV.

The third ranking entry, IET 24183 (UPR 2873), a derivative from the cross UPR 2143/AC 19146//VL30425 gave 16 % yield gain over the best check with a mean yield of 6715 kg/ha. It is a long slender grains variety with 91 days to 50% flowering. It has moderate HRR (54.1%), intermediate AC (23.08%), hard GC (23mm) and low ASV indicating acceptable cooking quality.

b. Southern hills

The AVT-1-EH trial was conducted in medium altitude hills at one location namely Ponnampet in Karnataka. The mean grain yield of the entries ranged from 4458 kg/ha (local check) to 10211 kg/ha (IET 24197). The flowering duration and plant height of the entries ranged from 72 days (regional check) to 146 days (IET 23518) and 66 cm (IET 24179) to 121 cm (Local check) respectively. Among the checks, national check was the best check (7410 kg/ha).

Performance of promising entries at medium altitude (Southern) hills in AVT-1- EH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (NC)
1	24197 TRC 2014-8-IR 83928-B-B-9-1 IR 78878-208-B-1-2/IR 74371-54-1-1	10211 92 MS	38.0
	Vivekdhan 86 (National check)	**7410** **76**	
	Shalimar Rice 3 (Regional check)	6972 72	
	Local check	4458 125	

IET 24197 (TRC 2014-8-IR 83928-B-B-9-1) a derivative of the cross IR 78878-208-B-1-2/IR 74371-54-1-1 occupied first rank in grain yield (10211 kg/ha). It showed 38 % yield advantage over the best check (National check). It possessed medium slender grains and 92 days to 50% flowering duration. It has low Ac (18.97%), hard GC (25mm) and high ASV (7).

Based on desirable yield advantage over best check IET 24188, IET 24195, IET 24183 and IET 24197 promoted for 3rd year of testing in AVT-2 E-H

High hills (≥ 1501 msl)

The trial was conducted at 3 locations namely Khudwani, Pombay and Shalimar (Jammu & Kashmir). The mean grain yield of test entries ranged from 1519 kg/ha (IET 22957) to 6524 kg/ha (Local check). Days to 50% flowering ranged from 94 days (Shalimar rice 3) to 125 days (IET 24179). Plant height ranged from 60 cm (IET 24179) to 108 (local check) whereas panicles/m^2 ranged from 221 (IET 24195) to 490 (IET 24193).

Local check ranked 1st in this trail. Hence none of the entries were promoted to AVT-2-EH under high elevation

Three years' performance of entries IET 22952, 22957 and IET 23518 in early hills during 2012, 2013, 2014 and /or 2015 in overall mean

S.No	IET No. / Designation / Cross combination	Year	Yield advantage % over the best check				
			Low elevation		Medium elevation		High elevation
			Northern	Southern	Northern	Southern	
1	22952 UPR 3656-1-1-2 VLDhan 61/UPR 2870-98-125	2012 (IVT-EH)	-	-	15.4	-	-
		2013 (AVT-1-EH)	-	-	10.7	-	-
		2014 (AVT-2-EH)	-	-	-	-	-
		2015 (AVT-1-EH)	-	-	-	-	-
2	22957 HPR 2686 Him 1/IR 53915	2012 (IVT-EH)	-	-	17.9	-	-
		2013 (AVT-1-EH)	-	-	21.0	-	-
		2014 (AVT-2-EH)	-	-	-	-	-
		2015 (AVT-1-EH)	14.0	23.0	6.0	-	-
3	23518 UPR 3751-8-1-2 UPR 2581-14-1-1/UPR 2642	2013 (IVT-EH)	16.8	-	-	-	-
		2014 (AVT-1-EH)	-	-	6.0	-	-
		2015 (AVT-1-EH)	12.0	-	15.0	-	-

Three entries namely IET Nos. 22952, 22957 and 23518 had been evaluated for three years in early hill trials (2012: IVT-EH, 2013: AVT-1-EH, 2014: AVT-2- EH and 2015: AVT-1-EH). IET Nos 22952 and 22957 were not evaluated during 2014 and were tested during 2015. The IET 22952 (UPR 3656-1-1-2) recorded significant yield superiority in two consecutive years (2012 & 2013) under medium altitude (northern hills) in overall mean. It showed yield advantage of 15.4 % over best check (local) during 2012 and 10.7% over best check during 2013. Another entry namely IET 22957 (HPR 2686) was found promising in medium altitude (northern hills) continuously for two years 2012 and 2013 over the best check (2012: 17.9%, 2013: 21%). The third entry IET 23518 recorded significant yield superiority in two consecutive years (2014 & 2015) under medium altitude (northern hills) in overall mean. It was superior to best check by 6.0% yield advantage in medium (Northern) hills during 2014 and in 2015. Yield performance information of these 3 entries is furnished in the table mentioned below.

State wise performance of IET 22952, 22957 and 23518 in early hills during three years (2012 to 2015)

SN	IET No. / Designation / Cross combination	Year	Elevation								
			Low			Medium					High
			Northern		Southern	Northern				Southern	
			ME	H.P	PNP	WB	U.T	HP	J&K	TN	
1	22952 UPR 3656-1-1-2 VL Dhan 61/UPR 2870-98-125	2012 (IVT-EH)	-	-	-	-	46.2	-	-	-	-
		2013 (AVT-1-EH)	-	-	-	25	15.3	-	-	-	-
		2014 (AVT-2-EH)	-	-	-	-	-	-	-	-	-
		2015 (AVT-1-EH)	-	-	7.0	-	-	-	-	6.0	-
2	22957 HPR 2686 Him 1/IR 53915	2012 (IVT-EH)	-	-	-	-	43.7	-	-	-	-
		2013 (AVT-1-EH)	-	-	-	33	35.8	-	-	-	-
		2014 (AVT-2-EH)	-	-	-	-	-	-	-	-	-
		2015 (AVT-1-EH)	-	14.0	23.0	-	-	-	-	-	-
3	23518 UPR 3751-8-1-2 UPR 2581-14-1-1/UPR 2642	2013 (IVT-EH)	10.0	5.4	-	-	-	-	-	-	-
		2014 (AVT-1-EH)	-	-	-	-	-	-	10.09	-	-
		2015 (AVT-1-EH)	-	12.0	-	-	7.0	-	-	-	-

All the three entries viz., IET 22952, IET 22957 and IET 23518 could not show consistent yield superiority over best check in three years of testing neither under any elevation nor in any state. But two entries IET 22952 and IET 22957 could show yield advantage in 2012 and 2013 in the state of Uttrakhand only. Hence none were promising.

INITIAL VARIETY TRIAL – EARLY (HILLS) – IVT-EH

Locations : 11 **Entries: 18**

Checks : Vivekdhan 86 (National), Shalimar Rice 3 (Regional) and Local Check **Table: 7.7**

IVT - E (Hills) trail was sent to 16 locations covering the states of Meghalaya, Uttrakhand, Jammu and Kashmir, Himachal Pradesh, West Bengal and Karnataka. Data was received from 11 locations: three in low hills (Malan, Daulakhan and Ponnampet); five in medium hills (Almora, Rajouri, Kalimpong, Chintapalli and Palampur) and three in high hills namely Khudwani, Pombay and Shalimar. The trial consisted of 18 entries including 15 test entries and 3 checks: Vivekdhan 86 (National Check), Shalimar Rice 3 (Regional Check) and local check.

The overall mean grain yield across altitudes ranged from 1664 kg/ha (IET 25152) to 5114 kg/ha (IET 25144). The flowering duration ranged from 71 days (zonal check) to 104 days (IET 25145). Plant height ranged from 70 cm (IET 25152 and 25158) to 104 cm (IET 25145), where as the panicles/m^2 ranged from 248 (IET 25152) to 419 (IET 25156). Among the checks, local Check was the top yielder (4615 kg/ha) followed by Shalimar Rice 3 (4296 kg/ha) and Vivekdhan 86 (3827 kg/ha) (Tables 7.8, 7.9, 7.10 and 7.11). The performance of the test entries are discussed below in different altitudes.

Low altitude (≤ 950 msl)

The IVT-EH trial was conducted under low elevation at three locations namely Malan, Daulakhan and Ponnampet (Karnataka) in southern hills. The experimental mean yield ranged from 1139 kg/ha (IET 25152) to 4205 kg/ha (IET 25144). Days to 50% flowering ranged from 77 days (IET 25150) to 103 days (IET 25145 and local check); plant height ranged from 67 cm (IET 25152) to 113 cm (Vivekdhan 86, IET 25153) while panicles /m^2 ranged from 263 (IET 25152) to 460 (IET 25156).

Among the checks, Local check gave highest yield (4061 kg/ha) followed by Vivekdhan 86, (3454 kg/ha) and Shalimar Rice 3 (3103 kg/ha).

The local check was the 2nd ranking entry in the trial under low elevation and none of the entries could yield more than 5 % yield advantage over best check.

Medium altitude (951-1500 msl)

IVT-EH trial was evaluated at five locations, Almora, Malan, Rajouri, Kalimpong and chintapalli. The experimental mean grain yield at Malan and Rajouri was less than 2500 kg/ha, hence data was not included in the grand mean At both the locations the average minimum temperature was less at grain filling stages, hence the entries yielded less. The entries IET 25144 and IET 25156 have yielded better. In, addition, Kalimpong data was also not considered for overall mean due to very high unusual yield of some entries (more than 9 and 10 tonnes). Therefore, Almora data was considered for evaluation of performance of entries in northern hill region.

The mean grain yield of test entries in medium hills (northern) ranged from 426 kg/ha (IET 25152) to 4285 kg/ha (IET 25149). Flowering duration ranged from 70 days (IET 25152) to 115 days

(IET 25145). Plant height ranged from 66 cm (IET 25152) to 113 cm (national check). Panicles/m^2 ranged from 143 (IET 25152) to 332 (IET 25158). Among three checks, local check was the top yielder (3428 kg/ha) followed by national check (3352 kg/ha) and zonal check Shalimar Rice 3 (3068 kg/ha).

Three entries namely IET 25149, 25151 and 25158 registered yield gain of ≥ 10% over the best check (local check) in medium altitude (northern hills). Therefore, these three entries have been promoted to second year of testing.

IET 25149 (HPR 2674) derived from cross HPU 741/HPR 1149 has long slender grain type, took 103 days to 50% flowering and ranked first in medium altitude (northern hills). It registered 25% yield superiority over best check with grain yield of 4285 kg/ha. It showed 27, 39 and 25% yield superiority over national, zonal and local check respectively.

IET 25151 (UPR 3879-4-2-1-1) derived from cross HPU 741/HPR1149 possess long slender grain type, ranked second in medium altitude (northern hills) with 23% yield superiority over best check. It took 103 days to 50% flowering with grain yield of 4209 kg/ha. It registered 25, 37 and 22% over national, zonal and local check respectively.

IET 25158 (HPR 2756) a derivative from the cross HS/T23//IR 66295 ranked first with grain yield of 4119 kg/ha. It showed 20% yield advantage over the best check (Local check). It possessed long slender grains and took 90 days flowering duration.

Performance of promising entries at medium altitude (Northern) hills in IVT-EH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (LC)
1	**IET 25149** HPR 2674 HPU 741/HPR 1149	4285 103 LS	25.0
2	**IET 25151** UPR 3879-4-2-1-1 HPU 741/HPR1149	4209 103 LS	23.0
3	**IET 25158** HPR 2756 HS/T23//IR 66295	4119 103 LS	20.0
	Vivekdhan 86 (National check)	3352 96	
	Shalimar Rice 3 (Regional check)	3068 88	
	Local check	**3428** **89**	

In Southern medium hills, trail was conducted at Chintapalli, grain yield was ranged from 2332 kg/ha (IET 25152) to 8164 kg/ha (National check) with days to 50% flowering ranged from 64

days (IET 25152) to 125 (local check). **No entry showed required yield superiority over best check in Southern medium hills, therefore, none is promoted.**

High altitude (≥ 1501 msl)

The trial was also evaluated at high hills at Khudwani, Pombay and Shalimar. At Shalimar, the coefficient of variation for yield was very less (2.82), hence data was not included in the analysis of mean. The overall mean yield ranged from 2455 kg (Vivekdhan 86) to 8513 kg/ha (IET 25157). Days to 50% flowering ranged from 72 days (IET 25152) to 121 days (IET 25145); Plant height ranged from 66 cm (IET 25158) to 111 cm (IET 25157) and panicles/m^2 ranged from 274 (IET 25144) to 411 (IET 25158). Among the checks, regional check was the best with yield of 5763 kg/ha. Among the test entries IET 25157 was the top ranking entry (8513 Kg/ha) and details are mentioned below.

IET 25157, SKUA 483 (K 1331-3-1) a derivative of the cross SKUA-339/China 1039 ranked first in grain yield (8513 kg/ha). It showed 48 % yield advantage over the best check (Regional check). It possessed short bold grains and 95 days flowering duration. It has significantly higher yield than the best check with 1st rank and 9500 kg/ha at Khudwani and Pombay (1st, 7525 kg/ha).

The second ranking entry IET 25144 (HPR 2672) recorded 6630 kg/ ha yield. It was developed from the cross HPU 741/ HPR 1149. It exhibited 15 % yield superiority over the best check (Regional check) possessing short bold grains and 91 days flowering duration. It showed significantly higher yield than best check at Pombay with 6110 kg/ha.

The third ranking entry, IET 25154, SKUA 484 (K 1313-24-3) a derivative from the cross SKUA 46/Dular gave 5 % yield gain over the best check (Regional check) with a mean yield of 6063 kg/ha. It is a short bold grains variety with 91 days to 50% flowering.

Performance of promising entries at high altitude hills in IVT- EH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (RC)
1	25157 SKUA 483 (K 1331-3-1) SKUA-339/China 1039	8513 95 SB	48.0
2	25144 HPR 2672 HPU 741/ HPR 1149	6630 103 LS	15.0
3	25154 SKUA 484 (K 1313-24-3) SKUA 46/Dular	6063 91 SB	5.0
	Vivekdhan 86 (National check)	2455 103	
	Shalimar Rice 3 (Regional check)	**5763** **93**	
	Local check	5438 95	

Based on yield superiority two entries namely IET 25157, IET 25144 and IET 25154 are promoted to AVT-1E-H under high altitude since they out yielded the best check (Regional Check) with ≥ 5% yield superiority.

List of superior entries in IVT-EH Kharif, 2015

S.No.	Entries	Yield advantage over the best check (%)	Remarks
Low altitude – Best check (Shalimar Rice 3, Regional check)			
1	IET 25148	11.0	Promoted
Medium altitude – Best check (Local check)			
1	IET 25158	109.0	Promoted
2	IET 25153	93.0	Promoted
3	IET 25155	93.0	Promoted
4	IET 25156	35.0	Promoted
5	IET 25145	31.0	Promoted
6	IET 25151	28.0	Promoted
7	IET 25149	25.0	Promoted
High altitude– Best check (Shalimar Rice 3, Regional check)			
1	IET 25157	48.0	Promoted
2	IET 25144	15.0	Promoted
3	IET 25154	5.0	Promoted

Table 7.1: Composition of entries in Advanced Variety Trial 1- Early Hills, AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
3rd Year of testing				
1901	22957 (Repeat)	HPR 2686	Him 1/IR 53915	LS
2nd Year of testing				
1902	24179	UPR 3837-10-1-1	Narendra 359/UPR 2778-12-1-1	SB
1903	24189	VL-31850	VL 30424/ IR 78525	LS
3rd Year of testing				
1904	23518	UPR 3751-8-1-2	UPR 2581-14-1-1/UPR 2642	LS
1905	**Vivekdhan 86 (NC)**			
2nd Year of testing				
1906	24183	HPR 2873	HPR 2143/AC 19146//VL 30425	LS
3rd Year of testing				
1907	22952 (Repeat)	UPR 3656-1-1-2	VL DHAN 61/UPR 2870-98-125	LB
2nd Year of testing				
1908	24193	HPR 2748	HS/T 23/IR 66295	LS
1909	24197	TRC 2014-8/IR 83928-B-B-9-1	IR 78878-208-B-1-2/IR 74371-54-1-1	MS
1910	**Shalimar Rice 3 (ZC)**			
1911	24188	HPR 2872	HPR 2143/AC 19146//VL 30424	LS
1912	24195	TRC 2013-11/IR 84898-B-171-CRA 43-1	IR 78877-208-B-1-2/IR78878-53-2-2-2	SB
1913	24192	UPR 3879-4-1-1	UPRI 2001-9/S. 1113	LS
1914	24196	TRC 2014-6/IR 83929-B-B-132-2	IR 78878-53-2-2-2/CT 6510-24-1-2	LB
1915	**Local Check**			

Table 7.2: Grain yield (kg/ha) of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Northern-Low								Southern Low	
		H.P.		H.P.		H.P. (2)		Northern Low (2)		KA	
		MLN		DUK		Mean		Mean		PNP	
1901	22957	3351	2	2379	8	2865	5 *14%	2865	5 * 14%	4473	4 23%
1902	24179	785		2795	6 *	1790		1790		3391	
1903	24189	2883	8	3341	4 *	3112	3 *23%	3112	3 * 23%	4082	5 12%
1904	23518	2746		2895	5 *	2821	6 *12%	2821	6 * 12%	2836	
1905	Vivekdhan 86	3074	4	1970		2522	8	2522	8	3167	
1906	24183	2791	9	2205		2498	9	2498	9	3137	
1907	22952	2907	7	1712		2310		2310		3902	6 7%
1908	24193	2016		2273	9	2144		2144		2722	
1909	24197	2720		3486	2 *	3103	4 *23%	3103	4 * 23%	3843	7 5%
1910	Shalimar Rice 3	2270		2100		2185		2185		3649	8
1911	24188	2993	6	2091		2542	7 1%	2542	7 1%	3536	9
1912	24195	3504	1	3577	1 *	3541	1 *40%	3541	1 * 40%	5173	1 *42%
1913	24192	2469		2394	7	2432		2432		4568	3 *25%
1914	24196	2995	5	3447	3 *	3221	2 *28%	3221	2 * 28%	5060	2 *39%
1915	Local Check	3328	3	1462		2395		2395		3096	
	Exp Mean	**2722**		**2542**		**2632**		**2632**		**3776**	
	C.D. 5%	332		427		283		285		831	
	C.V.%	7.28		10.04		9.30		9.38		13.15	
	D/S	17/06		26/06						20/07	
	D/P	25/07		22/07						28/08	
	Local Check	HPR 1068		HKR 126							

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.2 (Contd.): Grain yield (kg/ha) of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Northern Medium								Northern Medium (2) Mean		Southern Medium	
		UT		H.P.		J&K		W.B				AP	
		ALM		PLM@		RJR@		KLP				CTP	
1901	22957	3535		1833		1733	3	8750	6	6143	5 6%	7575	6 2%
1902	24179	1407		2056	4	333		4125		2766		6386	9
1903	24189	4293	3 * 20%	1978	6	1667	4	4394		4343		6175	
1904	23518	3824	6 7%	1778		1467	7	9450	4	6637	4 * 15%	4986	
1905	Vivekdhan 86	2922		2289	2	1667	5	4831		3877		7410	7
1906	24183	3636	7 2%	1878	9	667		9794	2 2%	6715	3 * 16%	5158	
1907	22952	2597				444		6950	7	4774	8	7825	5 6%
1908	24193	3932	4 10%	1889	7	444		6525	8	5229	7	5789	
1909	24197	4924	1 *38%	1778		778		3688		4306		10211	1* 38%
1910	Shalimar Rice 3	1948		1267		1111	9	9588	3	5768	6	6972	8
1911	24188	4906	2 *38%	1889	8	1556	6	9344	5	7125	1 * 24%	5719	
1912	24195	3550		2056	5	1778	1	10038	1 5%	6794	2 * 18%	8211	2 11%
1913	24192	3633	8 2%	2300	1	956		4994		4313		8035	3 8%
1914	24196	3932	5 10%	2222	3	1778	2	5513	9	4722	9	7895	4 7%
1915	Local Check	3564	9	1611		1400	8			3564		4458	
	Exp Mean	**3507**		**1916**		**1185**		**6999**		**5193**		**6854**	
	C.D. 5%	668		570		587		835		503		2227	
	C.V.%	11.39		17.74		29.62		7.11		8.38		19.43	
	D/S	18/05		16/06		15/06		17/06				16/06	
	D/P	21/07		21/07		11/07		21/07				17/07	
	Local Check	VLD 85		HPR-1068		K39						Isukaravvalu	

Table 7.2 (Contd.): Grain yield (kg/ha) of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	High								High (3) Mean		Overall (9) Mean		DFF	PH (cm)	Pan / m²
		J&K KHD		J&K PBY		J&K SHL		J&K (3) Mean								
1901	22957	1644		1378		1533		1519		1519		3847	7	99	71	342
1902	24179	1473		1156		1384		1338		1338		2545		104	70	347
1903	24189	5878	2	4944	2	5544	2	5456	2	5456	2	4615	3 4%	91	82	339
1904	23518	2200	9	1909	9	1967	9	2025	9	2025	9	3646		106	81	283
1905	Vivekdhan 86	2100		1678		1800		1859		1859		3217		95	92	275
1906	24183	2098		1667		1789		1851		1851		3586		100	85	299
1907	22952	1727		1600		1744		1690		1690		3440		100	93	274
1908	24193	2789	8	2278	8	2393	8	2487	8	2487	8	3413		99	81	370
1909	24197	1689		1433		1667		1596		1596		3740	9	98	83	273
1910	Shalimar Rice 3	5022	3	4133	3	4322	4	4493	3	4493	3	4445	4	84	95	308
1911	24188	2944	6	2478	7	2722	6	2715	6	2715	6	4081	6	98	88	306
1912	24195	3667	5	2989	5	3733	5	3463	5	3463	5	4938	1 * 11%	97	86	231
1913	24192	2836	7	2571	6	2640	7	2682	7	2682	7	3793	8	98	73	319
1914	24196	4867	4	3978	4	4500	3	4448	4	4448	4	4687	2 5%	91	89	243
1915	Local Check	7440	1	5411	1	6722	1	6524	1	6524	1	4435	5	95	101	314
	Exp Mean	**3225**		**2640**		**2964**		**2943**		**2943**		**3891**		**97**	**84**	**301**
	C.D. 5%	291		179		251		124		104		300		1		12
	C.V.%	5.40		4.06		5.06		4.49		3.78		14.40		1.39		7.68
	D/S	20/05		20/05		25/05										
	D/P	20/06		20/06		25/06										
	Local Check	Shalimar Rice-3		Shalimar Rice-3		Shalimar Rice-3										

DFF: Days to 50% flowering, PH: Plant Height; Pan/m^2: Panicles /m^2

Table 7.3: Days to 50% flowering of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Low			Northern Low (2) Mean	Southern Low	Northern Medium				Northern Medium (4) Mean	Southern Medium
		H.P.	H.P.	H.P. (2)		KA	UT	H.P.	J&K	W.B		AP
		MLN	DUK	Mean		PNP	ALM	PLM	RJR	KLP		CTP
1901	22957	104	84	94	94	105	99	99	62	104	91	93
1902	24179	98	100	99	99	115	105	113	51	78	87	112
1903	24189	100	82	91	91	98	94	98	61	81	84	77
1904	23518	108	90	99	99	110	106	107	67	103	96	146
1905	Vivekdhan 86	101	83	92	92	101	90	92	60	101	86	76
1906	24183	105	87	96	96	109	103	98	67	97	91	95
1907	22952	106	86	96	96	109	101	100	60	110	93	94
1908	24193	100	87	94	94	106	106	104	61	97	92	95
1909	24197	104	84	94	94	101	100	99	67	90	89	92
1910	Shalimar Rice 3	90	75	83	83	85	84	82	45	106	79	72
1911	24188	108	87	98	98	97	104	102	60	100	91	95
1912	24195	102	87	95	95	94	106	103	58	102	92	94
1913	24192	106	87	96	96	96	102	100	60	100	90	94
1914	24196	98	84	91	91	96	96	91	57	99	85	78
1915	Local Check	98	101	99	99	114	88	95	46		76	125
	Exp Mean	**102**	**87**	**94**	**94**	**102**	**99**	**99**	**59**	**97**	**88**	**96**
	C.D. 5%	3	1	1	1	2	1	4	3	2	1	1
	C.V.%	1.62	0.55	1.34	1.17	1.16	0.76	2.14	3.05	1.46	1.79	0.88

Table 7.3(Contd.): Days to 50% flowering of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	High				High (3) Mean	Overall (11) Mean
		J&K	J&K	J&K	J&K (3)		
		KHD	PBY	SHL	Mean		
1901	22957	110	114	111	112	112	99
1902	24179	124	127	124	125	125	104
1903	24189	102	106	103	103	103	91
1904	23518	110	110	111	110	110	106
1905	Vivekdhan 86	113	113	113	113	113	95
1906	24183	110	114	111	111	111	100
1907	22952	111	114	113	113	113	100
1908	24193	109	112	110	110	110	99
1909	24197	114	115	115	115	115	98
1910	Shalimar Rice 3	88	98	95	94	94	84
1911	24188	105	109	106	107	107	98
1912	24195	105	112	108	108	108	97
1913	24192	108	113	111	111	111	98
1914	24196	100	105	104	103	103	91
1915	Local Check	91	99	98	96	96	95
	Exp Mean	**107**	**111**	**109**	**109**	**109**	**97**
	C.D. 5%	2	2	2	1	1	1
	C.V.%	1.04	0.97	1.13	1.12	1.13	1.39

Table 7.4: Plant Height (cm) of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Northern Low			Northern Low (2) Mean	Southern Low	Northern Medium				Northern Medium (3) Mean	Southern Medium
		H.P.	H.P.	H.P. (2)		KA	UT	H.P.	J&K	W.B		AP
		MLN	DUK	Mean		PNP	ALM	PLM	@RJR	KLP		CTP
1901	22957	73	84	78	78	60	92	66	31	75	78	67
1902	24179	73	100	86	86	64	76	51	32	83	70	66
1903	24189	80	82	81	81	68	101	69	32	91	87	78
1904	23518	76	90	83	83	74	98	71	38	95	88	80
1905	Vivekdhan 86	90	83	87	87	79	122	87	36	117	109	96
1906	24183	81	87	84	84	77	109	75	33	110	98	85
1907	22952	95	86	90	90	74	128	86	35	115	110	93
1908	24193	75	87	81	81	71	101	65	39	108	91	82
1909	24197	76	84	80	80	82	109	71	38	104	95	94
1910	Shalimar Rice 3	95	75	85	85	77	105	80	40	100	95	99
1911	24188	76	87	82	82	77	108	79	34	120	102	84
1912	24195	88	87	87	87	91	117	83	44	83	94	101
1913	24192	62	87	75	75	65	88	61	23	94	81	67
1914	24196	87	84	86	86	82	114	73	42	102	96	88
1915	Local Check	80	101	90	90	90	116	75	38		95	121
	Exp Mean	**80**	**87**	**84**	**84**	**75**	**106**	**73**	**36**	**100**	**93**	**87**

Table 7.4(Contd.): Plant Height (cm) of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	High				High (3) Mean	Overall (10) Mean
		J&K	J&K	J&K	J&K (3)		
		KHD	PBY	SHL	Mean		
1901	22957	66	64	63	64	64	71
1902	24179	62	60	59	60	60	70
1903	24189	84	82	81	82	82	82
1904	23518	77	78	74	77	77	81
1905	Vivekdhan 86	82	80	79	80	80	92
1906	24183	77	75	75	76	76	85
1907	22952	85	85	84	85	85	93
1908	24193	76	73	73	74	74	81
1909	24197	70	70	67	69	69	83
1910	Shalimar Rice 3	109	102	106	106	106	95
1911	24188	83	80	81	81	81	88
1912	24195	72	70	69	70	70	86
1913	24192	68	66	66	67	67	73
1914	24196	87	84	86	86	86	89
1915	Local Check	110	107	108	108	108	101
	Exp Mean	**80**	**79**	**78**	**79**	**79**	**84**

Table 7.5: Panicles/m^2 of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	Northern Low			Northern Low (2) Mean	Southern Low	Northern Medium				Northern Medium (4) Mean	Southern Medium
		H.P.	H.P.	H.P. (2) Mean		KA	UT	H.P.	J&K	W.B		AP
		MLN	DUK			PNP	ALM	PLM	RJR	KLP		CTP@
1901	22957	285	244	264	264	545	225	338	350	264	294	32
1902	24179	272	346	309	309	581	232	322	444	302	325	32
1903	24189	208	288	248	248	501	298	286	464	313	340	36
1904	23518	202	265	234	234	370	301	310	115	325	263	33
1905	Vivekdhan 86	190	356	273	273	392	225	334	230	303	273	29
1906	24183	190	300	245	245	414	235	424	110	320	272	35
1907	22952	162	317	239	239	341	230	288	217	275	252	25
1908	24193	277	243	260	260	508	299	408	171	320	300	32
1909	24197	177	212	194	194	407	266	248	288	323	281	25
1910	Shalimar Rice 3	223	306	265	265	407	203	302	204	286	249	30
1911	24188	230	249	240	240	421	319	222	292	315	287	32
1912	24195	165	182	173	173	305	242	280	156	321	250	27
1913	24192	228	307	268	268	508	261	405	293	312	318	31
1914	24196	148	180	164	164	348	209	256	202	314	245	22
1915	Local Check	212	216	214	214	436	273	439	251		321	31
	Exp Mean	**211**	**267**	**239**	**239**	**432**	**255**	**324**	**252**	**307**	**284**	**30**
	C.D. 5%	38	27	23	22	22	22	83	11	33	22	9
	C.V.%	10.86	6.11	8.45	8.12	3.04	5.22	15.33	2.70	6.46	9.62	18.63

Table 7.5 (Contd.): Panicles/m^2 of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	High				High (3) Mean	Overall (10) Mean
		J&K	J&K	J&K	J&K (3)		
		KHD	PBY	SHL	Mean		
1901	22957	436	327	412	392	392	342
1902	24179	337	307	332	325	325	347
1903	24189	354	343	332	343	343	339
1904	23518	323	304	310	312	312	283
1905	Vivekdhan 86	248	228	242	239	239	275
1906	24183	344	318	330	331	331	299
1907	22952	316	296	303	305	305	274
1908	24193	548	382	541	490	490	370
1909	24197	278	254	274	269	269	273
1910	Shalimar Rice 3	407	350	397	385	385	308
1911	24188	355	335	320	337	337	306
1912	24195	230	209	224	221	221	231
1913	24192	300	290	288	293	293	319
1914	24196	272	251	252	258	258	243
1915	Local Check	348	314	340	334	334	314
	Exp Mean	**340**	**300**	**327**	**322**	**322**	**301**
	C.D. 5%	34	22	37		9	12
	C.V.%	6.04	4.40	6.71		2.93	7.68

Table 7.6: Grain quality characteristics of entries in AVT 1-E (H), Kharif 2015

Entry No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	A.C	G.C
1901	IET 22957	76.9	67.9	62.7	6.52	2.1	3.10	LS	VOC	4	26.63	42
1902	24179	79.6	72.2	70.1	5.92	2.44	2.42	SB	VOC	4	22.93	22
1903	24189	75.8	62.3	48	7.09	1.74	4.07	LS	VOC	7	22.49	22
1904	23518	77.5	68.4	63.9	7.32	1.91	3.82	LS	A	3	18.86	63
1905	Vivekdhan.86	80.9	71.7	50.8	5.56	2.59	2.14	SB	VOC	4	25.34	22
1906	24183	78.7	67.7	54.1	7.23	2.04	3.54	LS	VOC	3	23.08	23
1907	22952	79.7	69.8	44.2	6.49	2.5	2.59	LB	VOC	3	17.92	74
1908	24193	78.7	69.5	64.9	7.25	1.85	3.91	LS	A	4	24.81	22
1909	24197	77.1	68.8	63.8	5.77	2.29	2.51	MS	VOC	7	18.97	25
1910	Shalimar Rice -3	78.2	68.8	52.2	5.47	2.4	2.27	SB	OC	4	25.49	22
1911	24188	76.8	67.8	56.6	7.19	2.07	3.47	LS	VOC	4	23.58	22
1912	24195	77.7	68.4	46.7	5.66	2.28	2.48	SB	VOC	3	16.98	31
1913	24192	80.1	70.7	64.3	6.57	2.15	3.05	LS	VOC	4	26.45	22
1914	24196	75.8	64.3	37.5	6.39	2.29	2.79	LB	VOC	7	21.85	48

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 7.7: Composition of entries in Initial Variety Trial -Early (Hills), IVT – E (H), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
1st year of testing				
2001	25144	HPR 2672	HPU 741 / HPR 1149	LS
2002	25145	UPR 3820-2-1-1-1	UPRI 99-1/UPR 2870-98-125	LS
2003	25146	SKUA-482 (K 1356-6-4)	Shalimar Rice-1/ Dular	SB
2004	25147	VL 31918	VLD 85/A-57	SB
2005	25148	HPR 2674	HPU 741 / HPR 1149	LS
2006	25149	HPR 2760	HS/KASTURI	LS
2007	**Vivek Dhan 86 (NC)**			
2008	25150	SKUA-481 (K 1329-16-2)	SKUA-339/China 1039	SB
2009	25151	UPR 3879-4-2-1-1	UPRI 2001-9/ S-1113	LS
2010	**Shalimar Rice 3 (ZC)**			
2011	25152	SKUA-530	Kohsar / GS-504	SB
2012	25153	VL 31893	VLD 86/VL 30424	LS
2013	**Local Check**			
2014	25154	SKUA-484 (K 1313-24-3)	SKUA-46/Dular	SB
2015	25155	VL 31916	VLD 85/BL 245	SB
2016	25156	HPR 2746	HS/T23// IR 67011	LS
2017	25157	SKUA-483 (K 1331-3-1)	SKUA-339/China 1039	SB
2018	25158	HPR 2756	HS/T23// IR 66295	LS

Table 7.8: Grain Yield (kg.ha) of entries in IVT-E (H), kharif 2015.

Entry No.	IET No.	Low										Medium	
		H.P.		H.P.		H.P. (2)		KA		Low (3)		UT	
		MLN		DUK		Mean		PNP		Mean		ALM	
2001	25144	4205	7	4159	3	4182	2	4251	2	4205	1 4%	3314	
2002	25145	2957		4398	1 *	3677	7	3635	5	3663	6	2936	
2003	25146	3870		3091	7	3480		2630		3197		1610	
2004	25147	3816		2364		3090		2902		3027		3594	4 …5%
2005	25148	5082	1	2432		3757	5	4562	1	4025	3	3371	9
2006	25149	4004	8	1432		2718		3461	7	2965		4285	1 * 25%
2007	Vivek Dhan 86 (NC)	5039	3	2182		3610	9	3142	8	3454	8	3352	
2008	25150	3054		3750	6	3402		954		2586		1894	
2009	25151	4641	5	2341		3491		4187	3	3723	5	4209	2 …23%
2010	Shalimar Rice 3 (ZC)	3962	9	1250		2606		4096	4	3103		3068	
2011	25152	1273				1273		1004		1139		426	
2012	25153	3810		3977	5	3894	4	2888		3559	7	3561	5 …4%
2013	Local Check	5082	2	4000	4	4541	1	3101	9	4061	2	3428	7
2014	25154	2911		3091	8	3001		856		2286		2178	
2015	25155	4965	4	2341		3653	8	2835		3380	9	3409	8
2016	25156	3484		2364		2924		2838		2895		3504	6 …2%
2017	25157	4294	6	3068	9	3681	6	1996		3119		2367	
2018	25158	3715		4205	2	3960	3	3560	6	3827	4	4119	3 …20%
	Exp Mean	**3898**		**2967**		**3446**		**2939**		**3274**		**3035**	
	C.D. 5%	548		332		308		977		386		716	
	C.V.%	6.67		5.28		6.22		15.76		10.17		11.18	
	Sowing Date	17/06		26/06				20/07				18/05	
	Planting Date	21/07		23/07				28/08				29/05	
	Local ©	HPR 1068		HKR 126				Tunga				VLD 85	

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.8 Contd.: Grain Yield (kg.ha) of entries in IVT-E (H), kharif 2015

Entry No.	IET No.	H.P.		J&K		W.B		AP		Medium (2)		J&K	
		@ALM		@RJR		@KLP		CTP		Mean		KHD	
2001	25144	2125	1 *	1750	4 *	3031		6609	5	4961	7	7150	2
2002	25145	875		1350	9	6019	4 *	5881		4408		3050	
2003	25146	875		750		4031		4635		3123		6200	7
2004	25147	1375	6	2050	2 *	3281		6188	7	4891	8	4550	
2005	25148	1375	7	1550	6	4144		6703	4	5037	5	6300	5
2006	25149	1500	5 *	1150		4281	9	6088	9	5186	4	5150	
2007	Vivek Dhan 86 (NC)	1125		850		2938		8164	1	5758	1	2600	
2008	25150	875		1100				3806		2850		6050	8
2009	25151	1375	8	1950	3 *	4594	8 *	6804	3	5506	3	2750	
2010	Shalimar Rice 3 (ZC)	750		1400	7			6169	8	4619		6800	3
2011	25152	800		700				2332		1379		2775	
2012	25153	1750	2 *	1650	5	9675	3 *	6396	6	4978	6	5050	
2013	Local Check	1125		1400	8			5821		4625		5700	9
2014	25154	875		1200		5806	5 *	5735		3956		6600	4
2015	25155	1625	3 *	1250		9806	2 *	6038		4724	9	6300	6
2016	25156	1625	4 *	2100	1 *	5756	6 *	5683		4594		3300	
2017	25157	625		750		5031	7 *	4543		3455		9500	1 *
2018	25158	1250	9	1150		10206	1 *	7097	2	5608	2	2750	
	Exp Mean	**1218**		**1339**		**5614**		**5816**		**4426**		**5143**	
	C.D. 5%	357		345		1541		1700		587		355	
	C.V.%	13.91		12.23		12.71		13.85		9.24		3.27	
	Sowing Date	29/05		15/06		17/06		16/06				20/05	
	Planting Date	29/06		11/07		17/07		17/07				20/06	
	Local ©	HPR-1068		K 39				Isukaravvalu				Shalimar Rice-3	

Table 7.8 Contd.: Grain Yield (kg.ha) of entries in IVT-E (H), kharif 2015

Entry No.	IET No.	High						High (2)		Overall (7)		DFF	PH	Pan/ m2
		J&K		J&K		J&K (2)		Mean		Mean				
		PBY		@SHL		Mean								
2001	25144	6110	2 *	6505	6	6630	2 * 15%	6630	2 15%	5114	1 * 11%	91	92	291
2002	25145	2270		2205		2660		2660		3590		104	86	293
2003	25146	5375	5	5700	9	5788	5	5788	5	3916		84	102	295
2004	25147	3725		4250		4138		4138		3877		90	88	359
2005	25148	5450	4	6850	5	5875	4 2%	5875	4 2%	4843	2 5%	89	89	328
2006	25149	4725	9	5550		4938		4938		4163	8	92	100	357
2007	Vivek Dhan 86 (NC)	2310		2650		2455		2455		3827		89	95	297
2008	25150	4875	8	7050	2	5463	8	5463	8	3483		79	93	313
2009	25151	2275		2800		2513		2513		3887		96	75	360
2010	Shalimar Rice 3 (ZC)	4725		6875	4	5763	6	5763	6	4296	7	82	98	303
2011	25152	2175		3560		2475		2475		1664		71	70	248
2012	25153	4525		5825	8	4788		4788		4315	6	86	103	340
2013	Local Check	5175	7	5525		5438	9	5438	9	4615	4	95	93	309
2014	25154	5525	3	6275	7	6063	3 * 5%	6063	3 * 5%	3842		80	93	298
2015	25155	5220	6	6895	3	5760	7	5760	7	4444	5	85	97	306
2016	25156	2800		4275		3050		3050		3425		92	86	419
2017	25157	7525	1 *	8650	1 *	8513	1* 48%	8513	1 * 48%	4756	3 3%	80	99	343
2018	25158	2500		3350		2625		2625		3992	9	94	70	375
	Exp Mean	**4294**		**5266**		**4718**		**4718**		**4021**		**88**	**91**	**325**
	C.D. 5%	372		313		235		235		306		1	6	22
	C.V.%	4.11		2.82		3.48		3.48		10.19		1.65	0.00	10.36
	Sowing Date	20/05		25/05										
	Planting Date	19/06		25/06										
	Local ©	Shalimar Rice-3		Shalimar Rice-3										

Table 7.9: Days to 50% flowering of entries in IVT-E (H), kharif 2015

Entry No.	IET No.	Low				Low (3)	Medium				
		H.P.	H.P.	H.P. (2)	KA		UT	H.P.	J&K	W.B	AP
		MLN	DUK	Mean	PNP	Mean	ALM	PLM	RJR	@KLP	CTP
2001	25144	95	82	89	101	93	97	94	60	89	76
2002	25145	111	90	101	108	103	115	109	72	103	70
2003	25146	90	83	87	75	83	91	86	57	84	77
2004	25147	90	82	86	100	91	100	92	58	91	76
2005	25148	97	82	90	99	93	94	91	59	86	78
2006	25149	97	86	92	92	92	103	100	59	101	92
2007	Vivek Dhan 86 (NC)	96	83	90	83	87	96	93	56	87	75
2008	25150	80	77	78	74	77	88	77	46	101	72
2009	25151	99	91	95	97	96	103	99	67	78	94
2010	Shalimar Rice 3 (ZC)	83	78	81	86	82	88	85	45		76
2011	25152	77	78	78	98	84	70	61	46		64
2012	25153	90	82	86	73	82	96	92	54	78	76
2013	Local Check	96	102	99	112	103	89	96	52		125
2014	25154	78	79	78	75	77	89	74	66	99	72
2015	25155	88	82	85	83	84	90	79	47	100	94
2016	25156	98	83	91	102	94	99	98	55	95	72
2017	25157	76	78	77	75	76	93	75	46	92	72
2018	25158	99	87	93	100	95	103	100	56	100	94
	Exp Mean	**91**	**84**	**87**	**90**	**88**	**94**	**89**	**56**	**92**	**81**
	C.D. 5%	5	1	2	6	2	1	4	0	7	1
	C.V.%	2.35	0.35	1.74	3.30	2.39	0.74	1.88	0.00	3.43	0.56

Table 7.9 Contd.: Days to 50% flowering of entries in IVT-E (H), kharif 2015

Entry No.	IET No.	Medium (4)	High				High (3)	Overall (10)
			J&K	J&K	J&K	J&K (3)		
		Mean	KHD	PBY	SHL	Mean	Mean	Mean
2001	25144	82	98	108	103	103	103	91
2002	25145	91	121	124	119	121	121	104
2003	25146	78	92	98	96	95	95	84
2004	25147	81	98	103	101	101	101	90
2005	25148	81	95	99	99	97	97	89
2006	25149	88	95	98	99	97	97	92
2007	Vivek Dhan 86 (NC)	80	101	105	105	103	103	89
2008	25150	71	91	95	95	93	93	79
2009	25151	91	102	110	103	105	105	96
2010	Shalimar Rice 3 (ZC)	73	90	97	94	93	93	82
2011	25152	60	68	77	71	72	72	71
2012	25153	80	96	105	102	101	101	86
2013	Local Check	90	91	103	91	95	95	95
2014	25154	75	87	95	90	91	91	80
2015	25155	78	91	100	94	95	95	85
2016	25156	81	101	107	104	104	104	92
2017	25157	72	91	102	94	95	95	80
2018	25158	88	97	106	99	100	100	94
	Exp Mean	**80**	**94**	**102**	**97**	**98**	**98**	**88**
	C.D. 5%	1	2	4	1	1	1	1
	C.V.%	1.10	1.08	1.69	0.65	1.21	1.23	1.65

Table 7.10: Plant Height (cm) of entries in IVT-E (H), Kharif 2015

Entry No.	IET No.	Low			Low (2) Mean	Low	Medium				
		H.P.	H.P.	H.P. (2)		KA	UT	H.P.	J&K	W.B	AP
		MLN	DUK	Mean		PNP	ALM	PLM	@RJR	@KLP	@CTP
2001	25144	98	116	107	107	77	97	78	40	101	17
2002	25145	76	109	92	92	71	94	62	33	94	14
2003	25146	110	112	111	111	84	109	81	34	108	19
2004	25147	89	94	91	91	84	94	74	41	96	17
2005	25148	104	89	96	96	88	103	70	48	116	17
2006	25149	106	105	106	106	94	111	73	31	124	18
2007	Vivek Dhan 86 (NC)	104	123	113	113	89	113	80	46	88	19
2008	25150	94	96	95	95	75	99	69	42		17
2009	25151	79	93	86	86	64	99	61	35	113	13
2010	Shalimar Rice 3 (ZC)	100	104	102	102	92	99	78	40		20
2011	25152	73	66	69	69	61	66		32		12
2012	25153	113	107	110	110	90	113	87	44	119	20
2013	Local Check	86	89	87	87	93	103	60	40		25
2014	25154	94	94	94	94	77	101	70	41	107	16
2015	25155	103	106	104	104	81	104	83	45	102	19
2016	25156	98	76	87	87	82	106	64	39	112	18
2017	25157	101	95	98	98	82	101	76	37	103	17
2018	25158	77	74	75	75	69	91	51	25	86	14
	Exp Mean	**95**	**97**	**96**	**96**	**81**	**100**	**72**	**39**	**105**	**17**

Table 7.10 Contd.: Plant Height (cm) of entries in IVT-E (H), Kharif 2015

Entry No.	IET No.	Medium (2) Mean	High				High (3) Mean	Overall (8) Mean
			J&K	J&K	J&K	J&K (3)		
			KHD	PBY	SHL	Mean		
2001	25144	88	96	85	90	90	90	92
2002	25145	78	98	85	91	91	91	86
2003	25146	95	113	98	107	106	106	102
2004	25147	84	94	82	89	88	88	88
2005	25148	87	92	80	88	87	87	89
2006	25149	92	113	96	105	105	105	100
2007	Vivek Dhan 86 (NC)	96	92	78	87	86	86	95
2008	25150	84	112	96	106	105	105	93
2009	25151	80	73	61	70	68	68	75
2010	Shalimar Rice 3 (ZC)	88	110	94	104	103	103	98
2011	25152	66	80	69	75	75	75	70
2012	25153	100	112	98	105	105	105	103
2013	Local Check	81	113	98	105	105	105	93
2014	25154	86	109	93	104	102	102	93
2015	25155	93	108	91	100	100	100	97
2016	25156	85	91	81	86	86	86	86
2017	25157	88	119	104	112	111	111	99
2018	25158	71	71	61	67	66	66	70
	Exp Mean	**86**	**100**	**86**	**94**	**93**	**93**	**91**

Table 7.11: Panicles/m2 of entries in IVT-E (H), Kharif 2015

Entry No.	IET No.	Low				Low (3) Mean	Medium				
		H.P.	H.P.	H.P. (2)	KA		UT	H.P.	J&K	W.B	AP
		MLN	DUK	Mean	PNP		ALM	PLM	RJR	@KLP	@CTP
2001	25144	203	360	281	356	306	284	369	224	296	23
2002	25145	223	380	301	392	331	252	315	227	324	27
2003	25146	278	343	310	465	362	237	318	132	343	25
2004	25147	230	331	281	682	414	249	363	339	313	31
2005	25148	265	323	294	378	322	279	399	249	328	34
2006	25149	283	355	319	581	406	302	348	238	330	33
2007	Vivek Dhan 86 (NC)	195	331	263	537	354	247	321	183	290	34
2008	25150	265	331	298	508	368	188	348	233		30
2009	25151	270	289	280	639	399	295	471	389	266	34
2010	Shalimar Rice 3 (ZC)	285	174	229	581	346	240	375	208		22
2011	25152	160	106	133	523	263	143		181		33
2012	25153	278	301	289	559	379	248	348	286	334	36
2013	Local Check	285	269	277	515	356	209	378	229		46
2014	25154	288	249	268	443	326	210	399	207	289	28
2015	25155	195	267	231	399	287	200	342	273	333	31
2016	25156	323	304	313	755	460	323	390	522	308	47
2017	25157	228	261	244	704	398	209	381	192	331	33
2018	25158	300	321	311	566	396	332	383	240	322	36
	Exp Mean	**253**	**294**	**273**	**532**	**360**	**247**	**368**	**253**	**315**	**32**
	C.D. 5%	40	27	23	69	29	40	131	38	26	13
	C.V.%	7.57	4.36	5.98	6.18	6.99	7.62	16.81	7.06	3.80	18.63

Table 7.11: Panicles/m2 of entries in IVT-E (H), Kharif 2015

Entry No.	IET No.	Medium (3)	High				High (3)	Overall (9)
			J&K	J&K	J&K	J&K (3)		
		Mean	KHD	PBY	SHL	Mean	Mean	Mean
2001	25144	292	289	259	273	274	274	291
2002	25145	264	292	277	283	284	284	293
2003	25146	229	304	288	293	295	295	295
2004	25147	317	366	321	353	347	347	359
2005	25148	309	365	342	356	354	354	328
2006	25149	296	381	360	367	370	370	357
2007	Vivek Dhan 86 (NC)	250	328	210	320	286	286	297
2008	25150	256	325	300	316	314	314	313
2009	25151	385	305	282	296	294	294	360
2010	Shalimar Rice 3 (ZC)	274	299	280	287	289	289	303
2011	25152	162	299	278	292	290	290	248
2012	25153	294	365	318	357	347	347	340
2013	Local Check	272	309	293	299	300	300	309
2014	25154	272	309	283	293	295	295	298
2015	25155	271	378	336	364	359	359	306
2016	25156	412	409	357	389	385	385	419
2017	25157	261	389	356	371	372	372	343
2018	25158	318	447	372	414	411	411	375
	Exp Mean	**288**	**342**	**306**	**329**	**326**	**326**	**325**
	C.D. 5%	43	86	43	82	33	33	22
	C.V.%	12.99	11.92	6.69	11.74	8.87	8.87	10.36

ADVANCE VARIETY TRIAL 1 - MEDIUM (HILLS) AVT-1-MH

Locations : 10 **Entries: 11**

Checks : Vivekdhan-62 (National), VL Dhan 65 (RC-North & South) RC Maniphou 11 (RC- North East) and Local check **Table: 7.12**

AVT-1-MH was conducted at 10 locations : five in low elevated northern hills (Malan, ICAR-Umiam, CAU-Umiam, Daulakhan and Lamphalpet); one in southern hills of Sirsi ; three in medium elevated hills at Almora, Rajouri and Gudalur two in Northern hills of Almora and Rajouri and one in southern hills of Gudalur; one in high elevated hills of Khudwani (Jammu and Kashmir).

The trial was constituted with 11 entries, 8 test entries and 3 checks *i.e.*, Vivekdhan 62 (National check), VL Dhan 65 (Regional check for North and South), RC Maniphou 11 (Regional check for North East) and local. The overall mean grain yield across altitudes ranged from 3033 kg/ha (IET 24201) to 4585 kg/ha (IET 24214); days to 50% flowering ranged from 96 days (IET 24199) to 110 days (IET 24201); plant height ranged from 80 cm (IET 24207) to 112 cm (Vivekdhan 62) and panicles/m^2 ranged from 229 (IET 24216) to 311 (IET 24207) (Tables 7.13, 7.14, 7.15 and 7.16).

Low elevated hills (≤ 950msl)

a. Northern Hills

AVT-1-MH trial was evaluated at Malan, ICAR-Umiam, CAU-Umiam, Daulakhan and Lamphalpet in northern hills. The overall grain yield ranged from 2420 kg/ha (IET 24201) to 4646 kg/ha (Regional check). Days to 50 % flowering duration ranged from 102 days (IET 24199) to 111 days (IET 23536); plant height ranged from 82 cm (IET 24207) to 110 cm (Vivekdhan 62); panicles/m^2 ranged from 192 (IET 24216) to 240 (regional check). Among the test entries the zonal check (VL Dhan 65) ramked 1st with yield of 4646 Kg/ha. Hence no entry was superior.

b. Southern Hills

AVT-1-MH trial was carried out at southern hills of Sirsi (Karnataka) under low elevation. Mean Grain yield ranged from 3494 kg/ha (Vivekdhan 62) to 6109 kg/ha (IET 24216). Days to 50 % flowering duration ranged from 85 days (IET 24215) to 108 days (IET 24201); Plant height ranged from 84 cm (IET 24207) to 128 cm (National check) whereas panicles/m^2 ranged from 211 (Local Check) to 301 (IET 24201). Among the checks local check was the highest yielder (5877 kg/ha).***None of the test entries showed the required >10% yield advantage over the best check (Local check).***

Medium elevated hills (951-1500 msl)

a. Northern Hills

AVT-1-MH trial was conducted at northern hills of Almora and Rajouri. At Rajouri location, the mean yield of the trial was less than 2500 kg/ha since the crop suffered from severe cold stress during crop season. Hence data of Rajouri location was not considered for further analysis and interpretation. The grain yield of test entries ranged from 2118 kg/ha (IET 24211) to 5278 kg/ha (IET 24207). Days to 50 % flowering ranged from 82 days (IET 24199 and IET 24211) to 93 days (IET 23536). Plant height ranged from 78 cm (IET 24207) to 111 cm (Vivekdhan 62). Panicles/m^2 ranged from 186 (Regional check) to 285 (IET 24207). Among the checks, regional check was the top yielder (4708 kg/ha).

Performance of promising entries at low altitude (Northern) hills in AVT-1-MH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (RC)
1	24207 HPR 2696 HS/T 23/IR 66295-36-2	5278 87 LS	12.0
	Vivekdhan 62 (National check)	4408 86	
	VL Dhan 65 (Regional check)	**4708** **86**	
	Local check	3924 86	

IET 24207 (HPR 2696) a derivative of the cross HS/T 23/IR 66295-36-2 occupied first rank in grain yield (5278 kg/ha). It showed 12 % yield advantage over the best check (Regional check). It possessed long slender grains and 87 days to 50 % flowering duration. Quality wise it showed high HRR (62.7 %), desirable ASV (3), low amylose (17.86 %) and hard gel consistency (24) (Table 7.17).

On the basis of yield superiority IET 24207 is promoted to AVT-2-MH under medium altitude (northern hills) as it had shown 12% yield gain over the best check (RC).

b. Southern Hills

AVT-1-MH trial was conducted at southern hills of Gudalur (Tamil Nadu) in medium altitude. The grain yield ranged from 3003 kg/ha (IET 24211) to 5426 kg/ha (national check). Days to 50 % flowering duration ranged from 89 days (IET 24215) to 103 days (Local check). Plant height ranged from 74 cm (IET 24207) to 117 cm (National check). Panicles/m^2 ranged from 308 (Regional check) to 567 (IET 24207). ***Since national check (Vivekdhan 62) was the first ranking entry, no entry was promoted to AVT-2-MH.***

High elevated hills (≥ 1501 msl)

Under high altitude AVT-1-MH trial was conducted at one location in Khudwani (Jammu & Kashmir). Crop got affected by cold leading to drastic reduction in yield in many of the entries. Mean grain yield ranged from 1600 Kg/ha (National check) to 6556 Kg/ha (IET 24211). Mean days to 50% flowering ranged from 94 days (Local check) to 123 days (IET 24201). Plant height ranged from 62 cm (IET 23536) to 109 cm (Local check). Panicles/m^2 ranged from 251 (IET 24211) to 336 (IET 24207). Among the checks, local check was the top yielder (5078 kg/ha).

Performance of promising entries at high altitude hills in AVT-1-MH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (LC)
1	24211 SKUA 412 VL 4561/Jehlum	6556 102 SB	29.0
2	24199 SKUA 415 VL 4561/Jehlum	6511 100 SB	28.0
	Vivekdhan 62 (National check)	1600 111	
	VL Dhan 65 (Regional check)	1722 118	
	Local check	**5078** **94**	

IET 24211 (SKUA 412) a derivative of the cross VL 4561/Jehlum occupied first rank in grain yield (6556 kg/ha). It showed 29.0 % yield advantage over the best check (Local check). It possessed short bold grains and 102 days to 50 % flowering duration. Quality wise it showed high HRR (64 %), desirable ASV (4), intermediate amylose (23.23 %) and hard gel consistency (22).

Three years' performance of entries IET 23536 in medium hills during 2013-2015

S.No	IET No. / Designation / Cross combination	Year	Yield advantage % over the best check				
			Elevation				
			Low		Medium		High
			Northern	Southern	Northern	Southern	
1	23536 VL 31630 IR 72870-120-1-2-2/IR 72870-19-2-2-3	2013 (IVT-MH)	9.03 (NC)	-	-	-	-
		2014 (AVT-1-MH)	5.18 (NC)	-	-	-	-
		2015 (AVT-1-MH)	-	-	-	-	-

NC: National check, RC: Regional check; LC: Local check

IET 24199 (SKUA 415) a derivative of the cross VL 4561/Jehlum occupied second rank in grain yield (6511 kg/ha). It showed 28.0 % yield advantage over the best check (Local check). It possessed short bold grains and 100 days to 50 % flowering duration. Quality wise it showed high HRR (60.5 %), desirable ASV (4), high amylose (25.46 %) and hard gel consistency (22).

On the basis of yield superiority two entries, IET 24211 and IET 24199 is promoted to AVT-2-MH under high altitude since they out yielded the best check (Local Check) with ≥ 10% yield superiority.

State wise performance of IET 23536 in medium hills during 2013-2015

S.No	IET No. / Designation / Cross combination	Year	Low elevation				Medium elevation		High elevation
			Northern			Southern	Northern	Southern	J&K
			ME	H.P	MA	KA	UT	TN	
1	23536 VL 31630 IR 72870-120-1-2-2/IR 72870-19-2-2-3	2013 (IVT-MH)	9.9 (LC)	8.06 (NC)	-	-	-	-	-
		2014 (AVT-1-MH)	-	-	8.32 (NC)	-	-	-	-
		2015 (AVT-1-MH)	-	5.0 (RC)	-	-	-	-	-

NC: National check, RC: Regional check; LC: Local check.

The entry IET 23536 (VL 31630) evaluated for 3 years under low, medium and high altitude in IVT-MH, AVT-1-MH and AVT-2-MH trial during 2013, 2014 and 2015 at different states and regions. The entry could not show consistent performance over the years in any altitude hence discontinued from further testing.

INITIAL VARIETY TRIAL -MEDIUM (HILLS) IVT –MH

Locations : 10 **Entries: 13**
Checks : National check: Vivekdhan 62 **Table: 7.18**
Regional check: VL Dhan 65 (North & South),
RC Maniphou 11 (North East) and Local check

Initial Variety Trial- Medium hills (IVT - MH) was conducted at 10 locations : five under northern low altitude (≤ 950 msl) at Malan and Daulakhan in Himachal Pradesh, ICAR-Umiam and CAU-Umiam in Meghalaya, Lamphalpet in Manipur) and one under southern low altitude (Sirsi in Karnataka); two northern locations under medium altitude (951-1500 msl) at Rajouri in Jammu & Kashmir, Almora in Uttarakhand and a single southern location (Gudalur in Tamil Nadu) and one location under high altitude (≥1501 msl) at Khudwani in Jammu & Kashmir.The trial composed of 10 entries and 3 checks *viz*., Vivekdhan-62 (National), VL Dhan 65 and RC Maniphou 11 (Regional Checks) and local check. The overall mean grain yield of entries across altitudes varied from 3335 kg/ha (IET 25163) to 4282 kg/ha (IET 25166). The overall mean flowering duration ranged from 92 days (IET 25168) to 106 days (IET 25160). Panicles /m^2 ranged from 244 (Local check) to 296 (IET 25161) where as plant height ranged from 79 cm (IET 25159) to 116 cm (IET 25165). Among the checks, local check was the highest yielder (3982 g/ha) (Tables 7.19, 7.20, 7.21 and 7.22).

Low altitude hills (≤ 950 msl)

IVT – MH was conducted at 5 northern locations, Malan, ICAR-Umiam, CAU-Umiam, Daulakhan and Lamphalpet. Three locations namely Lamphalpet due to high CV (29.41%), while ICAR-Umiam (2357 kg/ha) and Daulakhan (2485 kg/ha) recorded mean grain yield less than 2500 kg/ha hence not included in analysis. The mean grain yield of the entries in northern locations ranged from 2402 kg/ha (Vivekdhan 62) to 4123 kg/ha (IET 25166). The mean flowering duration under low elevation ranged from 96 days (IET 25168) to 110 days (IET 25160). Panicles/m^2 and plant height of the entries ranged from 204 (local check) to 273 (IET 25161) and 85 cm (IET 25159) to 121 cm (IET 25166) respectively. Among the checks, regional check was the best check (3274 kg/ha).

Performance of promising entries at low altitude (Northern) hills in IVT-MH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (RC)
1	25166 VL 31897 VLD 86/VL 30424	3900 106 LB	19.0
2	25164 UPRI 2013-5 IR 72870-120-1-2-2.IR 72870-19-2-2-3	3557 111 LS	8.0
	Vivekdhan 62 (National check)	3129 106	
	VL Dhan 65 (Regional check)	**3274** **109**	
	Local check	3094 107	

IET 25166 (VL 31897) a derivative of the cross VLD 86/VL 30424 occupied first rank in grain yield (3900 kg/ha). It showed significantly higher yield (3862 kg/ha, 1st) at Umiam and ranked

3rd at Malan (3938 kg/ha) and 7th at Sirsi (4571 kg/ha). It showed 8 % yield advantage over the best check (Regional check). It possessed long bold grains and 106 days flowering duration.

The second ranking entry, IET 25164 (UPRI 2013-5) derived from the cross IR 72870-120-1-2-2.IR 72870-19-2-2-3 yielded 3557 kg/ha with 8% higher yield than the best check. It has 111 days to 50 % flowering duration, 91 cm of plant height and 256 panicles//m^2.

On the basis of yield superiority IET 25166 and IET 25164 were promoted to AVT-1-MH under low altitude.

Medium altitude hills (951 – 1500 msl)

IVT - MH was evaluated at Rajouri (960 msl) in J&K and Almora (1250 msl) in Uttarakhand and Gudalur (1300 msl) in Tamilnadu**.** The mean grain yield at location Rajouri was less than 2500 kg/ha, hence was not included in analysis of the performance of the entry. The mean grain yield under medium elevation ranged from 3408 kg/ha (IET 25160) to 4567 kg/ha (IET 25161). Mean flowering duration ranged from 85 days (IET 25168) to 95 days (IET 25160 and IET 25164). Panicles/m^2 ranged from 202 (National check) to 303 (IET 25167) while plant height ranged from 93 cm (IET 25159) to 132 cm (IET 25165). Among the checks, the local check was the best check (4243 kg/ha).

The entry IET 25161 (HPR 2755) derived from the cross HS/T23//IR 66295 with 110 days to 50 % flowering duration and MS grain type ranked 1st with 4567 kg/ha yield and yield superiority of 8 % over best check. It ranked 3rd at Almora (4870 kg/ha) and 2nd at Gudalur (4265 kg/ha).

IET 25166 (VL 31897), was the second ranking entry (4520 kg/ha). It had a flowering duration of 105 days with long bold grains. It was significantly superior to **VL Dhan 65** (Regional check), the best check with 7 **%** yield gain.

Performance of promising entries at medium altitude (Northern) hills in IVT-MH, Kharif 2015.

Rank	IET No./designation/ cross combination	GY (kg/ha)/ days to 50% flowering/ grain Type	% yield advantages over best check (RC)
1	25161 HPR 2755 HS/T23//IR 66295	4567 110 MS	8
2	25166 VL 31897 VLD 86/VL 30424	4520 105 LB	7
	Vivekdhan 62 (National check)	4595 106	
	VL Dhan 65 (Regional check)	**4777** **105**	
	Local check	4527 107	

Considering yield superiority over best check more than 5 %, IET 25161, IET 25166 and IET 25167 promoted to AVT-1-MH under medium altitude.

High altitude hills: (≥ 1501 msl)

IVT - MH trial was conducted at one location, Khudwani (1560 msl), Shalimar (1610 msl), Pombay (1560 msl), Wadura (1560 msl) and Bandipore (1680 msl) in Jammu and Kashmir under high altitude. Data was received from Khudwani only. The overall mean grain yield at this altitude ranged from 1315 kg/ha (IET 225164) to 6265 kg/ha (IET 25168). Flowering duration ranged from 91 days (local check) to 123 days (regional check) while panicles/m^2 ranged from 335 (IET 25163 and local check) to 380 (IET 25165). Among the checks, local check was the top yielder (5670 kg/ha). The CV at the location was very low 1.77 %, hence data was not considered for analyzing the performance of entry.

List of superior entries in IVT-MH Kharif, 2015

S.No.	Entries	Yield advantage over the best check (%)	Remarks
Low altitude – Best check (VL Dhan 65, Regional check)			
1	IET 25166	19.0	Promoted
2	IET 25164	8.0	Promoted
Medium altitude – Best check (VL Dhan 65, Regional check) Northern hills			
1	IET 25161	8.0	Promoted
2	IET 25166	7	Promoted

Table 7.12: Composition of entries in Advance Variety Trial 1- Medium Hills, AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
2nd year of testing				
2101	24199	SKUA-415	VL 4561/Jehlum	SB
2102	24211	SKUA-412	VL 4561/Jehlum	SB
2103	**Vivekdhan 62 (NC)**			
3rd year of testing				
2104	23536	VL 31630	IR 72870-120-1-2-2/ IR 72870-19-2-2-3	LS
2nd year of testing				
2105	24215	TRC 2013-8/IR 87756-19-1-2-1	IR06L164/IR 79971-B-204-1-4	MS
2106	**VL Dhan 65 (ZC for North & South), RC Maniphou 11 (ZC for North East)**			
2107	24201	UPR 3831-6-1-3	Pant Dhan 10/VL Dhan 85	SB
2108	24216	TRC 2013-9/IR 87756-20-2-2-3	IR06L164/IR 79971-B-204-1-4	SB
2109	24207	HPR 2696	HS/T 23/IR 66295-36-2	LS
2110	24214	TRC 2014-7/IR 82589-B-B-7-2	IRRI-132/IR 74371-54-1-1	SB
2111	**Local Check**			

Table 7.13: Grain yield (kg/ha) of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Low												Northern Low (3) Mean		Southern Low	
		MN		ME		ME		H.P.		H.P.		H.P. (2)				KA	
		LPP		@UMM-ICAR		@UMM-CAU		MLN		DUK		Mean				SRS	
2101	24199	3080	9	2138	1	2950	2	3197	5	3295	3	3246	5	3191	7	3859	8
2102	24211	3518	8	1988	3	2763	3	3067	7	3157	4	3112	6	3247	5	3828	
2103	Vivekdhan 62	966		1463	9	2106	8	3844	2	2715	8	3280	3	2508		3494	
2104	23536	5752	2	1705	7	2409	6	3200	4	3864	1 *	3532	1 .. 5%	4272	2	5198	5
2105	24215	3970	5	1902	4	2655	4	2380		2652	9	2516	9	3001	8	4806	6
2106	Zonal Check	7216	1	2106	2	3188	1	3314	3	3409	2	3362	2	4646	1	5423	3
2107	24201	3880	6	1807	5	2537	5	300		3081	5	1690		2420		4681	7
2108	24216	4197	4	1785	6	2176	7	3159	6	2841	7	3000	7	3399	4	6109	1...4%
2109	24207	2536		1405		1701		2440	9	2563		2502		2513	9	3847	9
2110	24214	4876	3	1642	8	2052	9	3868	1	2626		3247	4	3790	3	5245	4
2111	Local ©	3835	7	1394		1688		2727	8	3068	6	2898	8	3210	6	5877	2
	Exp Mean	**3984**		**1758**		**2384**		**2863**		**3025**		**2944**		**3291**		**4761**	
	C.D. 5%	1357		428		839		268		453		249		428		904	
	C.V.%	20.00		14.29		20.66		5.49		8.80		7.26		13.81		11.15	
	D/S	07/07		15/05		17/06		10/06		13/06						03/07	
	D/P	30/07		15/06		17/07		23/07		18/07						31/07	
	Local Check	RCM -9		Shahsarang		Shahsarang		HPR 1156		HKR 126						MGD-101	

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.13 (Contd.): Grain yield (kg/ha) of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium				Northern Medium (1) Mean		Southern Medium		High		Overall (7) Mean		DFF	PH (cm)	Pan/ m²
		UT		J&K				TN		J&K						
		ALM		@RJR				GDL		KHD						
2101	24199	4083	8	2167	7	4083	8	3638	9	6511	2 * 28%	3952	6	96	100	258
2102	24211	2118		2433	5	2118		3003		6556	1 * 29%	3607	8	98	99	250
2103	Vivekdhan 62	4408	7	1600	8	4408	7	5426	1	1600		3208		98	112	248
2104	23536	4611	5	1367		4611	5	4978	4	2067	8	4238	2 2%	105	86	262
2105	24215	5000	3 6%	2333	6	5000	3 * 6%	3731	8	3667	5	3744	7	97	103	239
2106	Zonal	4708	4	1167		4708	4	3436		1722		4176	3	100	94	248
2107	24201	2951		2667	2	2951		4026	7	2316	6	3033		110	97	266
2108	24216	4427	6	1433	9	4427	6	5151	3	1971	9	3979	5	103	90	229
2109	24207	5278	1 12%	2633	4	5278	1 * 12%	4407	5	2133	7	3315	9	101	80	311
2110	24214	5035	2 7%	2667	3	5035	2 * 7%	5202	2	5244	3 3%	4585	1 * 10%	99	92	252
2111	Local ©	3924	9	2833	1	3924	9	4337	6	5078	4	4121	4	100	98	263
	Exp Mean	**4231**		**2118**		**4231**		**4303**		**3533**		**3814**		**101**	**96**	**257**
	C.D. 5%	733		301		81		550		231		270		1		19
	C.V.%	10.17		8.34		1.13		7.51		3.83		11.61		1.81		14.48
	D/S	21/05		03/07				07/07		20/05						
	D/P	02/07		29/07				01/08		19/06						
	Local Check	VLD 61		K 39				CO(R) 50		Shalimar Rice-3						

DFF: Days to 50% flowering; PH: Plant Height (cm); Pan/m^2: Panicles/m^2

Table 7.14: Days to 50% flowering of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Southern Low
		MAN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		KA
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2101	24199	88	110	113	112	106	94	100	102	93
2102	24211	93	114	118	116	106	94	100	105	93
2103	Vivekdhan 62	90	109	112	110	106	96	101	102	94
2104	23536	103	113	117	115	117	106	111	111	97
2105	24215	95	112	115	113	110	98	104	106	85
2106	Zonal Check	103	108	111	110	106	97	102	105	87
2107	24201	103	118	122	120	135	112	124	118	108
2108	24216	94	118	122	120	115	99	107	109	95
2109	24207	95	116	120	118	112	95	103	108	97
2110	24214	95	109	112	111	111	97	104	105	89
2111	Local ©	95	113	117	115	105	105	105	107	100
	Exp Mean	**96**	**113**	**116**	**115**	**112**	**99**	**105**	**107**	**94**
	C.D. 5%	2	2	2	1	2	3	2	1	1
	C.V.%	1.49	0.97	1.01	1.00	1.11	1.52	1.30	1.20	0.70

Table 7.14 (Contd.): Days to 50% flowering of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium		Northern Medium (2) Mean	Southern Medium	High	Overall (10) Mean
		UT	J&K		TN	J&K	
		ALM	RJR		GDL	KHD	
2101	24199	101	63	82	95	100	96
2102	24211	101	63	82	95	102	98
2103	Vivekdhan 62	107	65	86	93	111	98
2104	23536	112	74	93	99	112	105
2105	24215	101	65	83	89	102	97
2106	Zonal Check	107	65	86	95	118	100
2107	24201	120	63	92	98	123	110
2108	24216	107	66	87	96	114	103
2109	24207	108	66	87	100	103	101
2110	24214	106	67	87	92	110	99
2111	Local ©	109	64	86	103	94	100
	Exp Mean	**107**	**65**	**86**	**96**	**108**	**101**
	C.D. 5%	1	3	1	8	2	1
	C.V.%	0.60	3.11	0.96	4.61	1.07	1.81

Table 7.15: Plant Height (cm) of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Southern Low
		MAN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		KA
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2101	24199	132	88	90	89	91	94	93	99	113
2102	24211	137	87	85	86	90	94	92	99	106
2103	Vivekdhan 62	148	105	104	104	100	96	98	110	128
2104	23536	116	80	78	79	67	106	87	89	90
2105	24215	140	92	93	92	99	97	98	104	114
2106	Zonal Check	112	70	68	69	93	97	95	88	117
2107	24201	127	85	82	83	88	112	100	99	100
2108	24216	124	80	80	80	75	99	87	91	99
2109	24207	119	71	63	67	65	95	80	82	84
2110	24214	122	83	82	82	87	97	92	94	100
2111	Local Check	110	85	81	83	95	106	101	95	105
	Exp Mean	**126**	**84**	**82**	**83**	**86**	**99**	**93**	**96**	**105**

Table 7.15 (Contd.): Plant Height (cm) of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium		Northern Medium (2) Mean	Southern Medium	High	Overall (10) Mean
		UT	J&K		TN	J&K	
		ALM	RJR		GDL	KHD	
2101	24199	117	71	94	102	101	100
2102	24211	115	86	101	97	93	99
2103	Vivekdhan 62	128	94	111	117	104	112
2104	23536	93	81	87	82	62	86
2105	24215	114	81	98	109	89	103
2106	Zonal Check	116	83	100	95	92	94
2107	24201	104	97	100	88	87	97
2108	24216	106	80	93	93	66	90
2109	24207	94	62	78	74	68	80
2110	24214	108	88	98	88	70	92
2111	Local Check	117	82	100	87	109	98
	Exp Mean	**110**	**82**	**96**	**94**	**85**	**96**

Table 7.16: Panicles/m^2 of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Southern Low
		MAN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		KA
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2101	24199	172	240	255	248	173	329	251	234	251
2102	24211	167	212	231	222	153	320	237	217	234
2103	Vivekdhan 62	184	226	243	234	212	329	270	239	271
2104	23536	197	216	239	227	162	325	243	228	294
2105	24215	186	212	226	219	158	240	199	204	261
2106	Zonal Check	192	209	232	221	240	329	285	240	294
2107	24201	187	201	221	211	198	319	259	225	301
2108	24216	144	200	200	200	143	270	207	192	271
2109	24207	212	253	270	262	240	372	306	269	291
2110	24214	147	188	198	193	272	226	249	206	277
2111	Local Check	169	190	227	209	245	339	292	234	211
	Exp Mean	**178**	**213**	**231**	**222**	**200**	**309**	**254**	**226**	**269**
	C.D. 5%	32	22	56	29	26	30	19	15	41
	C.V.%	10.65	5.94	14.17	11.05	7.58	5.76	6.37	8.99	9.02

Table 7.16 (Contd.): Panicles/m^2 of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium		Northern Medium (2) Mean	Southern Medium	High	Overall (10) Mean
		UT	J&K		TN	J&K	
		ALM	RJR		GDL	KHD	
2101	24199	234	190	212	450	282	258
2102	24211	219	225	222	483	251	250
2103	Vivekdhan 62	280	158	219	317	257	248
2104	23536	262	124	193	483	315	262
2105	24215	271	223	247	325	288	239
2106	Zonal Check	244	127	186	308	309	248
2107	24201	230	251	240	425	328	266
2108	24216	253	124	189	375	311	229
2109	24207	316	254	285	567	336	311
2110	24214	250	260	255	442	266	252
2111	Local Check	247	306	277	400	296	263
	Exp Mean	**255**	**204**	**229**	**416**	**294**	**257**
	C.D. 5%	20	7	5	177	38	19
	C.V.%	4.52	2.06	1.71	25.03	7.67	14.48

Table 7.17: Grain quality characteristics of entries in AVT 1-M (H), Kharif 2015

Entry No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	A.C	G.C
2101	IET 24199	79.7	70.1	60.5	5.84	2.56	2.28	SB	VOC	4	25.46	22
2102	24211	78.8	71.2	64	5.88	2.52	2.33	SB	VOC	4	23.23	22
2103	Vivekdhan 62	80	70.6	60.9	5.4	2.49	2.16	SB	OC	4	24.22	24
2104	23536	77.5	69.5	66.2	6.35	2.06	3.08	LS	A	7	24.2	25
2105	24215	77.1	67.5	46.1	5.75	2.24	2.56	MS	VOC	4	21.88	53
2106	VL Dhan-65	78.7	71	63.9	6.28	2.15	2.92	LB	VOC	4	26.89	22
2107	24201	80.5	72.5	70.1	5.97	2.45	2.43	SB	VOC	7	22.99	30
2108	24216	79.5	70.4	53.2	5.68	2.31	2.45	SB	VOC	7	20.44	23
2109	24207	78.6	68.2	62.7	6.21	1.71	3.63	LS	VOC	3	17.86	24
2110	24214	76.6	69.1	55.1	5.6	2.31	2.42	SB	VOC	3	17.36	47

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 7.18: Composition of entries in Initial Variety Trial-Medium (Hills), IVT –M (H), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
1st year of testing				
2201	25159	HPR 2683	HIM 1/ IR 53915	LS
2202	25160	UPR 3947-23-2-3	UPR 2791-18-1-1/ UPRI 2007-11	LS
2203	25161	HPR 2755	HS/T23// IR 66295	MS
2204	25162	VL 31929	VLD 85/ VL 30424	LS
2205	**Vivekdhan 62 (NC)**			
2206	25163	HPR 2692	HS/T23//IR 67011	LS
2207	25164	UPRI 2013-5	IR 72870-120-1-2-2/ IR 72870-19-2-2-3	LS
2208	25165	UPR 3911-4-1-2	Pantdhan 11/ UPRI 2006-4	LS
2209	25166	VL31897	VLD 86/VL 30424	LB
2210	**VL Dhan 65 (ZC for North & South) , RC Maniphou 11 (ZC for North East)**			
2211	25167	HPR 2751	HS/T23// IR 66295	**LS**
2212	25168	VL 31930	VLD 85/ VL 30424	LS
2213	**Local Check**			

Table 7.19: Grain yield (kg/ha) of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Low													
		MN		ME		ME		ME (1)		H.P.		H.P.		H.P. (1)	
		@LPP		@UMM-ICAR		@UMM-ICAR		Mean		MLN		@DUK		Mean	
2201	25159	2044	2251	2251	9	2787	5 4%	2787	5 4%	3886	5	2879	3 *	3886	5
2202	25160	5060	2749	2749	2	3251	2 21%	3251	2 21%	2790		2514	7	2790	
2203	25161	4683	2096	2096		2122		2122		3229		2831	6 *	3229	
2204	25162	2321	2315	2315	6	2384	9	2384	9	3738	7	2231		3738	7
2205	Vivekdhan 62	2024	1952	1952		2057		2057		4201	2	2149		4201	2
2206	25163	4563	2262	2262	7	2471	8	2471	8	3112		2989	2 *	3112	
2207	25164	5714	2669	2669	3	3208	3 20%	3208	3 20%	3905	4	2844	5 *	3905	4
2208	25165	3115	2426	2426	5	2866	4 7%	2866	4 7%	3242	9	3140	1 *	3242	9
2209	25166	2976	2861	2861	1	3862	1* 44%	3862	1* 44%	3938	3	999		3938	3
2210	Zonal Check	5675	2576	2576	4	2683	6	2683	6	3864	6	2405	8	3864	6
2211	25167	754	2215	2215		2342		2342		3176		2879	4 *	3176	
2212	25168	2718	2016	2016		2010		2010		4254	1	2121		4254	1..1%
2213	Local Check	3115	2258	2258	8	2526	7	2526	7	3661	8	2328	9	3661	8
	Exp Mean	**3443**	**2357**	**2357**		**2659**		**2659**		**3615**		**2485**		**3615**	
	C.D. 5%	1707	437	437		863		1104		353		267		345	
	C.V.%	29.41	10.99	10.99		19.26		24.70		5.80		6.37		5.68	
	D/S	23/06		15-May		15-May				10/06		13/06			
	D/P	30/07		15-Jun		15-Jun				22/07		21/07			
	Local Check	RCM -9		shahsarang		shahsarang				HPR 1156		HKR 126			

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.19 (Contd.): Grain yield (kg/ha) of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Low (2) Mean		Southern Low		Northern Medium				Southern Medium	
				KA		UT		J&K		TN	
				SRS		ALM		@RJR		GDL	
2201	25159	3336	3 2%	4778	6	4664	7	1867	6	3947	6
2202	25160	3020		5314	2 1%	2743		2233	2 *	4072	4 3%
2203	25161	2675		5413	1 3%	4870	3 2%	1800	8	4265	2 8%
2204	25162	3061	8	3582		4835	4 1%	1800	9	2826	
2205	Vivekdhan 62	3129	6	2448		4595	9	1233		3848	9
2206	25163	2791		3635	9	4630	8	2167	3	2826	
2207	25164	3557	2 9%	4989	4	4938	2 3%	1900	5	3920	8
2208	25165	3054	9	4832	5	4355		1567		4098	3 4%
2209	25166	3900	1 * 19%	4571	7	5672	1 * 19%	1800		3367	
2210	Zonal Check	3273	4	3251		4777	6	1500		3193	
2211	25167	2759		4140	8	4355		2433	1 *	4583	1 * 16%
2212	25168	3132	5	2822		4787	5	2067	4	3932	7
2213	Local Check	3094	7	5238	3	4527		1867	7	3958	5
	Exp Mean	**3137**		**4232**		**4596**		**1864**		**3757**	
	C.D. 5%	550		505		813		323		474	
	C.V.%	15.13		7.09		10.50		10.28		7.49	
	D/S			03/07		21/05		03/07		07/07	
	D/P			31/07		30/06		29/07		31/07	
	Local Check					VLD 61		K 39		CO(R)50	

Table 7.19 (Contd.): Grain yield (kg/ha) of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Medium (2) Mean			High J&K KHD@		Overall (5) Mean			Days to 50% Flowering	Plant Height (cm)	Panicles/ m²
2201	25159	4305	6	1%	2190		4012	3	1%	100	79	265
2202	25160	3408			2250		3634	8		106	100	251
2203	25161	4567	1	8%	2350	9	3980	5		103	87	296
2204	25162	3831			4200	3	3473			93	108	270
2205	Vivekdhan 62	4222	9		1870		3430			100	115	252
2206	25163	3728			4040	4	3335			98	96	268
2207	25164	4429	4	4%	1315		4192	2	5%	105	88	279
2208	25165	4227	8		2810	6	3879	6		103	116	257
2209	25166	4520	2	7%	2770	7	4282	1 *	8%	102	115	272
2210	Zonal Check	3985			3250	5	3554			101	96	278
2211	25167	4469	3	5%	2760	8	3719	7		100	96	279
2212	25168	4360	5	3%	6265	1 *	3561	9		92	108	270
2213	Local Check	4243	7		5670	2	3982	4		99	97	244
	Exp Mean	**4176**			**3211**		**3772**			**100**	**100**	**268**
	C.D. 5%	404			96		292			1		16
	C.V.%	8.35			1.77		10.70			1.30		11.59
	D/S				21/05							
	D/P				20/06							
	Local Check											

Table 7.20: Days to 50%flowering of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Low							Region Low (5) Mean	Low Southern KA
		MAN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2201	25159	79	120	125	123	105	96	101	105	95
2202	25160	101	116	123	119	116	102	109	112	101
2203	25161	95	119	127	123	110	96	103	110	94
2204	25162	79	112	118	115	100	91	96	100	83
2205	Vivekdhan 62 (NC)	93	114	120	117	105	98	102	106	92
2206	25163	89	116	123	120	109	96	103	107	91
2207	25164	100	119	126	123	105	103	104	111	96
2208	25165	96	108	116	112	114	101	108	107	100
2209	25166	93	114	119	117	107	99	103	106	93
2210	ZC	102	114	123	119	106	99	102	109	84
2211	25167	75	116	127	122	108	97	102	105	94
2212	25168	78	110	115	112	97	95	96	99	81
2213	Local Check	96	112	118	115	101	108	105	107	96
	Exp Mean	**90**	**115**	**122**	**118**	**107**	**99**	**103**	**106**	**92**
	C.D. 5%	3	2	2	1	3	2	2	1	0
	C.V.%	2.23	0.97	0.90	0.94	1.64	1.02	1.33	1.34	0.26

Table 7.20 (Contd.): Days to 50%flowering of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Medium			Medium (3)	High	Overall (10)
		UT	J&K	Medium		J&K	
		ALM	RJR	GDL	Mean	KHD	Mean
2201	25159	100	65	95	87	117	100
2202	25160	113	69	99	93	120	106
2203	25161	107	68	95	90	119	103
2204	25162	97	59	90	82	101	93
2205	Vivekdhan 62 (NC)	106	66	90	87	116	100
2206	25163	107	60	89	85	104	98
2207	25164	113	71	96	93	120	105
2208	25165	106	73	99	93	116	103
2209	25166	105	73	97	92	119	102
2210	ZC	105	63	86	85	123	101
2211	25167	106	67	93	89	116	100
2212	25168	96	63	90	83	97	92
2213	Local Check	107	62	102	90	91	99
	Exp Mean	**105**	**66**	**94**	**88**	**112**	**100**
	C.D. 5%	1	2	3	1	2	1
		0.51	2.14	1.86	1.53	1.02	1.30

Table 7.21: Plant Height (cm) of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Southern Low
		MAN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		KA
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2201	25159	101	78	77	77	73	96	85	85	82
2202	25160	131	120	114	117	89	102	95	111	97
2203	25161	120	81	74	78	74	96	85	89	92
2204	25162	146	104	98	101	108	91	100	110	113
2205	Vivekdhan 62	136	127	116	122	109	98	104	117	129
2206	25163	137	82	85	83	94	96	95	99	103
2207	25164	119	81	81	81	69	103	86	91	86
2208	25165	148	123	119	121	110	101	106	120	120
2209	25166	140	128	120	124	117	99	108	121	128
2210	Zonal Check	103	83	75	79	100	99	99	92	107
2211	25167	130	88	84	86	94	97	96	99	100
2212	25168	133	105	105	105	108	95	102	109	109
2213	Local Check	105	87	84	85	106	108	107	98	102
	Exp Mean	**127**	**99**	**95**	**97**	**96**	**99**	**97**	**103**	**105**

Table 7.21 (Contd.): Plant Height (cm) of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium		Southern Medium	Medium (3) Mean	High	Overall (10) Mean
		UT	J&K	TN		J&K	
		ALM	RJR	GDL		KHD	
2201	25159	93	70	67	76	58	79
2202	25160	113	80	96	97	61	100
2203	25161	98	83	82	87	69	87
2204	25162	126	90	93	103	111	108
2205	Vivekdhan 62	129	84	120	111	100	115
2206	25163	116	69	85	90	93	96
2207	25164	95	67	79	80	100	88
2208	25165	132	84	117	111	102	116
2209	25166	128	87	106	107	94	115
2210	Zonal Check	120	82	91	98	101	96
2211	25167	108	84	88	93	83	96
2212	25168	118	81	113	104	111	108
2213	Local Check	124	52	86	87	114	97
	Exp Mean	**115**	**78**		**96**	**92**	**100**

Table 7.22: Panicles/m^2 of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Southern Low
		MN	ME	ME	ME (2)	H.P.	H.P.	H.P. (2)		KA
		LPP	UMM-ICAR	UMM-CAU	Mean	MLN	DUK	Mean		SRS
2201	25159	147	255	259	257	242	359	300	252	287
2202	25160	133	242	233	238	232	300	266	228	251
2203	25161	222	269	251	260	245	379	312	273	320
2204	25162	186	234	236	235	227	375	301	251	271
2205	Vivekdhan 62	146	263	245	254	242	368	305	253	238
2206	25163	190	279	288	284	227	325	276	262	297
2207	25164	181	275	252	264	245	328	287	256	284
2208	25165	156	274	250	262	233	215	224	226	264
2209	25166	172	302	285	294	218	297	258	255	225
2210	Zonal Check	168	280	272	276	240	362	301	264	284
2211	25167	171	275	284	280	225	254	239	242	317
2212	25168	160	247	247	247	225	236	230	223	294
2213	Local Check	168	186	183	185	267	218	242	204	231
	Exp Mean	**169**	**260**	**253**	**256**	**236**	**309**	**272**	**245**	**274**
	C.D. 5%	37	27	55	31	35	31	22	17	39
	C.V.%	13.03	6.26	12.80	10.55	8.92	5.99	7.07	9.66	8.41

Table 7.22 (Contd.): Panicles/m^2 of entries in IVT-M (H), Kharif 2015

Entry No.	IET No.	Northern Medium		Southern Medium	Medium (3) Mean	High	Overall (10) Mean
		UT	J&K	TN		J&K	
		ALM	RJR	GDL		KHD	
2201	25159	238	234	258	244	366	265
2202	25160	213	320	233	255	353	251
2203	25161	272	272	350	298	376	296
2204	25162	231	272	283	262	384	270
2205	Vivekdhan 62	282	122	267	224	350	252
2206	25163	280	182	275	246	335	268
2207	25164	259	236	375	290	355	279
2208	25165	262	201	333	265	380	257
2209	25166	274	215	375	288	353	272
2210	Zonal Check	288	179	367	278	338	278
2211	25167	254	353	308	305	345	279
2212	25168	248	289	417	318	340	270
2213	Local Check	259	322	275	285	335	244
	Exp Mean	**259**	**246**	**317**	**274**	**355**	**268**
	C.D. 5%	20	52	113	40	43	16
	C.V.%	4.53	12.59	21.21	15.47	7.22	11.59

ADVANCED VARIETY TRIAL 1-UPLAND (HILLS) AVT 1-U (H)

Locations : 11 **Entries: 9**
Checks : Checks: Sukaradhan 1 (NC), Vivekdhan 154 (Northern and Southern), Bhalum 1 (North East) and local check **Table: 7.23**

The Advanced Varietal Trial-1 Upland Hills (AVT 1-U-H) consisting of nine entries involving checks *viz*., Sukaradhan 1 (National Check), Vivekdhan 154 (Zonal check for North and South), Bhalum 1 (zonal check for North East) and local checks was conducted at 11 locations spanning across the states of Manipur, Sikkim, Meghalaya, Uttarakhand and Himachal Pradesh. The trials was conducted under low elevated hill (<950msl) at locations Malan, Umiam (Barapani-ICAR), Barapani (CAU), Imphal (CAU), Lamphalpet, Majhera, Daulakhan; under medium elevated (951-1500msl) locations Almora, Bageshwar, and Gangtok. The experiment failed at Majhera and Ranichouri while the data was not received from Imphal and Dhaulakuan. Severe moisture stress was observed at flowering at Almora and Bageswar. The data received from six locations was used for analysis to evaluate the performance of entries. The overall mean of grain yield was ranged from 1520 kg/ha (IET 23548) to 2180 kg/ha (IET 24229). The CV% at different locations ranged from 7.64%

(Malan) to 53.80% (Almora). The mean data of Almora location was not included in overall mean due to high CV (53.80%). Days to 50% flowering was ranged from 88 days (Zonal check) to 109 days (IET 23544) while number of panicles/m^2 was ranged from 182 (Zonal check) to 214 (IET 24220). Among the checks, local check recorded highest yield (1799 kg/ha) followed by zonal check (1761 kg/ha) and national check (1752 kg/ha).

The performance of test entries under different elevations is described below.

Low elevated hills:

Performance of the entries in the trials under low elevated hills was assessed based on data received from four locations. The mean yield of low elevated hills trial ranged from 1886 kg/ha (IET 23548) to 2469 kg/ha (IET 24229); days to 50% flowering ranged from 88 (Zonal check) to 109 (IET 23544); number of panicles/m^2 was ranged from 182 (Zonal check) to 214 (IET 24220). Among checks, local checks registered highest yield (2278 kg/ha) followed by national check (2153 kg/ha) and zonal check (2115 kg/ha) (Tables 7.24, 7.25, 7.26 and 7.27). The entry IET 24229 (2469 kg/ha) IET 23544 (2395 kg/ha) outperformed the best check (local check; 2278 kg/ha) in terms of yield superiority of 8% and 5% respectively.

Performance of promising entries at low elevated hills in Advanced Varietal Trial 1- Upland Hills during Kharif 2015 (AVT 1-U-H)

Rank	IET No./ Designation/ Cross combination	Grain yield (kg/ha)/ Days to 50% flowering/ Grain type	% yield superiority over best check
1	IET 24229 HPR 2779 VL221/HPU2216/HPR1149	2469 101 LS	8%
2	IET 23544 Tamphaphou (CAU R1) Leimaphou/BR-1	2395 111 LB	5%
NC	Sukaradhan-1	2153 87	
ZC	Vivekdhan 154 Bhalum 1	2115 90	
LC	Local Check	2278 94	

IET 24229, a derivative of the cross VL 221/HPU 2216/HPR 1149 possessing long slender with 101 days to 50% flowering ranked first with mean yield of 2469 kg/ha. It registered 8% yield advantage over the best check (local check). The entry ranked second at Lamphelpat (2868 kg/ha); third at Umiam-ICAR (2560 kg/ha) and Umiam-CAU (2640 kg/ha) with significant yield superiority over all the three checks. It has moderate HRR (58%), intermediate AC(20.35%), hard GC(22mm) and low ASV(4) (Table 7.28).

The second ranking entry IET 23544, a derivative of cross Leimaphou/BR-1 possessing long bold grain with 111 days to 50% to flowering, ranked second with mean yield of 2395 kg/ha. It registered 5% yield superiority over best check (local check). The entry ranked first at Lamphelpat (3472 kg/ha) and Umium-CAU (2922 kg/ha) while ranked second at Umiam-ICAR (2789 kg/ha) significant yield superiority over all the three checks. It has high HRR(61%), low amylase (19.38%) and high GC(56mm) with high ASV (7).

Medium elevated hills:

Under medium elevated hills condition, trial was conducted at three locations *viz*., Gangtok, Almora and Bageswar. The data of Almora was not included in overall mean due to high CV (53.80) which might be due to severe water stress during flowering stage. Mean grain yield was ranged from 682 kg/ha (IET 24220) to 1694 kg/ha (IET 23539); days to 50% flowering ranged from 86 days (IET 23548 and zonal check) to 104 days (IET 23544) and number of panicles/m^2 was ranged from 177 (IET zonal check) to 202 (IET 24220). Among the checks, zonal check recorded maximum yield (1054 kg/ha) followed by national check (950 kg/ha) and local check (839 kg/ha). Analysis of test entries that IET 23539 and IET 23544 which yielded superior at Gangtok but failed at other locations but ranked ranked 1st and 2nd on mean. After analysis at one location only IET 23544 could show 19.5 yield advantage over best check.

Performance of promising entries at medium elevated hills in Advanced Varietal Trial 1-Upland Hills during Kharif 2015 (AVT 1-U-H)

Rank	IET No./ Designation/ Cross combination	Grain yield (kg/ha)/ Days to 50% flowering/ Grain type	% yield superiority over best check
1	IET 23539 HPR2774 VL221/RP2421//IR53915	1694 95 LS	19.5
NC	Sukaradhan-1	1417 93	
ZC	Vivekdhan 154 Bhalum 1	1028 86	
LC	Local Check	722 90	

IET 23539, a derivative of VL221/RP2421//IR53915 possessing long slender grain with 95 days to 50% flowering ranked first with grain yield of 1694 kg/ha at Gangtok it showed 19.5% higher yield than than the best check (Sukaradhan 1). However, data of IET 23539 could not survive under drought other location.

Considering the yield superiority of entries over best check, two entry IET 24229 (low hills) and IET 23539 (medium hills) were promoted.

List of promising entries in AVT-1-U-H qualified for 3rd year for testing

S No.	**Entries**	**Yield advantage over best check**	**Remarks**
Low hills - Best check- local check			
1	IET 24229	8%	Promoted
Medium hills – Best check-zonal check			
2	IET 23539	61%	Promoted

Three year performance of entries in upland hills

IET No./ Designation/ Cross combination	Year	Mean wise performance		State wise performance				
		Mean yield adv% over best check		Low elevation			Medium elevation	
		Low elevation	Medium elevation	HP (MLN)	MN (LPP)	ME (BRP/ USG)	UT (ALM/ BSG)	SKM (GTK)
IET 23544 Tamphaphou (CAU R1) Leimaphou/ BR-1	**2013 IVT-U(H)**	17.03	-	-	46.85	23.73	-	-
	2014 AVT-1-U(H)	20.80	14.84	-	5.8	28.16	34.72	11.79
	2015 AVT-2-U(H)	5	11	-	42	11	-	-

The entry IET 23544 derived from cross Leimaphou/BR-1 was tested for three years under low and medium elevations hills in different states. It has performed consistently superior under low elevation in the states of Manipur and Meghalaya; Hence, identified as promising for both the states.

INITIAL VARIETY TRIAL –UPLAND (HILLS) IVT-U (H)

Locations : 11 **Entries: 9**
Checks : Checks: Sukaradhan 1 (NC), Vivekdhan 154 (Northern and Southern), Bhalum 1 (North East) and local check **Table: 7.29**

The initial varietal trial-upland hills constituted with nine entries including three checks *viz*., Sukaradhan 1 (National Check), Vivekdhan 154 (Regional Check for Northern and Southern), Bhalum 1 (regional check for North East) and local checks was conducted at 11 locations spanning across the hill states of Manipur, Sikkim, Meghalaya, Uttarakhand and Himachal Pradesh. The trials was conducted at low elevated hill (<950msl) locations viz., Wangbal, Malan, Umiam (Barapani-ICAR), Barapani (CAU), Lamphalpet, Imphaul (CAU), Majhera, Daulakhan; medium elevated (951-1500msl) locations viz., Almora, Bageshwar, and Gangtok. Sever moisture stress was observed during flowering and grain filling stage of crop at Almora, Bageshwar and Wangbal while drought like situation was observed during flowering and maturity period at Wangbal. The data from Imphal (CAU), Majhera, Ranichouri, and Daulakhan was not received. Although data was received from eight locations, but the Wangbal and Almora were not included in overall mean due to high CV(53.94%) at Almora location and low CV (1.45%) at Wangbal location. In over mean, grain yield was ranged from 1047 kg/ha (IET 25169) to 1698 kg/ha (zonal check); days to 50% flowering was ranged from 87 (zonal check) to 94 (IET 25173); number of panicles/m^2 was ranged from 184 (zonal check) to 221(national check). Among checks, zonal check (1698 kg/ha) registered highest yield followed by local check (1509 kg/ha) and national

check (1293 kg/ha) (Tables 7.30, 7.31, 7.32 and 7.33). Performance of entries under different elevations is discussed below.

Under low elevation, no entry found superior to the best check (local check). Under medium elevation, IET 25170 recorded required yield advantage over superior check for promotion.

Medium elevation hills

The trial was conducted at two locations viz., Gangtok, Almora and Bargeswar. Due to high CV (53.94%), at Almora location, the data was considered for overall mean, therefore mean data of remaining two locations were used for analysis of performance of entries. The grain yield was ranged from 814 kg/ha (IET25174) to 1426 kg/ha (IET 25170); days to 50% flowering was ranged from 84 days (zonal check) to 96 days (IET 25173); number of panicles/m^2 was ranged from 152 (IET 25174) to 217 (IET 25170). Among checks, zonal checks registered highest grain yield (1236 kg/ha) followed by local check (1144 kg/ha) and national check (927 kg/ha).

IET 25170 (HPR 2703) a derivative of cross SKAU383/IR70181with medium bold grain and 88 days to 50% flowering ranked first and recorded grain yield of 1426 kg/ha. It recorded 15% yield advantage over best check (zonal check). It yielded 2028 kg/ha at Gangtok and 824 kg/ha at Bargeswar. At Gangtok it outperformed all three checks while at Bargeswar, it yielded 4th with yield of 824 kg/ha.

Performance of promising entries at medium elevated hills in Initial Varietal Trial-Upland Hills during Kharif 2015 (IVT -U-H)

Rank	IET No./ Designation/ Cross combination	Grain yield (kg/ha)/ Days to 50% flowering/ Grain type	% yield superiority over best check
1	IET 25170 HPR 2703 SKAU383/IR70181	1426 88 MB	15%
	Sukaradhan-1 (NC)	927 87	
	Vivekdhan 154/ Bhalum 1 (ZC)	1236 84	
	Local Check (LC)	1144 89	

On the basis of performance of entries over best check, IET 25170 is qualified for second of testing. It outperformed all three checks at Gangtok and registered 15% yield advantage over best check in overall mean data, hence promoted to AVT1-U-(H).

Table 7.23: Composition of entries in Advance Variety Trial 1 -Upland Hills, AVT 1- U (H) Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
2nd year of testing				
2301	24220	HPR 2778	VL 221/RP 2421//IR 53915	LB
2302	**Sukaradhan 1(NC)**			
2303	23539 (Repeat)	HPR 2774	VL 221/RP2421// IR 53915	LS
2304	23542 (Repeat)	HPR 2709	VL 221/JD 3	SB
3rd year of testing				
2305	23544	Tamphaphou (CAU R1)	Leimaphou / BR-1	LB
2306	**Vivekdhan 154 (ZC for North & South), Bhalum 1 (ZC for North East)**			
2nd year of testing				
2307	24229	HPR-2779	VL 221/HPU 2216//HPR 1149	LS
2308	23548 (Repeat)	VL 8726	VL 6394 /PSB RC-4	LB
2309	**Local Check**			

Table 7.24: Grain yield (kg/ha) of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	Northern Low										Northern Low (4) Mean		Northern Medium	
		MAN		H.P.		ME		ME		ME (2)				SK	
		LPP		MLN		UMM-ICAR		UMM-CAU		Mean				GTK	
2301	24220	1872	6	1862	3	2793	1	2879	2 10%	2836	2 10%	2351	3 3%	1222	4
2302	Sukaradhan 1	2098	4	1945	1	2250	7	2319	7	2284	7	2153	5	1417	2
2303	23539	1796	7	1774	5	2227	8	2296	8	2262	8	2023	7	1694	1 19.5%
2304	23542	1917	5	1922	2	1947	9	2008	9	1977	9	1949	8	1417	3
2305	23544	3472	1 42%	398	9	2789	2	2922	1 12%	2855	1 11%	2395	2 5%	1167	5
2306	Zonal Check	1615	9	1706	6	2531	4	2609	5	2570	4	2115	6	1028	6
2307	24229	2868	2 17%	1806	4	2560	3	2640	3 1%	2600	3 1%	2469	1 8%	1028	7
2308	23548	1661	8	1084	8	2364	6	2437	6	2400	6	1886	9	806	8
2309	Local Check	2446	3	1659	7	2398	5	2610	4	2504	5	2278	4	722	9
	Exp Mean	**2194**		**1573**		**2429**		**2524**		**2477**		**2180**		**1167**	
	C.D. 5%	1312		208		419		515		316		322			
	C.V.%	34.54		7.64		9.96		11.79		10.90		18.17			
	D/S	29/05		22/06		15/05		03/06						07/07	
	Local Check	RCM 5		VL 221		Bhalum 3		Bhalum 3							

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.24(Contd.): Grain yield (kg/ha) of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	Northern Medium						Northern Medium (2) Mean		Overall (6) Mean		DFF	PH (cm)	Pan/\ m²
		UT ALM@		UT BGS		UT (1) Mean								
2301	24220			142	6	142	6	682	9 *	1795	5 *	93	98	214
2302	Sukaradhan 1	20	4	483	4	483	4	950	5 *	1752	7 *	90	90	206
2303	23539							1694	1 *	1958	3 * 9%	99	100	203
2304	23542			265	5	265	5	841	6 *	1579	8 *	93	92	206
2305	23544							1167	2 *	2149	2 * 20%	109	81	207
2306	Zonal Check	105	2	1080	1	1080	1	1054	3 *	1761	6 *	88	90	182
2307	24229							1028	4 *	2180	1 * 21%	101	89	211
2308	23548	144	1	767	3	767	3	786	8 *	1520	9 *	90	99	186
2309	Local ©	87	3	956	2	956	2	839	7 *	1799	4 *	92	84	191
	Exp Mean	**89**		**616**		**616**		**946**		**1817**		**94**	**91**	**199**
	C.D. 5%	96		357		279						1		12
	C.V.%	53.80		31.88		25.25						1.10		10.17
	D/S	04/06		05/06										
	Local Check	VLD 221		VLD 221										

DFF: Days to 50% flowering; PH: Plant Height (cm); Pan/m²: Panicles/m²

Table 7.25: Days to 50% flowering of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	Northern Low					Northern Low (4) Mean	Northern Medium				Region Medium (3) Mean	Overall (7) Mean
		MN	H.P.	ME	ME	ME (2)		SK	UT	UT	UT (2)		
		LPP	MLN	UMM-ICAR	UMM-CAU	Mean		GTK	ALM	BGS	Mean		
2301	24220	97	87	93	94	94	93	93		95	95	94	93
2302	Sukaradhan 1	94	81	87	87	87	87	89	97	92	95	93	90
2303	23539	108	99	97	98	98	101	95				95	99
2304	23542	103	86	94	96	95	95	84		94	94	89	93
2305	23544	115	113	105	110	108	111	104				104	109
2306	Zonal Check	104	72	91	93	92	90	88	85	85	85	86	88
2307	24229	104	99	100	103	102	101	101				101	101
2308	23548	103	86	91	91	91	93	80	87	91	89	86	90
2309	Local Check	103	69	100	102	101	94	96	90	84	87	90	92
	Exp Mean	**104**	**88**	**95**	**97**	**96**	**96**	**92**	**90**	**90**	**90**	**91**	**94**
	C.D. 5%	1	2	2	2	2	1	0	1	1	1	1	1
	C.V.%	0.45	1.54	1.38	1.11	1.42	1.19	0.00	0.49	0.75	0.80	0.67	1.10

Table 7.26: Plant Height (cm) of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	Northern Low					Northern Low (4) Mean	Northern Medium				Northern Medium (3) Mean	Overall (7) Mean
		MN	H.P.	ME	ME	ME (2)		SK	UT	UT	UT (2)		
		LPP	MLN	UMM-ICAR	UMM-CAU	Mean		GTK	ALM	BGS	Mean		
2301	24220	106	107	109	111	110	108	75		80	80	77	98
2302	Sukaradhan 1	106	98	103	105	104	103	70	71	79	75	73	90
2303	23539	106	103	107	107	107	106	75				75	100
2304	23542	111	96	96	99	97	100	66		85	85	75	92
2305	23544	99	101	80	76	78	89	50				50	81
2306	Zonal Check	113	94	101	99	100	102	66	70	89	79	75	90
2307	24229	101	89	95	95	95	95	64				64	89
2308	23548	110	106	102	105	104	106	81	87	98	93	89	99
2309	Local Check	103	83	95	94	95	94	81	59	71	65	70	84
	Exp Mean	**106**	**97**	**99**	**99**	**99**	**100**	**70**	**72**	**84**	**79**	**75**	**91**

Table 7.27: Panicles/m^2 of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	Northern Low					Northern Low (4) Mean	Medium				Region Medium (3) Mean	Overall (7) Mean
		MN	H.P.	ME	ME	ME (2)		SK	UT	UT	UT (2)		
		LPP	MLN	UMM-ICAR	UMM-CAU	Mean		GTK	ALM	BGS	Mean		
2301	24220	157	227	243	251	247	220	202		201	201	202	214
2302	Sukaradhan 1	147	235	226	234	230	211	179	223	197	210	199	206
2303	23539	143	252	212	219	216	207	186				186	203
2304	23542	115	255	240	248	244	215	186		193	193	190	206
2305	23544	168	232	218	225	222	211	190				190	207
2306	Zonal Check	127	212	198	205	202	185	135	204	193	199	177	182
2307	24229	181	278	202	198	200	215	196				196	211
2308	23548	111	205	213	220	216	187	174	199	177	188	183	186
2309	Local Check	128	202	210	197	204	184	186	210	207	209	201	191
	Exp Mean	**142**	**233**	**218**	**222**	**220**	**204**	**181**	**209**	**195**	**201**	**191**	**199**
	C.D. 5%	34	34	39	46	31	20	0	20	6		5	12
	C.V.%	13.95	8.48	10.34	11.86	12.07	12.29	0.00	4.76	1.63		2.64	10.17

Table 7.28: Grain quality characteristics of entries in AVT 1-U (H), Kharif 2015

Entry No.	IET No.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	A.C	G.C
2301	IET 24220	77.7	68.9	52.7	6.94	2.47	2.8	LB	VOC	4	24.28	24
2302	Sukaradhan-1	78.7	66.8	58.2	6.28	2.02	3.1	LS	A	4	24.61	40
2303	23539	77.2	67.9	58.3	7.09	2.02	3.5	LS	VOC	4	26.01	22
2304	23542	78.3	69.3	58.9	5.54	2.29	2.41	SB	VOC	4	24.4	22
2305	23544	78.9	69.3	61	6.22	2.33	2.66	LB	VOC	7	19.38	56
2306	Vivekdhan-154	77.8	65.9	31.1	6.44	2.36	2.72	LB	VOC	4	25.87	42
2307	24229	77.2	67.8	58.1	7.28	1.99	3.65	LS	VOC	4	20.35	22
2308	23548	78	69.1	60.2	6.61	2.23	2.96	LB	VOC	7	20.38	67

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 7.29: Composition of entries in Initial Variety Trial -Upland (Hills) IVT-U (H), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
1st year of testing				
2401	25169	VL 8989	SKAU383/IR 70181	SB
2402	25170	HPR 2703	RP 2421/ VL 221	MB
2403	**Sukaradhan 1 (NC)**			
2404	25171	VL 8992	SKAU383/IR 70181	SB
2405	**Vivek Dhan 154 (ZC for North & South), Bhalum-1 (ZC for North East)**			
2406	25172	HPR 2704	RP 2421/ VL 221	MB
2407	25173	HPR 2708	VL 221/JD 3	MB
2408	**Local Check**			
2409	25174	VL 20006	HPR 2143/RP 3644	LS

Table 7.30: Grain yield (kg/ha) of entries in IVT-U (H), Kharif 2015

Entry No.	IET No.	Northern Low														Northern Low (4) Mean	
		MAN LPP		MAN @WBL		MAN (1) Mean		H.P. MLN		ME UMM-ICAR		ME UMM-CAU		ME (2) Mean			
2401	25169	1736	3	2827	8	1736	3	1523	8	529	9	545	9	537	9	1083	9
2402	25170	1449	8	4700	2	1449	8	1505	9	1259	7	1298	7	1279	7	1378	8
2403	Sukaradhan1	1646	6	3852	5	1646	6	1661	7	1279	6	1319	6	1299	6	1476	7
2404	25171	1706	4	2679	9	1706	4	2032	5	1889	2	1948	2 6%	1919	2 6%	1894	3
2405	Zonal	1993	1	4539	3	1993	1	2108	4	1781	3	1836	3	1809	3	1930	2
2406	25172	1419	9	2939	7	1419	9	2115	3	1682	4	1734	4	1708	4	1737	4
2407	25173	1917	2	3609	6	1917	2	1737	6	2156	1	2222	1 21%	2189	1 21%	2008	1 4%
2408	Local ©	1507	7	5084	1	1507	7	2148	2	1567	5	1547	5	1557	5	1692	5
2409	25174	1676	5	4402	4	1676	5	2316	1 8%	1132	8	1167	8	1150	8	1573	6
	Exp Mean	**1672**		**3848**		**1672**		**1905**		**1475**		**1513**		**1494**		**1641**	
	C.D. 5%	662		97		686		387		389		820		424		270	
	C.V.%	22.88		1.45		23.83		11.75		15.25		31.31		24.23		20.19	
	D/S	02/06		08/07				23/06		15/05		03/06					
	D/P			06/08													
	Local Check	RCM 5		Sanaphou				vl 221		Bhalum 3		Bhalum 3					

* Superior to Best Check % Superior over Best Check @ not included in means

Table 7.30 (Contd.): Grain yield (kg/ha) of entries in IVT-U (H), Kharif 2015

Entry No.	IET No.	Northern Medium								Northern Medium (2) Mean		Overall (6) Mean		DFF	PH (cm)	Pan/ m²
		Medium GTK		UT @ALM		UT BGS		UT (1) Mean								
2401	25169	1361	4	273	6	587	5	587	5	974	6 *	1047	9 *	88	102	197
2402	25170	2028	1	540	2	824	4	824	4	1426	1 * 15%	1394	6 *	89	92	213
2403	Sukaradhan 1	1361	5	124	7	492	7	492	7	927	7 *	1293	8 *	89	92	221
2404	25171	1250	7	280	5	994	3	994	3	1122	4 *	1637	3 *	88	99	196
2405	Zonal	1250	8	397	3	1222	2	1222	2	1236	2 *	1698	1 *	87	93	184
2406	25172	1694	2	293	4	511	6	511	6	1103	5 *	1526	4 *	90	88	210
2407	25173	1611	3	33	9	208	9	208	9	910	8 *	1642	2 *	94	88	206
2408	Local ©	1028	9	697	1	1259	1	1259	1	1144	3 *	1509	5 *	89	87	195
2409	25174	1306	6	111	8	322	8	322	8	814	9 *	1320	7 *	88	97	166
	Exp Mean	**1432**		**305**		**713**		**713**		**1073**		**1452**		**89**	**93**	**199**
	C.D. 5%			285		351		324						1		
	C.V.%			53.94		28.40		26.37						2.68		
	D/S	07/07		05/06		05/06										
	Local Check			VLD 221		VLD 221										

DFF: Days to 50% flowering; PH: Plant Height (cm); Pan/m²: Panicles/m²

Table 7.31: Days to 50% flowering of entries in IVT-U (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Northern Medium				Northern Medium (3) Mean	Overall (8) Mean
		MN LPP	MN WBL	MN (2) Mean	H.P MLN	ME UMM-ICAR	ME UMM-CAU	ME (2) Mean		SK GTK	UT ALM	UT BGS	UT (2) Mean		
2401	25169	92	88	90	84	93	94	94	90	73	92	92	92	85	88
2402	25170	90	86	88	84	91	92	92	89	81	89	94	92	88	89
2403	Sukaradhan 1	89	89	89	81	94	95	95	90	82	92	86	89	87	89
2404	25171	89	86	88	84	91	92	92	89	77	90	92	91	86	88
2405	Zonal	94	90	92	69	94	94	94	88	87	80	86	83	84	87
2406	25172	90	90	90	84	93	94	94	90	86	89	92	91	89	90
2407	25173	91	87	89	93	96	97	97	93	84	109	94	102	96	94
2408	Local ©	99	77	88	69	99	102	101	89	94	88	84	86	89	89
2409	25174	90	74	82	83	95	96	96	88	83	92	91	92	89	88
	Exp Mean	**92**	**85**	**88**	**81**	**94**	**95**	**95**	**90**	**83**	**91**	**90**	**91**	**88**	**89**
	C.D. 5%	2	7	3	2	6	6	4	2	0	4	1	1	1	1
	C.V.%	1.01	4.55	3.17	1.59	3.84	3.67	3.51	3.20	0.00	2.28	0.70	0.97	1.41	2.68

Table 7.32: Plant Height (cm) of entries in IVT-U (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Northern Medium				Northern Medium (3) Mean	Overall (8) Mean
		MN LPP	MN WBL	MN (2) Mean	H.P MLN	ME UMM-ICAR	ME UMM-CAU	ME (2) Mean		SK GTK	UT ALM	UT BGS	UT (2) Mean		
2401	25169	113	120	117	97	114	124	119	114	82	83	86	85	84	102
2402	25170	105	105	105	85	106	111	108	102	66	74	80	77	74	92
2403	Sukaradhan 1	108	111	110	93	103	112	107	105	68	56	82	69	69	92
2404	25171	113	116	114	97	99	101	100	105	84	74	106	90	88	99
2405	Zonal Check	100	111	106	91	105	111	108	104	66	73	88	81	76	93
2406	25172	102	106	104	87	93	95	94	97	65	71	84	77	73	88
2407	25173	107	112	110	93	96	98	97	101	61	64	70	67	65	88
2408	Local Check	106	88	97	80	94	93	94	92	88	64	83	74	78	87
2409	25174	99	137	118	98	109	111	110	111	76	66	78	72	73	97
	Exp Mean	**106**	**112**	**109**	**91**	**102**	**106**	**104**	**103**	**73**	**69**	**84**	**77**	**76**	**93**

Table 7.33: Panicles/m² of entries in IVT-U (H), Kharif 2015

Entry No.	IET No.	Northern Low							Northern Low (5) Mean	Northern Medium				Northern Medium (3) Mean	Overall (8) Mean
		MN LPP	MN WBL	MN (2) Mean	H.P. MLN	ME UMM-ICAR	ME UMM-CAU	ME (2) Mean		SK GTK	UT ALM	UT BGS	UT (2) Mean		
2401	25169	143	258	201	195	210	233	222	208	129	220	189	205	179	197
2402	25170	133	289	211	225	202	205	203	211	195	227	228	228	217	213
2403	Sukaradhan 1	138	300	219	277	227	221	224	233	166	222	213	218	200	221
2404	25171	125	249	187	193	265	239	252	214	123	175	197	186	165	196
2405	Zonal Check	121	214	168	210	184	190	187	184	156	195	206	201	186	184
2406	25172	140	258	199	227	249	247	248	224	171	195	192	194	186	210
2407	25173	135	262	199	270	217	211	214	219	141	220	190	205	184	206
2408	Local Check	125	257	191	225	184	204	194	199	174	198	192	195	188	195
2409	25174	116	215	166	177	186	182	184	175	122	200	134	167	152	166
	Exp Mean	**131**	**256**	**193**	**222**	**214**	**215**	**214**	**207**	**153**	**206**	**194**	**200**	**184**	**199**
	C.D. 5%	30	8	14	71	26	86	41	23		22	42	21		
	C.V.%	13.10	1.79	6.34	18.44	6.93	23.02	16.45	14.99		6.24	12.38	9.16		

ADVANCED VARIETY TRIAL-2-AEROBIC (AVT 2-AEROB)

Locations : 18 **Entries : 12**
Checks **CR Dhan 201 (National), CR Dhan 202 (Zonal-North Western and Eastern), AAUDR 1 (Western), MAS 946-1 (Southern), PA6129 (Hybrid) and Local check** **Table: 8.1**

Advanced Variety Trial-2-Aerobic was constituted with eight test entries with four checks, viz., national, regional, hybrid and local checks. The trial was conducted at 18 locations under aerobic conditions spanning across 15 states in five zones (Zone – II, III, V, VI and VII). Most of the locations, sowing was carried out in the month of June (eight locations) and July (eight locations) except Coimbatore where sowing was done in the month of August. The experiment was conducted under aerobic condition with need based irrigation at all location except at Pusa and Bilaspur wherein seedlings were transplanted. At Hathwara drought occurred during advanced vegetative and reproductive stage. Severe drought was also experienced in Masodha. Experimental mean yield at Bubaneshwar (1373 kg/ha), Ranchi (776 kg/ha), Masodha (1573 kg/ha), Ambhikapur (2278 kg/ha), Navsari (2370 kg/ha) and Derol (790 kg/ha), were lower than acceptable experimental mean yield (2500 kg/ha) while CV at Cuttack (47.26 %), Ranchi (48.86%) and Hathwara (3.83 %) were not in acceptable range (more than 5% up to 35 %), therefore, data of these eight locations was not included in overall mean. The data from remaining 10 locations were used for analysis of performance of entries. Since seedlings were transplanted at Pusa and Bilaspur, the data of these two locations were not included in the overall mean and analysed separately. The overall mean yield of eight locations was ranged from 3333 kg/ha (IET 24035) to 5025 kg/ha (IET 24028) days to 50% flowering ranged from 83 days (zonal check) to 91 days (IET 24028 and 24008) while number of panicles/m^2 was ranged from 236 (IET 24036) to 390 (local check). The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m and plant height are presented in Tables 8.2, 8.3, 8.4 & 8.5.

On the basis of overall mean yield of eight locations, two entries namely, IET 24003 and IET 24028 and on regional basis four entries namely, IET 24010, 23997, 24008 and 24006 achieved required level of yield advantage over best check. The details of these entries are summarised in the table and discussed hereunder.

IET 24028 (KPH 272; Hybrid) possess medium slender took 91 days to 50% flowering and ranked 1st in overall mean with grain yield of 5025 kg/ha. It registered 44% higher yield over best check (national) and 7% over hybrid check on overall basis. It also surpassed the best check at LDN (4658 kg/ha; 2nd rank), SBR (4738 kg/ha; 3rd rank), PNT (4522 kg/ha; 1st rank), RPR (4081 kg/ha; 3rd rank), RDR (6615 kg/ha; 1st rank), CBT (8412 kg/ha; 1st rank), and MND (3543 kg/ha; 3rd rank) while it also outperformed over hybrid check at SBR (4738 kg/ha; 3rd rank), PNT (4522 kg/ha; 1st), RDR (6615 kg/ha; 1st) and CBT (8412 kg/ha; 1st). State wise it ranked first in Bihar (4630 kg/ha), Telangana (6615 kg/ha), and Tamil Nadu (8412 kg/ha); ranked second in Punjab (4658 kg/ha); third in Karnataka (3543 kg/ha) and fourth in Chhattisgarh (3854 kg/ha). It showed 11% yield advantage over hybrid check in zone III and VII. It recorded 65 % HRR with 4 ASV, intermediate AC (22.2) and soft GC (62) (Table 8.6).

IET 24003 (RCPR 8 -IR 84899-B-179-16-1-1-1) derived from cross IR 78877-208-B-1-1/IRRI 132 possessed long bold grain type with 85 days to 50% flowering, ranked 4th with over all mean grain yield of 4567 kg/ha and registered 31% higher yield than best check (national check). It also surpassed the best check at LDN (4550 kg/ha; 3rd rank), SBR 4601 kg/ha; 4th rank), PNT (4487 kg/ha; 2nd rank), RPR (3910 kg/ha; 4th rank), RDR (6206 kg/ha; 3rd rank) and MND (3481 kg/ha; 4th rank). State wise it ranked 2nd in Bihar and Chhattisgarh with 35% and 16% yield advantage over best check respectively and ranked 3rd in Telangana state with 36% yield advantage over best check. It showed 35, 16 and 20% yield advantage over best check in zone III, V and VII respectively. It registered 52.1 % HRR with 4 ASV, intermediate AC (21.47) and soft GC (66).

Overall performance of promising entries in Advanced Variety Trial-2-Aerobic, Kharif 2015

IET No.\ Designation\ Cross combination	**GY/ FD/ GT**	**Yield adv (%) over NC/ ZC/ LC/ HC**	**Significantly superior to check, location yield (kg/ha)/rank**	**% increase over the best check**					
				State			**Zone**		
			Three Checks	**Yield/ Rank**	**%BC**	**% HC**	**Rank/ yield**	**% BC**	**% HC**
IET 24028 KPH 272 (Hybrid)	5025 91 MS	43.61 47.4 43.73 7.2	LDN4658(2) SBR 4738(3) PNT 4522(1) RPR 4081(3) RDR 6615(1) CBT 8412(1) MND 543(3)	BI 4630(1) TEL 6615 (1) TN 8412(1)	37.0 45.0 57.0	11.0 11.0 17.0	Z3-4630(1) Z7-6190(2)	37.0 51.0	11.0 11.0
IET 24003 (RCPR 8 - IR 84899-B-179-16-1-1-1) IR 78877-208-B-1-1/IRRI 132	4567 85 LB	30.52 33.96 30.63	LDN 4550(3) SBR 4601(4) PNT 4544(2) RPR 3910(4) RDR 6206(3) MND4945(5)	BI 4544 (2) CG 4033 (2) TEL 6206(3)	35.0 16.0 36.0		Z3-4544(2) Z5-4033(2) Z7-4945(5)	35.0 16.0 20.0	
CR Dhan 201 (NC)	3499 85								
Zonal check	3409 83								
Local check	3496 87								
PA6129 (HC)	4684 85								

Four promising entries namely IET 24010, 23997, 24008 and 24006 achieved significant yield advantage over best check (above 5%) in different regions and are discussed below.

IET 24010 (RAU 1484) derived from cross OG 6709/APO possessing short bold grain took 84 days to 50% flowering and ranked 6th with grain yield of 3574 kg/ha and outperformed (6%) the best check (national check) with 6% grain gain in zone III. It registered 54.4% HRR with 3 ASV, intermediate AC (21.5) and medium GC (58).

IET 23997 (KMP 128) derived from cross IR 64/Bharani possessing long slender grain took 83 days to 50% flowering and ranked 3rd with 3997 kg/ha and outperformed (15%) the best check (zonal check) in region 5. It had 45.5 % HRR with 4 ASV, 23.76, intermediate AC (23.76) and medium GC (51).

Hybrid entry IET 24008 (NPH 912) possessing long slender took 88 days to 50% flowering and ranked 1st with 4082 kg/ha (17% over best check and 8% over hybrid check) in zone V. It achieved 65% (HRR), 4 ASV with intermediate AC (22.58) and soft GC (24).

Hybrid entry IET 24006 (NPH 8899) possessing medium slender grain type took 100 days to 50% flowering and ranked 1st (53% over best check and 12% over hybrid check) with grain yield of 6276 kg/ha in region 7. It had 69.1% HRR with 4 ASV, intermediate AC (24.6) and medium GC (41).

Transplanted under aerobic condition

Seedlings were transplanted under two locations Pusa (Bihar) and Bilaspur (Chhattisgarh). The performance of entries was analyzed for these two locations. The overall mean of yield was ranged from 2576 kg/ha (IET 24010) to 4771 kg/ha (IET 24035) with days to 50% flowering ranged from 95 days (PA 6129) to 107 days (IET 24006) and number of panicles/m^2 ranged from 164 (IET 24003) to 233 (IET 24006)

Among the test entries, IET 24035, 24008, 24006 and 24036 surpassed the best check with 31% (4771 kg/ha), 26% (4597 kg/ha), 15% (4208 kg/ha) and 7% (3903 kg/ha) higher yield respectively. Therefore these four entries achieved the required level of yield advantage over best check and found promising.

Three years performance of promising entries in aerobic trials

IET No.	Year	Overall mean	% Yield over NC, ZC, LC, HC	State rank	Yield (Kg)	%BVC	%HC	Zone rank	%BVC	%HC
24003	2015 AVT 2	4567	30.52 33.96 30.63	BI-2 CG-2 TEL-3	4544 4033 6206	35.0 16.0 36.0		Z3-2 Z5-2 Z7-5	35.0 16.0 20.0	
	2014 AVT1	3919	18.9 31.6 24.96	PUN-4 BI-4 UP-2 MP-1 CG10 GJ-4	3613 4461 5172 3642 3168 3983	13.6 36.0 8.0 61.2 5.0 10.0		Z2-7 Z3-2 Z4-4 Z5-5	12.0 31.0 10.0 8.0	
	2013 IVT	4550	53.7 28.85 17.69 12.76	OD-2 MP-2 CG-1 KA-2	3782 3308 6095 9609	23.23 55.08 74.79 35.16		Z3-1 Z4- Z5-6	21.96 19.4 11.73	
24028 (Hybrid)	2015 AVT 2	5025	43.61 47.4 43.73 7.28	BI-1 TN-1	4630 8412	37.3 56.94	11.0 17.0	Z3-1 Z7-2	37.0 51.0	11.0 11.0
	2014 AVT1	4437	34.7 49.04 41.48 10.7	BI-1 MP-3 CG-1 GU-1 TN-4	4822 3298 4121 4471 5750	47.28 46.05 36.81 23.23 15.76	22.0 15.47 11.0 6.0 16.34	Z2-3 Z3-1 Z4-1 Z5-2	24.0 42.0 23.0 16.0	8.0 14.0 6.0 6.0
	2013 IVT	4537	53.32 28.49 17.35 12.44	OD-7 CG-2 GU-3 TN-1	3446 5766 3606 8258	12.23 43.25 11.6 18.46	15.13 19.77 30.08 35.28	Z2-3 Z3-3 Z4-3 Z5-3	 15.29 11.61 13.97	90.74 30.08 34.49

IET No.	Year	Overall mean	% Yield over NC, ZC, LC, HC	State rank	Yield (Kg)	%BVC	%HC	Zone rank	%BVC	%HC
24010	2015 AVT 2	3635	3.88 6.62 3.97 -22.39	BI-6	3574	6.0		Z3-6	6.0	
	2014 AVT1	3571	8.41 19.95 13.87 -10.9	RA BI- UP-3 CG-9	6667 3492 5141 3182	223.32 6.65 7.17 5.64		Z2-2 Z3- Z5-9	55.0 10.0 8.0	36.0
	2013 IVT	3785	27.91 7.19 -2.09 -6.19	OD-5 MP-1 CG-	3674 3412 4262	22.75 21.85 5.88		Z2- Z3-8 Z4- Z5-	11.01	
24008 (Hybrid)	2015 AVT 2	4462	27.52 30.88 27.63 -4.73	CG-1	4082	17.02	8.0	Z5-1 Z7-4	17.0 21.0	8.0
	2014 AVT1	4187	27.11 40.64 33.51 4.46					Z2-1	66.0	46.0
	2013 IVT	4358	47.27 23.42 12.72 8.00	OD- BI-1 MP-8 TN-2 KA-8	3263 3469 2726 7992 7986	6.32 23.14 27.8 14.64 12.33	9.02 36.95 10.72 30.93 37.05	Z3-2 Z5-4	17.13 13.48	6.07 33.91
24006 (Hybrid)	2015 AVT 2	4645	32.75 36.25 32.86 -0.83	TN-2 KA-1	8124 4311	51.56 32.76	13.05 18.36	Z3-5 Z5-8 Z7-1	16.0 33.0 53.0	 12.0
	2014 AVT1	4063	23.34 36.47 29.55 1.37	RAJ-7 BI-3 MP-2 TN-2	2778 4558 3450 6142	34.72 39.21 52.79 23.65	33.49 16 20.79 24.28	Z5-1	20.0	9.0
	2013 IVT	3961	33.86 12.17 2.45 -1.83	TN- KA-4	6621 9217	-5.02 29.65	8.46 58.17	Z5-5	12.48	32.73

The entry IET 24003 outperformed the best check in Chhattisgarh (2013, 2014 & 2015) consistently for three years and in Bihar for two years (2015 and 2014). Although the entry outperformed the best check in Madhya Pradesh during in 2013, 2014 but failed during 2015. Therefore, the entry IET 24003 found promising in Chhattisgarh and Bihar.

The hybrid IET 24028 surpassed the best check in Tamil Nadu (2013, 2014 and 2015) for three years consistently and in Bihar (2015 and 2014) for two years. Although, the entry surpassed best check in Chhattisgarh and Gujarat for two years (2014 &2013) but failed in 2015. Therefore the hybrid IET 24028 found promising in Tamil Nadu and Bihar.

The entry IET 24010 registered the consistently higher yield than best check in Bihar (2013, 2014 and 2015) for three years. However, the entry outperformed the best check in Chhattisgarh for two years (2013 & 2014) but failed in final year of testing (2015). Therefore, the entry found promising in Bihar.

The IET 23997 and hybrid entry IET 24008 could not perform consistently in any states hence discontinued.

The hybrid IET 24006 outperformed the best check consistently for three years during 2015, 2014 and 2013 in Tamil Nadu and for two years in Karnataka during 2015 and 2013. The hybrid IET 24006 found promising in Tamil Nadu only.

ADVANCED VARIETY TRIAL 1-AEROBIC (AVT 1-AEROB)

Locations : 19 **Entries : 17**

Checks **CR Dhan 201 (National), CR Dhan 202 (North Western and Eastern), AAUDR 1 (Western), MAS 946-1 (Southern)—Zonal and Local check** **Table: 8.7**

Advanced Varietal Trial 1 consist of 17 entries and three checks (national, zonal and local) was evaluated at 19 locations in five zone II, III, V, VI, VII spanning across 11 states. The trial was constituted with three test entries in Zone II, III, V, 10 entries in zone VI and eight entries in zone VII. The experiment was conducted under aerobic condition with need based irrigation at all location except at Pusa, Gorakhpur and Bilaspur wherein seedlings were transplanted. In most of the locations, sowing was done in the month of June and July except at Coimbatore (August). Crop experienced drought situation at Hathwara, Masodha and Raipur. Crop at Hathwara location observed severe drought during vegetative and reproductive stage. Although there was no rain from 23rd September to 30th November in Raipur however, crop in general was good and yield was satisfactory.

Performance of promising entries in AVT 1-Aeobic Kharif 2015

IET No./ Designation/ Cross combination	FD/ GT	% improvement over best check in different zones					Remarks
		Z II	Z III	Z V	Z VI	Z VII	
IET 24660 RCPR-19-IR-84899-B-179-13-1-1-14 IR 7887-208-B-1-1/ IRRI 132	82 LB	-	25.0	-	-	9.0	Dropped due to Low HRR (40.)
IET 24665 TRC 2014-14-IR 82589-B-B-2-2 IRRI-132/IR 74371-54-1-1	81 LB	-		11.0	-	-	Dropped due to Low HRR (41.7)
Best check (kg/ha)		-	3905 (ZC)	3781 (ZC)	-	4271 (NC)	

Zonal wise performance of entries is discussed hereunder.

Three test entries along with three checks (national, zonal and local) were evaluated in zone II, III, and V at one, seven and three locations respectively spanning across seven states. The overall mean yield of zone II, III, and V was ranged from 3241 kg/ha (local check) to 4125 kg/ha (IET 24660) with days to 50% flowering ranged from 82 (IET 24660) to 85 days (local check). The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m and plant height are presented in Tables 8.8, 8.9, 8.10 & 8.11.

Zone II

Three entries along with three checks were evaluated at Ludhiana in zone II. The experimental mean 3930 kg/ha with CV 19.48 %, the entries yield was ranged from 3233 kg/ha (zonal check) to 4390 kg/ha (National check) with days to 50% flowering from 87 (IET 24660) to 93 days (zonal and local check). Among the checks, national check recorded highest yield (4390 kg/ha) followed by local check (4289 kg/ha) and zonal check (3233 kg/ha).

Among test entries, no entry found superior to best check and therefore, none is promoted in zone II.

Zone III

The trial was evaluated at seven locations in zone III. Experimental mean yield of CRRI (2446 kg/ha), BBN (1684 kg/ha), Ranchi (1074 kg/ha), Masodha (1684 kg/ha) was low, and CV of Hathwara (CV 3.68%) were not in acceptable range, therefore these five location data were not included in overall mean of zone III for analysing the performance of test entries. Data from remaining two locations (Sabour and Patna-ICAR) was used for analysis of performance of test entries. The experimental mean of Zone III was ranged from 2938 kg/ha (local check) to 4900 kg/ha (IET 24660) with days to 50% flowering ranged from 82 (IET 24665, 24630, 24660 and zonal check) to 84 days (local check). Among the checks, zonal check (3905 kg/ha) recorded highest yield followed by national check (3571 kg/ha) and local check (2938 kg/ha).

Out of three entries evaluated in zone III, **IET 24660** ranked first and registered 25% higher yield (4900 kg/ha) over best check (zonal check).

Zone V

The trial was evaluated at three locations (RPR, JDP and AMB) in zone V. The mean yield of Zone V was ranged from 4211 kg/ha (IET 24665) to 3095 kg/ha (local check) with days to 50% flowering ranged from 81 (IET 24665 and zonal check) to 84 days (national check). Among the checks, zonal check (3781 kg/ha) recorded highest yield followed by national check (3247 kg/ha) and local check (3095 kg/ha).

Out of three entries evaluated in zone V, **IET 24665** registered required level of yield advantage (11%) over the best check (zonal check; 3781 kg/ha).

Zone VI

The experiment consists of 10 test entries and three checks conducted at two locations (Navsari and Derol) in zone VI. However, the experimental mean yield of Navsari (2185 kg/ha) was lower than acceptable limit while data of most entries were missing in Derol, therefore, data of Zone VI was not considered for evaluation of performance of test entries.

Zone VII

Eight test entries along with three checks were evaluated at three locations (Rudur, Coimbatore and Mandya) in zone VII. Experimental mean of Zone VII was ranged from 3077 kg/ha (zonal check) to 4664 kg/ha (IET 24660) with days to 50% flowering ranged from 80 days (IET 24630) to 88 days (IET 24640). Among the checks, national check (4271 kg/ha) recorded highest yield followed by local check (4134 kg/ha) and zonal check (3077 kg/ha).

Among eight test entries evaluated in zone VII, one entry **IET 24660** achieved 9% (4664 kg/ha) higher yield over the best check (national check).

Therefore, on zonal mean yield basis, two entries namely, IET 24660 in Zone III & VII and IET 24665 in Zone V achieved required level of yield gain over best check. Hence, these two entries may be dropped due to low HRR.

IET 24660 (RCPR-19-IR-84899-B-179-13-1-1-14) derived from cross IR 78877-208-B-1-1/IRRI 132 has long bold grain type with yield of 4900 kg/ha with 82 days to 50% flowering in Zone III while it yielded 4664 kg/ha with 83 days to 50% flowering in zone VII. It ranked first in both Zone III and VII with 25 and 9% yield gain over best check respectively. It showed 37.21, 25.48 and 66.78 % yield advantage over national, zonal and local checks respectively in Zone III. It also showed 9, 51 and 12.8% yield gain over national, zonal and local checks, respectively in Zone VII. It had 40.2 % HRR with 3 ASV, intermediate AC (24.58%) and soft GC (80 mm) (Table 8.12).

IET 24665 (TRC 2014-14-IR 82589-B-B-2-2) derived from cross IRRI-132/IR 74371-54-1-1 has long bold grain, took 81 days to 50% flowering with grain yield of 4211 kg/ha in zone V. It ranked first in the zone with 11% yield gain over best check (zonal check). It registered 29.68, 11.37 and 36.05 % yield advantage of national, zonal and local checks respectively. It had 41.7% HRR with 7 ASV, intermediate AC (21.88%) and medium GC (57mm).

INITIAL VARIETY TRIAL-AEROBIC (IVT-AEROB)

Locations : 13 **Entries:64**

Checks **CR Dha 201(NC), CR Dhan 202(Northern and Eastern), AAUDR-1 (Western), MAS 946-1 (Southern)-- Zonal, PA 6129 (Hybrid) and Local check** **Table: 8.13**

Initial Varietal Trial-Aerobic comprises of 64 entries with national, zonal, hybrid and local checks were conducted in 13 locations across nine states. The experiment was conducted in aerobic condition with need based at all the centres irrigation except at Patna. The trial was failed in Mosadha due to severe drought while in Raipur there was dry spell from 23rd September to 30th November, 2016. At most of the locations, sowing was done in the month of July, however, sowing was done in June at three locations (Bubaneswar, Patna and Gorakhpur), and in August at two locations (Derol and Coimbatore). At Patna locations sowing was done on 4th July and seedling were transplanted on 31st July. Data of Cuttack (1645 kg/ha), Bhubaneswar (962 kg/ha), Ranchi (616 kg/ha), Gorakhpur (1649 kg/ha), Navasari (620 kg/ha), Derol (1846 kg/ha) were not in the range of acceptable experimental mean yield, hence not included analysis of performance of entries. Therefore grain yield of these locations were not included in overall mean. The data from the remaining locations were used for analysis of performance of entries. Overall mean yield was ranged from 2107 kg/ha (IET 25609) to 5148 kg/ha (IET 26640) with days to 50% flowering ranged from 79 days (IET 25624) to 104 days (IET 25642) and number of panicles/m^2 was ranged from 241 (IET 25624) to 341 (IET 25614). The CV was lowest at Patna (5.671) and highest at Coimbatore (15.58%) among the locations considered for evaluation of test entries. The information on mean yield of the entries at location, states, zones, 50% flowering duration, number of panicles/sq.m and plant height are presented in Tables 8.14, 8.15, 8.16 & 8.17.

Among the checks, hybrid check registered highest yield (4864 kg/ha) followed by Zonal check (3846 kg/ha), National Check (3814 kg/ha) and local check (3763 kg/ha).

On overall mean basis, 10 entries achieved required yield advantage over best check. These 10 entries (IET 25616, 25618, 25620, 25633, 25640, 25641, 25647, 25653, 25654, 25662) have been promoted to AVT-1. On zonal mean basis, five entries namely IET 25610, 25619, 24704, 25630, 24721 in zone 2 and nine entries namely IET 25607, 25611, 25613, 25614, 25625, 25636, 25637, 25642 and 25661 in zone 3 have achieved required level of yield advantage over best check. The entry IET 25610 found superior in both zone II and III. However, no entry found superior in zone V and VII. Therefore, 14 entries have been promoted on the basis of zonal mean yield basis.

The entry IET 25640 (RCPR-22-IR84899-B-183-20-1-1-1 derived from cross IR78877-208-B-1/IRRI 132 has ranked 1st on overall grain yield basis with 5148 kg/ha. It possesses long slender grain type and took 85 days to 50% flowering. It yielded 34.9, 33.8 and 36.8 higher yield over national, zonal and local check respectively. It out yielded the best check at LDN (13 %), SBR (20%), PTN (18.5%), RPR (10%) and MND (54%). State wise it out performed the best check in Punjab (13 %, 4550 kg/ha), Bihar (27 %, 5389 kg/ha), Chhattisgarh (8 %, 4715 kg/ha) and Karnataka (54%, 7217 kg/ha). It ranked 1st in Karnataka

and 2nd in Chhattisgarh. It also out-performed the best check in Zone 2 (13%), Zone 3 (27%), Zone 5 (8%) and Zone 7 (31%).

Overall performance of promising entries in IVT-Aerobic-2015

Rank	GY/ FD/ GT	Yield adv over NC ZC LC	Location Yield over BC	% Increase Over the Best Check			
				State		Zone	
				Rank Yield	%BC	Rank Yield	%BC
IET 25640 (RCPR-22-IR 84899 - B-183-20-1-1-1) IR 78877-208-B-1-1/ IRRI 132	5148 85 LS	34.9 33.8 36.8	LDN-4550-13% SBR-4888-20% PTN-5890-18.5% RPR-4201-10% MND-7217-54%	PUN-4550-(10) BI-5389-(7) CG-4715-(2) TN-4063-(11) KA-7217-(1)	13% 27% 8% 14% 54%	Z.2-4550(10) Z.3-5389(7) Z.5-4715(2) Z.7-5640(1)	13% 27% 8% 31%
IET 25616 RP5955-15-1-1-1-1 RP 5125-42-6-4-1-1 IR 78878-53-2-2-2	4603 83 SB	20.6 19.6 22.3	LDN-4693-17% SBR-5375-32% PNT-5740-15.4% CBT-4042-14%	PUN-4693-(5) BI-5558-(4) CG-3645 TN-4042 KA-5079-(4)	17% 31% - 14% -	Z2-4693(5) Z3-5558(4) Z5-3645 Z7-4561(7) _	17% 31% - 6% _
CR Dhan 201 (NC)	3814 86						
Zonal Check	3846 82						
Local check	3763 85						
PA 6129 (HC)	4864 85						

The entry IET 25616 (RP5955-15-1-1-1-1) derived from cross RP 5125-42-6-4-1-1/IR78878-53-2-2-2 possess short bold grain type and took 83 days to 50% flowering and ranked 2nd in overall mean yield basis with 4603 kg/ha. It registered 20.6%, 19.6% and 22.3% higher yield than national check, zonal check and local check. It surpassed the best check at LDN (17%), SBR (32%), PNT (15.4%) and CBT (14%) with grain yield of 4693 kg/ha, 5375 kg/ha, 5740 kg/ha and 4042 kg/ha respectively. State wise it out-performed the best check in Punjab (17%), Bihar (31 %) and Tamil Nadu (14%) with grain yield of 4693 kg/ha, 5558 kg/ha, 4042 kg/ha respectively. It also surpassed the best check in Zone 2 (17 %), Zone 3 (31%) and Zone 7 (6%) with grain yield of 4693 kg/ha, 5558 kg/ha and 4561 kg/ha respectively.

Performance of entries in IVT-Aerobic, Kharif 2015

IET No	FD	Overall	Z II	Z III	Z V	Z VI	Z VII	Promoted
25616	83	20.0	17.0	31.0			6.0	overall
25618	85	8.0	24.0	13.0				overall
25620	99	5.0		27.0			14.0	overall
25633	87	6.0		25.0				overall
25640	85	34, 6	13.0	27.0	8, 19		31, 12	overall
25641	88	8.0		17.0				overall
25647	94	6.0		41.0				overall
25653	83	17.0		38.0				overall
25654	85	10.0		24.0			9.0	overall
25662	84	16.0	10.0	.	9, 20		7.0	overall

IET No	FD	Overall	Z II	Z III	Z V	Z VI	Z VII	Promoted
25610	95		17.0	12.0				Zone II & III
25619	80		16.0					Zone II
24704	77		16.0					Zone II
25630	70		18.0					Zone II
24721	76		17.0					Zone II
25607	91			8.0				Zone III
25610	92			12.0				Zone III
25611	95			7.0				Zone III
25613	90			19.0				Zone III
25614	87			6.0				Zone III
25625	81			20.0				Zone III
25636	89			15.0				Zone III
25637	89			11.0				Zone III
25642	101			8.0				Zone III
25661	85			19.0				Zone III
BVC		3846	4985	4231	4888	-	4305	
HC		4864	4010	6021	3967	-	5029	

8.1: Composition of entries in Advance Variety Trial 2 - Aerobic (AVT 2 - AEROB), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
3rd year of testing				
2901	24035	BRR 0006 (IR 87759-2-2-1-1)	IR80463-B-39-3/ IR81421-B-B-66	LS
2902	24003	RCPR 8 (IR 84899-B-179-16-1-1-1)	IR 78877-208-B-1-1/ IRRI 132	SB
2903	**CR Dhan 201 (NC)**			
2904	23997	KMP 128	IR 64 /Bharani	LS
2905	24028	***KPH 272 (Hybrid)***	**-**	MS
2906	24008	***NPH 912 (Hybrid)***	***NPS 2001A / NPS 2334***	LS
2907	**CR Dhan 202 –Northwestern and Eastern, AAUDR-1 Western, MAS 946-1 - Southern – (ZC)**			
2908	24006	***NPH 8899 (Hybrid)***	***NPS 8001A /NP 1001R***	MS
2909	**PA 6129 (HC)**			
2910	24010	RAU 1484-Aer-04	OG 6709-7/APO	SB
2911	24036	BRR 0007 (IR 87638-10-1-1-3)	Dhagaddeshi / IR78585-98-2-2	LS
2912	**Local Check**			

Table No. 8.2: Grain Yield (kg/ha) of entries in AVT 2-AEROBIC, Kharif 2015

Entry No.	IET No.	II		III																Zone III (2)	
		PUN		OD		OD		BI		BI		BI (2)		JH		W.B		U.P.			
		LDN		@CTK		@BBN		SBR		PTN-ICAR		Mean		@RCI		@HTW		@MSD			
2901	24035	3348		1280		1010	8	3168	9	2002		2585		778	6	2895	7	1583	3	2585	*
2902	24003	4550	3	3842	3	1515	5	4601	4 *	4487	2 *	4544	2 * 35% **8%**	800	5	2798	8	1510	6	4544	2 * 35% **8%**
2903	CR Dhan 201 (NC)	3728	8	3025	6	1263	6	3581	8	3162	6	3372	7	978	2	2693	9	1275		3372	7 *
2904	23997	3721	9	1283		821		2953		2236		2594		467		2572		2060	1 *#	2594	*
2905	24028	4658	2 ...2%	1610	8	1705	4	4738	3 *	4522	1 *	4630	1 * 37% **11%**	956	3	4657	2 *#	2026	2 *#	4630	1 * 37% **11%**
2906	24008	4066	6	1212		947	9	5565	1 *#	2953	8	4259	3 * 26% **2%**	778	7	2046		1530	5	4259	3 * 26% **2%**
2907	Zonal Check	3888	7	3087	5	2273	2	2893		3409	4	3151	8	622	8	3521	4	1543	4	3151	8 *
2908	24006	4333	5	1439	9	379		4766	2 *	3024	7	3895	5 * 16%			3123	6			3895	5 * 16%
2909	PA 6129 (HC)	4736	1 ...4%	3143	4	2588	1	4298	6 *	4082	3 *	4190	4 * 24%	533	9	3957	3 *	1422	9	4190	4 * 24%
2910	24010	3331		4126	1	1957	3	3774	7	3373	5	3574	6 6%	1244	1 #	3347	5	1396		3574	6 * 6%
2911	24036	3556		2855	7	821		4408	5 *	1656		3032	9	533		4703	1 *#	1449	8	3032	9 *
2912	Local Check	4549	4	4062	2	1199	7	2386		2509	9	2447		844	4	2653		1510	7	2447	*
	Exp Mean	**4039**		**2580**		**1373**		**3927**		**3118**		**3523**		**776**		**3247**		**1573**		**3523**	
	C.D. 5%	1370		2065		419		703		661		460		645		210		213			
	C.V.%	20.04		47.26		18.01		10.57		12.52		11.24		48.85		3.83		7.94			
	Sowing Date	09-Jun		02-Jul		29-Jun		23-Jun		12-Jun				29-Jun		24-Jun		23-Jul			
	Local ©	PR 115		Pyari		Mandakini		Rajendra Suwasini		Rajendra Bhagwati				BD 201		Puspa		Sushk Samrat			

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Contd... Table No. 8.2 : Grain Yield (kg/ha) of entries in AVT 2-AEROBIC, Kharif 2015

Entry No.	IET No.	V								Zone V (2)		VI				VII	
		CG		CG		CG		CG (2)				GU		GU		TEL	
		RPR		JDP		ABP		Mean				@NVS		@DRL		RDR	
2901	24035	2566		3508	8	2133	9	3037		3037		1995	9	78	4	4329	
2902	24003	3910	4 *	4156	4 #	2578	2	4033	2 * 16% **6%**	4033	2 * 16% **6%**	2949	1 #			6206	3 * ...36% _4%
2903	CR Dhan 201 (NC)	2875	7	2332		2200	6	2604		2604		2110	8			4571	7
2904	23997	3110	6	4884	1 *#	2133		3997	3 * 15% **5%**	3997	3 * 15% **5%**	2884	3 #			4348	9
2905	24028	4081	3 *	3627	6 #	2156	8	3854	4 10% **2%**	3854	4 10% **2%**	2506	5 #			6615	1 * ...45% _11%
2906	24008	3877	5 *	4287	2 #	2289	5	4082	1 * 17% **8%**	4082	1 * 17% **8%**	1948				5277	5 ...15%
2907	Zonal Check	2765	9	4210	3 #	2422	4	3488	7	3488	7	1831		1560	1	3419	
2908	24006	2539		3672	5 #	2111		3105	8	3105	8	2867	4 #			6392	2 * ...40% _7%
2909	PA 6129 (HC)	4506	1 *	3075		2467	3	3791	5 9%	3791	5 9%	1815				5946	4 * ...30%
2910	24010	4090	2 *	2975		2600	1	3533	6 1%	3533	6 1%	2182	7			4404	8
2911	24036	2657		3532	7	2200	7	3095		3095		2450	6 #	231	3	5203	6 ...14%
2912	Local Check	2805	8	3396	9	2044		3100	9	3100	9	2901	2 #	1291	2	3902	
	Exp Mean	**3315**		**3638**		**2278**		**3476**		**3476**		**2370**		**790**		**5051**	
	C.D. 5%	682		459		366		374		374		582		270		1117	
	C.V.%	12.15		7.45		9.50		9.26		9.26		14.51		17.12		13.06	
	Sowing Date	03-Jul		06-Jul		07-Jul						12-Jun		01-Jul		27-Jun	
	Local ©	Indira Aerobic 1		Danteshwari		Indira Aerobic-1						NAUR-1		AAUDR-1		MTU 1010	

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Contd... Table No. 8.2 : Grain Yield (kg/ha) of entries in AVT 2-AEROBIC, Kharif 2015

Entry No.	IET No.	VII				Zone VII (3)		Overall (8)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		TN		KA								
		CBT		MND								
2901	24035	4663		3077	6	4023	8	3333		86	101	229
2902	24003	5146	8	3481	4	4945	5 * 20%	4567	4 * 31%	85	109	265
2903	CR Dhan 201 (NC)	5360	5	2380	9	4104	7	3499	7	85	98	252
2904	23997	5172	7	1531		3684		3494	9	82	100	247
2905	24028	8412	1 * ...57% _17%	3543	3	6190	2 * 51% **11%**	5025	1 *# 44% **7%**	91	94	268
2906	24008	6838	4 * ...28%	2835	8	4983	4 * 21%	4462	5 * 28%	91	95	267
2907	Zonal Check	5084	9	1602		3369		3409		83	100	259
2908	24006	8124	2 * ...52% _13%	4311	1 *#	6276	1 *# 53% **12%**	4645	3 * 33%	94	95	284
2909	PA 6129 (HC)	7186	3 * ...34%	3642	2	5591	3 * 36%	4684	2 * 34%	85	92	252
2910	24010	4284		2849	7	3846		3635	6 4%	86	102	247
2911	24036	4380		1965		3849	9	3420		86	97	237
2912	Local Check	5176	6	3247	5	4108	6	3496	8	87	90	275
	Exp Mean	**5819**		**2872**		**4581**		**3972**		**87**	**98**	**257**
	C.D. 5%	1236		559		621		317		1	0	13
	C.V.%	12.54		11.49		14.43		14.03		1.75	0.00	12.37
	Sowing Date	21-Aug		14-Jul								
	Local ©	Anna (R) 4		Rasi								

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No.8.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2-Aerob (TP) Kharif, 2015

Entry No.	IET No.	III		V		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		BI		CG						
		PSA		BLP						
2901	24035	4792	1 *#...44% _69%	4750	6	4771	1 *# 31% **24%**	100	100	184
2902	24003	1708		4889	4	3299	9	99	113	164
2903	CR Dhan 201 (NC)	2458	8	3667		3063		97	108	189
2904	23997	2167		3639		2903		95	106	177
2905	24028	2208	9	5361	1 *	3785	6 4%	98	98	211
2906	24008	4000	2 ...20% _41%	5194	2 *	4597	2 * 26% **20%**	103	105	208
2907	Zonal Check	3333	4 _18%	3778	9	3556	8	95	102	222
2908	24006	3250	5 _15%	5167	3 *	4208	3 15% **10%**	107	103	233
2909	PA 6129 (HC)	2833	7	4833	5	3833	5 5%	95	89	186
2910	24010	2208		2944		2576		97	101	178
2911	24036	3750	3 ...13% _32%	4056	8	3903	4 7% **2%**	100	100	213
2912	Local Check	3208	6 _13%	4083	7	3646	7	98	102	194
	Exp Mean	**2993**		**4363**		**3678**		**98**	**102**	**197**
	C.D. 5%	1256		1032		782		1	0	31
	C.V.%	24.79		13.97		18.29		1.12	0.00	9.35
	Sowing Date	03-Jul		12-Jun						
	Planting Date	19-Aug		09-Jul						
	Local ©	R.Bhagwati		MTU 1010						

* Superior to Best Check % Superior over Best Check @ not included in means
# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 8.3 : Days to 50% Flowering of entries in AVT 2-AEROBIC Kharif 2015

Entry No.	IET No.	II	III									Zone III (7) Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	W.B	U.P.	
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	HTW	MSD	
2901	24035	93	77	83	80	93	93	93	89	82	79	85
2902	24003	92	80	80	80	89	88	89	90	81	77	84
2903	CR Dhan 201 (NC)	93	79	80	79	91	87	89	89	85	79	84
2904	23997	86	71	80	76	90	86	88	87	81	75	81
2905	24028	98	83	86	84	91	93	92	98	86	88	89
2906	24008	95	80	87	83	90	95	93	97	86	80	88
2907	Zonal Check	92	74	78	76	87	84	86	87	83	75	81
2908	24006	104	81	90	86	98	104	101	104	75		92
2909	PA 6129 (HC)	86	73	80	77	86	83	84	88	80	86	82
2910	24010	94	77	81	79	92	94	93	87	82	75	84
2911	24036	87	80	83	82	91	93	92	87	86	77	85
2912	Local Check	90	83	78	81	110	93	102	88	85	78	88
	Exp Mean	**93**	**78**	**82**	**80**	**92**	**91**	**92**	**91**	**83**	**79**	**85**
	C.D. 5%	2	3	1	2	1	3	2	1	2	3	1
	C.V.%	1.46	2.30	0.70	1.92	0.82	1.99	1.45	0.82	1.75	2.31	1.60

Contd... Table No. 8.3 : Days to 50% Flowering of entries in AVT 2-AEROBIC Kharif 2015

Entry No.	IET No.	V				Zone V (3) Mean	VI			Zone VI (1) Mean	VII			Zone VII (3) Mean	Overall (15) Mean
		CG	CG	CG	CG (3)		GU	GU	GU (1)		TEL	TN	KA		
		RPR	JDP	ABP	Mean		NVS	@DRL	Mean		RDR	CBT	MND		
2901	24035	85	84	93	87	87	85	83	85	85	83	88	83	85	86
2902	24003	82	82	91	85	85	88		88	88	81	91	86	86	85
2903	CR Dhan 201 (NC)	84	86	93	88	88	87		87	87	82	84	80	82	85
2904	23997	82	80	87	83	83	86		86	86	82	83	80	81	82
2905	24028	88	88	107	94	94	90		90	90	86	89	95	90	91
2906	24008	88	85	106	93	93	94		94	94	93	91	91	92	91
2907	Zonal Check	82	81	88	84	84	66	79	66	66	80	91	91	87	83
2908	24006	95	89	116	100	100	86		86	86	90	90	92	91	94
2909	PA 6129 (HC)	81	87	97	88	88	87		87	87	83	91	91	88	85
2910	24010	85	87	88	87	87	93		93	93	82	88	83	84	86
2911	24036	83	85	90	86	86	87	113	87	87	86	88	83	86	86
2912	Local Check	84	81	94	86	86	90	77	90	90	94	82	79	85	87
	Exp Mean	**85**	**85**	**96**	**88**	**88**	**87**	**88**	**87**	**87**	**85**	**88**	**86**	**86**	**87**
	C.D. 5%	2	1	2	1	1	4	2	4	4	2	2	5	2	1
	C.V.%	1.11	0.61	1.10	0.69	0.91	2.71	1.09	2.55	2.63	1.13	1.55	3.42	2.30	1.75

Table No. 8.3 : Days to 50% Flowering of entries in AVT 2-Aerob (TP) Kharif 2015

Entry No.	IET No.	III	V	Overall Mean (2)
		BI	CG	
		PSA	BLP	
2901	24035	109	91	100
2902	24003	104	94	99
2903	CR Dhan 201 (NC)	106	88	97
2904	23997	103	87	95
2905	24028	100	96	98
2906	24008	111	94	103
2907	Zonal Check	99	91	95
2908	24006	112	102	107
2909	PA 6129 (HC)	97	92	95
2910	24010	97	96	97
2911	24036	108	91	100
2912	Local Check	110	86	98
	Exp Mean	**105**	**92**	**98**
	C.D. 5%	3	0	1
	C.V.%	1.43	0.00	1.12

Table No. 8.4 : Plant Height (cm) of entries in AVT 2- Aerob (TP) Kharif 2015

Entry No.	IET No.	III E	V CEN	Overall Mean (2)
		BI	CG	
		PSA	BLP	
2901	24035	94	105	100
2902	24003	104	121	113
2903	CR Dhan 201 (NC)	99	116	108
2904	23997	96	115	106
2905	24028	84	111	98
2906	24008	98	112	105
2907	Zonal Check	92	112	102
2908	24006	96	110	103
2909	PA 6129 (HC)	75	103	89
2910	24010	90	112	101
2911	24036	90	109	100
2912	Local Check	92	111	102
	Exp Mean	**93**	**111**	**102**

Table 8.4 Contd.: Plant Height (cm) of the entries in AVT 2-Aerob, Kharif 2015

Entry No.	IET No.	II	III									Zone III (7) Mean	V				Zone V (3) Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	W.B	U.P.		CG	CG	CG	CG (3)	
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	HTW	MSD		RPR	JDP	ABP	Mean	
2901	24035	109	112	115	114	109	109	109	92	101	85	103	106	97	81	95	95
2902	24003	123	106	114	110	118	108	113	85	105	83	103	119	107	94	107	107
2903	CR Dhan 201 (NC)	108	108	105	107	108	103	105	88	106	73	99	101	90	78	90	90
2904	23997	105	112	111	112	105	106	105	84	105	85	101	111	106	78	98	98
2905	24028	111	108	95	101	109	103	106	72	95	84	95	101	89	65	85	85
2906	24008	110	103	94	98	109	101	105	78	113	77	96	112	99	74	95	95
2907	Zonal Check	120	106	94	100	109	107	108	87	121	84	101	115	108	94	106	106
2908	24006	108	104	107	106	110	106	108	71	112		102	94	88	63	82	82
2909	PA 6129 (HC)	99	106	108	107	101	98	99	80	99	86	97	104	89	66	87	87
2910	24010	113	105	107	106	105	103	104	93	110	74	100	115	99	88	100	100
2911	24036	107	106	108	107	111	107	109	86	89	84	99	95	97	82	91	91
2912	Local Check	92	111	99	105	98	100	99	76	101	78	95	87	85	72	81	81
	Exp Mean	**109**	**107**	**105**	**106**	**108**	**104**	**106**	**83**	**105**	**81**	**99**	**105**	**96**	**78**	**93**	**93**
	C.D. 5%				0			4								0	0

Table 8.4 Contd.: Plant Height (cm) of the entries in AVT 2-Aerob, Kharif 2015

Entry No.	IET No.	VI			Zone VI (1) Mean	VII			Zone VII (3) Mean	Overall (15) Mean
		GU	GU	GU (1)		TEL	TN	KA		
		NVS	@DRL	Mean		RDR	CBT	MND		
2901	24035	117	75	117	117	102	104	74	94	101
2902	24003	127	73	127	127	128	119	92	113	109
2903	CR Dhan 201 (NC)	113	61	113	113	107	106	72	95	98
2904	23997	112	76	112	112	103	109	69	94	100
2905	24028	104	64	104	104	92	105	70	89	94
2906	24008	98	53	98	98	84	103	67	85	95
2907	Zonal Check	109	95	109	109	89	97	62	83	100
2908	24006	104	57	104	104	87	100	80	89	95
2909	PA 6129 (HC)	95	66	95	95	83	100	70	84	92
2910	24010	104	62	104	104	120	110	85	105	102
2911	24036	110	74	110	110	103	104	72	93	97
2912	Local Check	107	89	107	107	71	101	68	80	90
	Exp Mean	**108**	**70**	**108**	**108**	**97**	**105**	**74**	**92**	**98**

Table No. 8.5 : Panicles/ M² of entries in AVT 2-Aerob (TP) Kharif 2015

Entry No.	IET No.	III
		BI
		PSA
2901	24035	184
2902	24003	164
2903	CR Dhan 201 (NC)	189
2904	23997	177
2905	24028	211
2906	24008	208
2907	Zonal Check	222
2908	24006	233
2909	PA 6129 (HC)	186
2910	24010	178
2911	24036	213
2912	Local Check	194
	Exp Mean	**197**
	C.D. 5%	29
	C.V.%	8.73

Table No. 8.5 Contd.: Panicles/ M² of entries in AVT 2-AEROBIC Kharif 2015

Entry No.	IET No.	II	III									Zone III (7) Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	W.B	U.P.	
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	HTW	MSD	
2901	24035	265	286	196	241	149	183	166	128	317	243	215
2902	24003	403	286	240	263	209	227	218	104	297	270	233
2903	CR Dhan 201 (NC)	315	363	194	279	172	241	206	143	288	256	237
2904	23997	350	220	183	202	158	193	176	115	338	289	214
2905	24028	315	286	198	242	160	277	218	107	342	294	238
2906	24008	392	242	228	235	240	217	228	151	314	269	237
2907	Zonal Check	390	330	195	262	175	199	187	159	299	242	228
2908	24006	426	297	206	252	158	210	184		309		236
2909	PA 6129 (HC)	380	352	200	276	162	215	188	154	306	263	236
2910	24010	285	385	207	296	144	174	159	169	296	244	231
2911	24036	302	209	197	203	209	232	221	141	326	241	222
2912	Local Check	585	374	210	292	195	175	185	184	306	272	245
	Exp Mean	**367**	**303**	**205**	**254**	**178**	**212**	**195**	**141**	**312**	**262**	**231**
	C.D. 5%	62	54	40	34	43	55	32	60	33	22	18
	C.V.%	9.95	10.55	11.44	11.62	14.21	15.39	14.21	24.85	6.22	4.97	12.88

Contd... Table No. 8.5 : Panicles/ M² of entries in AVT 2-AEROBIC Kharif 2015

Entry No.	IET No.	V				Zone V (3) Mean	VI			Zone VI (1) Mean	VII			Zone VII (3) Mean	Overall (15) Mean
		CG	CG	CG	CG (3)		GU	GU	GU (1)		TEL	TN	KA		
		RPR	JDP	ABP	Mean		NVS	@DRL	Mean		RDR	CBT	MND		
2901	24035	236	188	164	196	196	175	36	175	175	375	277	261	304	229
2902	24003	222	279	172	224	224	252	80	252	252	388	258	372	339	265
2903	CR Dhan 201 (NC)	270	225	173	223	223	164	89	164	164	402	273	306	327	252
2904	23997	252	251	177	227	227	243	69	243	243	369	298	261	309	247
2905	24028	246	235	131	204	204	231		231	231	429	407	369	402	268
2906	24008	284	332	154	257	257	172		172	172	327	380	304	337	267
2907	Zonal Check	237	235	184	219	219	186	83	186	186	368	358	326	351	259
2908	24006	234	199	167	200	200	218		218	218	447	465	358	423	284
2909	PA 6129 (HC)	256	196	169	207	207	110		110	110	376	337	297	336	252
2910	24010	275	244	149	223	223	183		183	183	384	255	315	318	247
2911	24036	271	220	151	214	214	170	77	170	170	357	247	281	295	237
2912	Local Check	259	215	168	214	214	252	72	252	252	271	378	279	309	275
	Exp Mean	**254**	**235**	**163**	**217**	**217**	**196**	**72**	**196**	**196**	**374**	**328**	**311**	**338**	**257**
	C.D. 5%	56	65	20	26	27	44	28	18	41	45	54	88	35	13
	C.V.%	13.04	16.34	7.19	12.97	13.39	13.23	21.68	5.39	12.36	7.05	9.79	16.67	11.11	12.37

Table 8.6: Grain quality characteristics of entries in AVT-2-AEROBIC Kharif 2015

		IIRR											NRRI		
Entry No.	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**GT**	**Grain Chak**	**ASV**	**A.C**	**G.C**	**ASV**	**A.C**	**G.C**
2901	IET-24035	78.5	66.2	46.6	6.42	2	3.21	LS	VOC	4	21.73	65	3.0	22.87	30
2902	24003	77.9	68.7	52.1	5.64	2.39	2.35	SB	VOC	4	21.47	66	3.0	19.20	38
2903	CR Dhan 201	77.1	66.4	47	6.45	1.98	3.25	LS	VOC	7	23.9	61	6.3	21.52	42
2904	23997	78.1	66.7	45.5	6.25	2.06	3.03	LS	VOC	4	23.76	51	3.3	20.95	45
2905	24028	79.1	68.4	65	5.39	2.17	2.57	MS	VOC	4	22.2	62	3.0	20.25	47
2906	24008	80.3	70.8	64.4	6.39	2.02	3.16	LS	VOC	4	22.58	24	4.3	20.47	48
2907	MAS946-1(ZC)	78.1	67.5	54.8	5.81	2.14	2.71	MS	VOC	4	23.61	55	3.0	20.92	51
2908	24006	80.7	71.6	69.1	4.99	2.03	2.53	MS	A	4	24.6	41	3.0	23.25	37
2909	PA 6129 HC	81	70.6	59.1	5.7	2.21	2.57	MS	VOC	7	23.9	45	7.0	21.00	45
2910	24010	76.7	67.7	54.4	5.36	2.34	2.29	SB	VOC	3	21.5	58	6.0	19.20	51
2911	24036	79.3	68.5	51	6.35	2.05	3.09	LS	VOC	4	22.58	31	6.0	16.72	60

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 8.7: Composition of entries in Advance Variety Trial 1–Aerobic (AVT 1- AEROB), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain Type
2nd year of testing				
3001	24636	CB 12 702	IR 80021-B-86-3-4-CRD-1-2-1	LB
3002	24651	UPRI 2014-25 (IR 83141-B-17-B)	IR 06G103/IR 06G112	LB
3003	24665	TRC 2014-14/IR 82589-B-B-2-2	IRRI-132/IR 74371-54-1-1	LB
3004	24640	CR 2829-32-1	Naveen/ARC 10075	LB
3005	24630	TRC 2014-11/IR 83377-B-B-123-2	IR 71700-247-1-1-2/ Sambha Mahsuri	LB
3006	**CR Dhan 201 (NC)**			
3007	24661	UPRI 2014-26 (IRRI 132)	UPLRI-5/IR 12979-24-1	SB
3008	24658	AAGP 3006	PRN-6/PRN-45	LB
3009	**CR Dhan 202 –Northwestern and Eastern, AAUDR-1 Western, MAS 946-1-Southern – (ZC)**			
3010	24660	RCPR-19-IR 84899-B-179-13-1-1-1	IR 78877-208-B-1-1/ IRRI 132	LB
3011	24670	RP 4926-102-75-64-46-25	Swarna / RAU 3041	MS
3012	24639	R 1598-483-1-297-1	MTU 1010/IR 64	LB
3013	24666	UPR 2805-14-1-2	Sarju 52/ KAU P-C3-2	LB
3014	24664	PAU 2769-20-2-3-3-2-2-2-M-9	PR 103/PAU 1126-47-2-2	LB
3015	**Local Check**			
3016	24659	TRC 2014-12/IR 83928-B-B-81-2	IR 78877-208-B-1-2/IR 74371-54-1-1	LB
3017	24632	RCPR-17-IR 83929-B-B-291-3-1-1	IR 78878-53-2-2-2- / CT 6510-24-1-2	LB

Table No. 8.8: Grain Yield (kg/ha) of entries in AVT 1-AEROBIC ZONE-2,3&5 Kharif 2015

Entry No.	IET No.	II	III																	
		PUN	OD		OD		OD (1)		BI		BI		BI (2)		JH		W.B	
		LDH	CRR		@BBN		Mean		SBR		PTN-ICAR		Mean		@RCI		HTW	
3003	24665	4274	3	930	6	2399	1	930	6	3485	3	4218	3	3851	3	1333	1	3271	4
3005	24630	4116	4	2454	5	947	6	2454	5	3011	5	4558	2	3784	4	1067	4	3393	3
3006	CR Dhan 201 (NC)	4390	1	2501	4	1010	5	2501	4	3482	4	3660	5	3571	5	1111	3	4598	2
3009	Zonal Check	3233	6	3081	2	2336	2	3081	2	3631	2	4180	4	3905	2	1000	5	3227	6
3010	24660	3276	5	2537	3	2210	3	2537	3	3882	1	5918	1*	4900	1* 25%	1311	2	4662	1 ...1%
3015	Local ©	4289	2	3172	1	1199	4	3172	1	2895	6	2980	6	2938	6	622	6	3236	5
	Exp Mean	**3930**		**2446**		**1684**		**2446**		**3398**		**4252**		**3825**		**1074**		**3731**	
	C.D. 5%	1393		1515		469		1566		724		591		413		811		250	
	C.V.%	19.48		34.05		15.32		35.63		11.71		7.64		9.04		41.51		3.68	
	Sowing Date	08-Jun		02-Jul		29-Jun				23/06		11-Jun				30-Jun		23-Jun	
	Local ©	PR 115		Pyari		Mandakini				Rajendra Suwasini		Rajendra Bhagwati				BD 201		Puspa	

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 8.8 Contd. : Grain Yield (kg/ha) of entries in AVT 1-AEROBIC ZONE-2,3&5 Kharif 2015

Entry No.	IET No.	II	III																	
		PUN	OD		OD		OD (1)		BI		BI		BI (2)		JH		W.B	
		LDH	CRR		@BBN		Mean		SBR		PTN-ICAR		Mean		@RCI		HTW	
3003	24665	4274	3	930	6	2399	1	930	6	3485	3	4218	3	3851	3	1333	1	3271	4
3005	24630	4116	4	2454	5	947	6	2454	5	3011	5	4558	2	3784	4	1067	4	3393	3
3006	CR Dhan 201 (NC)	4390	1	2501	4	1010	5	2501	4	3482	4	3660	5	3571	5	1111	3	4598	2
3009	Zonal Check	3233	6	3081	2	2336	2	3081	2	3631	2	4180	4	3905	2	1000	5	3227	6
3010	24660	3276	5	2537	3	2210	3	2537	3	3882	1	5918	1 *	4900	1 * 25%	1311	2	4662	1 ...1%
3015	Local ©	4289	2	3172	1	1199	4	3172	1	2895	6	2980	6	2938	6	622	6	3236	5
	Exp Mean	**3930**		**2446**		**1684**		**2446**		**3398**		**4252**		**3825**		**1074**		**3731**	
	C.D. 5%	1393		1515		469		1566		724		591		413		811		250	
	C.V.%	19.48		34.05		15.32		35.63		11.71		7.64		9.04		41.51		3.68	
	Sowing Date	08-Jun		02-Jul		29-Jun				23-Jun		11-Jun				30-Jun		23-Jun	
	Local ©	PR 115		Pyari		Mandakini				Rajendra Suwasini		Rajendra Bhagwati				BD 201		Puspa	

* Superior to Best Check % Superior over Best Check @ not included in means

Contd... Table No. 8.8: Grain Yield (kg/ha) of entries in AVT 1-AEROBIC ZONE-2,3&5 Kharif 2015

Entry No.	IET No.	III		Zone III (4) Mean		V								Zonal V (3)		Overall (8)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		U.P.				CG		CG		CG		CG (3)								
		@MSD				RPR		JDP		AMB		Mean								
3003	24665	1446	6	2976	6	3156	4	5431	1	4044	1 *	4211	1 * 11%	4211	1 * 11%	3601	2	83	101	225
3005	24630	1841	1	3354	4	2824	6	4840	3	2178	4	3280	4	3280	4	3422	5	83	101	267
3006	CR Dhan 201 (NC)	1691	4	3560	2	2942	5	4756	5	2044	6	3247	5	3247	5	3547	4	84	100	276
3009	Zonal Check	1746	3	3530	3	3276	3	4868	2	3200	2	3781	3	3781	3	3587	3	83	102	246
3010	24660	1814	2	4250	1 * 19%	3879	1 *	4798	4	3000	3	3892	2 3%	3892	2 3%	3994	1 * 11%	82	105	262
3015	Local ©	1568	5	3071	5	3390	2	3761	6	2133	5	3095	6	3095	6	3232	6	85	91	254
	Exp Mean	**1684**		**3457**		**3245**		**4742**		**2767**		**3584**		**3584**		**3564**		**83**	**100**	**255**
	C.D. 5%	375		417		361		973		472		342		348		268		1		13
	C.V.%	12.25		14.68		6.11		11.28		9.38		9.97		10.14		13.12		1.73		10.79
	Sowing Date	23-Jun				03-Jul		06-Jul		13-Jul										
	Local ©	Sushk Samrat				Indira Aerobic		Danteshwari		Indira Aerobic 1										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 8.8 Contd. : Grain Yield (kg/ha) of entries in AVT 1-AEROBIC ZONE-6 Kharif 2015

Entry No.	IET No.	VI						Zone VI (1) Mean		Overall (1) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		GU		GU		GU (1)								
		NVS		DRL @		Mean								
3001	24636	3156	1			3156	1 7%	3156	1 7%	3156	1 7%	91	107	213
3002	24651	1381				1381		1381		1381		82	95	147
3003	24665	2413	5			2413	5	2413	5	2413	5	83	110	225
3004	24640	2272	6			2272	6	2272	6	2272	6	88	109	124
3005	24630	2068	9			2068	9	2068	9	2068	9	84	97	200
3006	CR Dhan 201 (NC)	2585	4			2585	4	2585	4	2585	4	84	105	289
3007	24661	2174	7			2174	7	2174	7	2174	7	96	104	80
3008	24658	1825				1825		1825		1825		95	83	160
3009	Zonal Check	687		627	2	687		687		687		66	124	75
3010	24660	2122	8	118	3	2122	8	2122	8	2122	8	82	119	200
3011	24670	1806				1806		1806		1806		95	100	185
3014	24664	2971	2			2971	2 1%	2971	2 1%	2971	2 1%	96	98	244
3015	Local ©	2951	3	698	1	2951	3	2951	3	2951	3	92	103	193
	Exp Mean	**2185**		**481**		**2185**		**2185**		**2185**		**87**	**104**	**180**
	C.D. 5%	612		555		614		585		585		5	0	43
	C.V.%	16.60		50.90		16.69		15.92		15.92		3.18	0.00	14.20
	Sowing Date	06-Dec		01-Jul										
	Local ©	NAUR-1		AAUDR-1										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 8.8 contd.: Grain Yield (kg/ha) of entries in AVT 1-AEROBIC ZONE-7Kharif 2015

Entry No.	IET No.	VII						Zone VII (3) Mean		Overall (3) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		TEL		TN		KA								
		RDR		CBT		MND								
3003	24665	4252	5	5761	1 …3%	3022	4	4345	2 2%	4345	2 2%	81	97	318
3004	24640	4215	6	5256	7	2519	7	3997	8	3997	8	88	101	294
3005	24630	4259	4	5565	4	2632	6	4152	6	4152	6	80	98	305
3006	CR Dhan 201 (NC)	4776	2	5584	3	2452	8	4271	3	4271	3	82	94	305
3009	Zonal Check	3387		4526	9	1319		3077		3077		86	85	293
3010	24660	4215	7	5342	6	4435	1 *	4664	1 9%	4664	1 9%	86	99	319
3012	24639	4630	3	5086	8	1588		3768	9	3768	9	86	83	303
3013	24666	3448		4271		1654	9	3124		3124		82	89	255
3015	Local ©	4825	1	4321		3257	2	4134	7	4134	7	81	87	313
3016	24659	4069	9	5354	5	3202	3	4208	4	4208	4	82	103	304
3017	24632	4176	8	5588	2	2756	5	4173	5	4173	5	81	101	288
	Exp Mean	**4205**		**5150**		**2621**		**3992**		**3992**		**83**	**94**	**300**
	C.D. 5%	979		893		555		443		444		2		40
	C.V.%	13.67		10.18		12.42		11.78		11.81		2.47		14.07
	Sowing Date	08-Jul		21-Aug		14-Jul								
	Local ©	MTU 1010		Anna (R) 4		Rasi								

* Superior to Best Check % Superior over Best Check @ not included in means

Table 8.9: Days to 50% Flowering of entries in AVT 1-AEROBIC ZONE-2,3&5 Kharif 2015

Entry No.	IET No.	II	III									Zone III (7) Mean	V				Zone V Mean (3)	Overall Mean (11)
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	W.B	U.P.		CG	CG	CG	CG (3)		
		LDH	CRR	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	HTW	MSD		RPR	JDP	AMB	Mean		
3003	24665	92	77	79	78	86	89	88	86	84	76	82	83	78	82	81	81	83
3005	24630	91	74	80	77	90	89	90	88	83	71	82	81	82	87	83	83	83
3006	CR Dhan 201 (NC)	92	75	80	78	89	91	90	89	83	77	83	81	79	91	84	84	84
3009	Zonal Check	93	74	78	76	89	86	88	92	83	70	82	80	81	82	81	81	83
3010	24660	87	73	79	76	86	87	86	87	85	75	82	82	80	84	82	82	82
3015	Local ©	93	84	78	81	78	94	86	95	86	76	84	83	78	87	83	83	85
	Exp Mean	**91**	**76**	**79**	**78**	**86**	**89**	**88**	**90**	**84**	**74**	**83**	**82**	**80**	**86**	**82**	**82**	**83**
	C.D. 5%	3	4	2	2	1	1	1	2	4	4	1	2	1	2		1	1
	C.V.%	1.83	2.64	1.44	2.34	0.66	0.64	0.59	1.07	2.78	2.69	1.92	1.07	0.91	1.23		0.99	1.73

Table No. 8.9 : Days to 50% Flowering of entries in AVT 1-AEROBIC ZONE-6 Kharif 2015

Entry No.	IET No.	VI			Zonal VI (1) Mean	Overall (1) Mean
		GU	GU	GU (1)		
		NVS	@DRL	Mean		
3001	24636	107	55	107	107	107
3002	24651	95	68	95	95	95
3003	24665	110	74	110	110	110
3004	24640	109	56	109	109	109
3005	24630	97	75	97	97	97
3006	CR Dhan 201 (NC)	105	70	105	105	105
3007	24661	104	70	104	104	104
3008	24658	83	56	83	83	83
3009	Zonal Check	124	85	124	124	124
3010	24660	119	76	119	119	119
3011	24670	100	42	100	100	100
3014	24664	98	50	98	98	98
3015	Local ©	103	91	103	103	103
	Exp Mean	**104**	**67**	**104**	**104**	**104**

Table No. 8.10 : Plant Height (cm) of entries in AVT 1-AEROBIC ZONE-6 Kharif 2015

Entry No.	IET No.	VI			Zonal VI (1) Mean	Overall (1) Mean
		GU	GU	GU (1)		
		NVS	@DRL	Mean		
3001	24636	91		91	91	91
3002	24651	82		82	82	82
3003	24665	83		83	83	83
3004	24640	88		88	88	88
3005	24630	84		84	84	84
3006	CR Dhan 201 (NC)	84		84	84	84
3007	24661	96		96	96	96
3008	24658	95		95	95	95
3009	Zonal Check	66	89	66	66	66
3010	24660	82	99	82	82	82
3011	24670	95		95	95	95
3014	24664	96		96	96	96
3015	Local ©	92	78	92	92	92
	Exp Mean	**87**	**89**	**87**	**87**	**87**
	C.D. 5%	5	3	5	5	5
	C.V.%	3.30	1.66	3.36	3.18	3.18

Table No. 8.9contd. : Days to 50% Flowering of entries in AVT 1-AEROBIC ZONE-7 Kharif 2015

Entry No.	IET No.	VII			Zone VII (3) Mean	Overall (3) Mean
		TEL	TN	KA		
		RDR	CBT	MND		
3003	24665	78	82	83	81	81
3004	24640	82	94	88	88	88
3005	24630	81	80	80	80	80
3006	CR Dhan 201 (NC)	79	83	83	82	82
3009	Zonal Check	79	89	89	86	86
3010	24660	75	91	93	86	86
3012	24639	81	88	89	86	86
3013	24666	81	82	84	82	82
3015	Local ©	79	79	85	81	81
3016	24659	80	83	83	82	82
3017	24632	77	85	82	81	81
	Exp Mean	**79**	**85**	**85**	**83**	**83**
	C.D. 5%	2	3	4	2	2
	C.V.%	1.53	1.93	3.06	2.47	2.47

Table No. 8.10 contd.: Plant Height (cm) of entries in AVT 1-AEROBIC ZONE-2,3 & 5 Kharif 2015

Entry No.	IET No.	II	III							Zone III Mean (6)	V				Zonal V (3) Mean	Overall (10) Mean
		PUN	OD	BI	BI	BI (2)	JH	W.B	U.P.		CG	CG	CG	CG (3)		
		LDH	CRR	SBR	PTN-ICAR	Mean	RCI	HTW	MSD		RPR	JDP	AMB	Mean		
3003	24665	111	112	105	101	103	88	101	78	97	99	112	101	104	104	101
3005	24630	108	104	111	111	111	86	105	84	100	108	109	85	101	101	101
3006	CR Dhan 201 (NC)	105	111	111	112	111	86	104	85	101	92	106	91	96	96	100
3009	Zonal Check	109	106	101	115	108	88	103	87	100	104	114	92	103	103	102
3010	24660	107	107	125	124	124	91	99	84	105	107	107	98	104	104	105
3015	Local ©	89	113	100	105	102	75	95	81	95	88	86	80	84	84	91
	Exp Mean	**105**	**109**	**109**	**111**	**110**	**86**	**101**	**83**	**100**	**100**	**106**	**91**	**99**	**99**	**100**

Table No. 8.10 contd. : Plant Height (cm) of entries in AVT 1-AEROBIC ZONE-7 Kharif 2015

Entry No.	IET No.	VII			Zone VII (3) Mean	Overall (3) Mean
		TEL	TN	KA		
		RDR	CBT	MND		
3003	24665	107	101	82	97	97
3004	24640	111	110	81	101	101
3005	24630	108	113	74	98	98
3006	CR Dhan 201 (NC)	104	105	72	94	94
3009	Zonal Check	86	98	71	85	85
3010	24660	109	108	81	99	99
3012	24639	93	97	60	83	83
3013	24666	99	102	65	89	89
3015	Local ©	93	95	72	87	87
3016	24659	116	112	80	103	103
3017	24632	115	111	77	101	101
	Exp Mean	**104**	**105**	**74**	**94**	**94**

Table No. 8.11: Panicles/ M² of entries in AVT 1-AEROBIC ZONE-2,3 & 5, Kharif 2015

Entry No.	IET No.	II	III									Zone III (7)Mean	V				Zonal V (3) Mean	Overall (11) Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	W.B	U.P.		CG	CG	CG	CG (3)		
		LDH	CRR	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	HTW	MSD		RPR	JDP	AMB	Mean		
3003	24665	298	381	245	313	129	184	157	137	268	230	225	208	238	162	203	203	225
3005	24630	438	395	185	290	132	224	178	205	284	293	245	221	360	197	259	259	267
3006	CR Dhan 201 (NC)	432	398	166	282	143	290	217	201	305	248	250	261	422	173	285	285	276
3009	Zonal Check	378	322	235	279	135	219	177	161	304	273	236	234	275	171	226	226	246
3010	24660	360	369	252	310	165	242	204	174	287	250	248	232	360	190	261	261	262
3015	Local ©	378	400	181	291	177	223	200	180	265	277	243	236	298	175	236	236	254
	Exp Mean	**381**	**378**	**211**	**294**	**147**	**230**	**189**	**176**	**286**	**262**	**241**	**232**	**326**	**178**	**245**	**245**	**255**
	C.D. 5%	76	38	26	20	50	16	23	71	23	34	14	30	84	27		21	13
	C.V.%	10.95	5.50	6.79	5.83	18.69	3.82	10.23	21.96	4.33	7.04	9.55	7.13	14.18	8.21		8.95	10.79

Table No. 8.11 Contd.: Panicles/ M² of entries in AVT 1-AEROBIC ZONE-6 Kharif 2015

Entry No.	IET No.	VI			Zonal VI (1) Mean	Overall (1) Mean
		GU NVS	GU @DRL	GU (1) Mean		
3001	24636	213	62	213	213	213
3002	24651	147	99	147	147	147
3003	24665	225	62	225	225	225
3004	24640	124	57	124	124	124
3005	24630	200	96	200	200	200
3006	CR Dhan 201 (NC)	289	74	289	289	289
3007	24661	80	72	80	80	80
3008	24658	160		160	160	160
3009	Zonal Check	75	73	75	75	75
3010	24660	200	101	200	200	200
3011	24670	185		185	185	185
3014	24664	244		244	244	244
3015	Local ©	193	51	193	193	193
	Exp Mean	**180**	**75**	**180**	**180**	**180**
	C.D. 5%	43	7	44	43	43
	C.V.%	14.34	5.41	14.52	14.20	14.20

Table No. 8.11 Contd: Panicles/ M² of entries in AVT 1-AEROBIC ZONE-7Kharif 2015

Entry No.	IET No.	VII			Zone VII (3) Mean	Overall (3) Mean
		TEL RDR	TN CBT	KA MND		
3003	24665	270	407	277	318	318
3004	24640	271	330	281	294	294
3005	24630	325	343	247	305	305
3006	CR Dhan 201 (NC)	268	358	288	305	305
3009	Zonal Check	234	353	292	293	293
3010	24660	325	323	310	319	319
3012	24639	266	327	315	303	303
3013	24666	206	285	274	255	255
3015	Local ©	287	370	281	313	313
3016	24659	280	360	272	304	304
3017	24632	258	306	301	288	288
	Exp Mean	**272**	**342**	**285**	**300**	**300**
	C.D. 5%	51	73	93	40	40
	C.V.%	11.03	12.54	19.21	14.13	14.07

Table 8.12: Grain quality characteristics of entries in AVT 1-Aerob, kharif 2015

Enty No..	IET NO.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chake	ASV	AC	GC	ASV	AC	GC
3001	24636	78.4	69.4	56.4	6.45	2.17	2.97	LB	VOC	7	22.76	22	6.3	24.82	46
3002	24651	78.5	65.2	46.3	6.63	2.15	3.08	LS	VOC	4	22.49	68	3.0	22.35	60
3003	24665	78.1	67.7	41.7	5.49	2.28	2.4	SB	VOC	7	21.88	57	7.0	21.52	46
3004	24640	78.9	70.3	66.8	6.33	2.16	2.93	LB	VOC	4	25.05	37	5.0	24.90	61
3005	24630	76.6	66.4	52.1	6.57	2.1	3.12	LS	VOC	7	27.33	42	6.3	25.12	50
3006	CRDHAN201	76.6	65.7	49.7	6.35	2.03	3.12	LS	VOC	7	23.61	55	7.0	22.87	64
3007	24661	76.9	67.8	57.8	5.47	2.35	2.32	SB	VOC	3	22.64	58	3.3	23.17	46
3008	24658	77.1	62	38.8	5.96	2.13	2.79	MS	OC	4	22.64	59	4.0	21.22	31
3009	MAS946-1(ZC)	79.6	65.4	43.1	5.92	2.15	2.75	MS	VOC	4	23.2	60	3.6	23.85	31
3010	24660	76.8	61.3	40.2	5.37	2.3	2.33	SB	OC	3	24.58	80	4.3	24.60	32
3011	24670	79.5	64.7	36.6	6.16	2.02	3.04	LS	VOC	4	25.25	58	3.0	23.77	30
3012	24639	77.5	68.8	62.6	4.48	1.86	2.4	SB	A	4	22.85	23	3.0	22.35	30
3013	24666	79.8	69.5	53.9	6.32	2.45	2.57	LB	VOC	4	27.6	38	4.0	24.75	34
3014	24664	78.6	70.1	65.1	6.46	2.27	2.84	LB	VOC	5	14.63	50	6.0	25.80	64
3016	24659	76.7	65.6	34.7	6.07	2.29	2.65	LB	VOC	7	22.67	62	7.0	23.10	36
3017	24632	76.4	66.9	45.7	5.75	2.33	2.46	SB	VOC	7	22.73	54	7.0	22.50	38

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 8.13: Composition of entries in Initial Variety Trial –Aerobic (IVT- AEROB), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing:				
3101	25606	OR 2537-9	OR1643-2/IR62037-93	MS
3102	25607	CR 3848-2-1-1-7	Vandana/BG90-2//PSB RC 18	LS
3103	25608	ARB-14	Budda/IR 64	MS
3104	25609	RP 5177-322-8-5-3-2	Swarna/ Sinnasivappu	LS
3105	25610	PAU-2K 10-23-53-14-52-20-0-4	PAU 201/PAU 3699-13-2-3-1// PAU 201	LS
3106	25611	TRC-2015-8	TRC-87-251/SAMBHA MAHSURI	MS
3107	25612	KMP-223	IR64/IET16348-22	LS
3108	25613	UPR 3841-8-1	UPR 2757-1-2-2/UPR2787-9-1-1	LS
3109	25614	R 1973-206-2-86-1	MTU 1010 X RP 4092	LS
3110	25615	***IIRRH -107 (HYBRID)***	-	MS
3111	25616	RP 5955-15-1-1-1-1	RP 5125-42-6-4-1-1/ IR 78878-53-2-2-2	SB
3112	25617	MC 13	MC13A/MC13R	LB
3113	25618	RCPR-20-IR83929-B-B-291-2-1-1-2	IR78878-53-2-2-2/CT6510-24-1-2	LS
3114	25619	CR 3947-9-25-3-2	IR 64/PSB RC 18	LB
3115	25620	OR 2529-1	Sararhi//Subhadra	MS
3116	25621	RP 5440-562-9-5-2	IR 64/IR 155-179313-11-3-9	LS
3117	25622	RP 5587-B-B-B-313	IR64/IR 75870-5-8-5-B-2-B	LS
3118	25623	TRC-2015-14	Naveen/Fulbadam	LB
3119	25624	RP 5940-15-13-2-1-1	MTU 1010//IR64*2/O.glaberrima	LS
3120	25625	RCPR-21-IR84887-B-158-7-1-1-4	IRRI148/IR78877-208-B-1-1	LS
3121	24704	HHZ 17-DT6-Sal3-DT1	Huang-Hua-Zhan*2/CDR-22	LS
3122	25626	***US-323 (Hybrid)***	-	LS
3123	25627	IR 95785-CR3946-42-1-1-4	IR84852-B-12-2/1R82804-81-1-3	MB

Entry No.	IET No.	Designation	Cross Combination	Grain type
3124	25628	CR 3856-44-22-2-1-10-3-1	IR 73963-86-1-5-2-2/CR 2324	MS
3125	24461	RP 5881-WEED TOLERANT RICE 1	Wushanyouzhan/PI312777	LB
3126	**CR Dhan 201 (NC)**			
3127	25629	UPR 3837-2-2-1-3	Narendra 359/UPR 2778-12-1-1	LS
3128	25630	KMP-224	IR 64/IET16348-27	MS
3129	25631	OR 2526-6	Daya/UPRI1425	MS
3130	25632	RP 5587-B-B-B-260	IR 64/IR 75870-5-8-5-B-2-B	LS
3131	25633	R 1986-296-2-86-1	Dateshwari / R 1493	LS
3132	25634	***NPH-2003***	***IET-25A/NPS 2111***	LS
3133	25635	GNV-14-18	BPT 5204/MTU 1010	MS
3134	**CR Dhan 202 (Northern & Eastern), AAUDR-1 (Western), MAS 946-1 (Southern)—Zonal Check**			
3135	25636	TRC-2015-15	Swarna/Kataktara	LS
3136	25637	BRR 0048 (IR 83383-B-B-129-4)	IR 72022-46-2-3-3-2/IR 57514-PMI 5B	LS
3137	25638	CR 3300-2 (IR 72158-154-3-2-1 CR 3300-2-1)	BG 90-2/IR 67962-84-2-2-2	LS
3138	25639	TRC-2015-20	TRC-87-251/BETI	LS
3139	25640	RCPR-22-IR84899-B-183-20-1-1-1	IR78877-208-B-1-1/IRRI 132	LS
3140	25641	CR 3948-2-1-2-2-1	Lalat/CR2340-11	LS
3141	25642	OR 2537-1	OR1643-2/IR62037-93	MS
3142	25643	RP 5938-243-8-6-2-2	Samba Mahsuri / IRBPHN 15	MS
3143	25644	IR 95797- CR3847-1-1-1-1	IR84852-B-12-2/ IR79643-39-2-2	LS
3144	25645	KMP-175	Thanu/IET15963	LB
3145	25646	UPR 3929-8-1-1	Pantdhan 12/UPR 2919-14-1-1	LS
3146	**PA 6129 (HC)**			
3147	25647	CR 3848-1-1-1-6	Vandana/BG 90-2//PSB RC 18	LS
3148	25648	RP 5587-B-B-B-305-13	IR64/IR 75870-5-8-5-B-2-B	LS
3149	25649	NDR 1018-1-1-2	Cavery/Panidhan	MS
3150	25650	TRC-2015-11	Naveen/Kataktara	LS
3151	25651	IR 95797-CR3847-38-3-2-1-2	IR84852-B-12-2/2IR79643-39-2-2	LS
3152	25652	R 1662-1419-2-742-1	R1044-5552-1-1 / Danteshwari	LB
3153	25653	RP 5943-421-16-1-1-B	RP 5124-11-4-3-2-1/IR 78877-208-B-1-1	SB
3154	24721	Huanghuazhan (RYT 3379)	Huang-Xin-Zhan/Feng-Hua-Zhan	LS
3155	25654	CR 3846-2-1-2-1-1	IR72/PSB RC 18	LS
3156	25655	CR 3848-1-2-1-1-1	Vandana/BG90-2//PSB RC 18	LS
3157	25656	CR 3947-1-3-1-1-1	IR 64/PSB RC 18	LS
3158	25657	CR 3580-3-1-1-1-1-1	Lalat / N 22	MB
3159	25658	CR 3721-11(IR 71701-28-1-4 CR 3721-11-1)	IR 66159-164-5-3-5/IRTP14184	MS
3160	25659	CR 3850-1-5-2-1-1	UPL RI 5/BG 90-2//IR12979-24-1	LS
3161	25660	RP 5940-93-14-1-1-1-B	MTU 1010//IR64*2/O.glaberrima	LS
3162	**Local Check**			
3163	25661	CR 3849-2-1-1-2-1	IR64/Thadokkham 1//Aday	LS
3164	25662	TRC-2015-12	Naveen/Kataktara	LS

Table No. 8.14 : Grain Yield (kg/ha) of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	II		III									
		PUN		OD		OD		BI		BI		BI (2)	
		LDN		CTK	@	BBN	@	SBR		PTN-ICAR		Mean	
3101	25606	2677		910				1344		3840		2592	
3102	25607	3872		1215		341		4388	7	4775		4581	8%
3103	25608	3383		2312	9 #	227		1438		3245		2341	
3104	25609	2013		1858	#			1813		3180		2496	
3105	25610	4692	6 _17%	1860	#			4356	9	5120		4738	* 12%
3106	25611	3308		1695	#			2388		6650	7 *	4519	7%
3107	25612	3770		2122	#	909		SBR		4140		2914	
3108	25613	2847		1557	#	682		2944		7085	4 *	5014	* 19%
3109	25614	2705		1488		1818	4	3188		5815	*	4501	6%
3110	25615	4597	9 _15%	2900	2 #	795		4719	6	6075	*	5397	6 * 28%
3111	25616	4693	5 _17%	1488		1705	7	5375	1 *	5740	*	5558	4 * 31%
3112	25617	3852		2612	6 #	1818	5	3513		5310		4411	4%
3113	25618	4975	2 _24%	2092	#	1591	8	3050		6515	9 *	4783	* 13%
3114	25619	4660	7 _16%	1752	#	1136		3750		3940		3845	
3115	25620	2101		1175				3563		7195	3 *	5379	8 * 27%
3116	25621	1962		2268	#			2250		2215		2233	
3117	25622	3480		1523	#			2250		5425		3838	
3118	25623			2598	7 #	341		2188		4930		3559	
3119	25624	3818		1905	#	455		1688		6060	*	3874	
3120	25625	3973		2617	5 #	1023		3688		6445	*	5066	* 20%
3121	24704	4637	8 _16%	953		909		3613		3975		3794	
3122	25626	4175	_4%	2420	8 #	909		2688		5880	*	4284	1%
3123	25627	2428		1988	#	568		2750		6000	*	4375	3%
3124	25628	1623		1587	#	909		3438		5005		4221	
3125	24461	3843		1458		682		3438		4725		4081	
3126	CR Dhan 201 (NC)	2980		2063	#	568		2750		4590		3670	
3127	25629	2288		1032				3475		4220		3848	
3128	25630	4723	3 _18%	2062	#	682		2125		3650		2888	
3129	25631	1802		1002		341		1013		6670	6 *	3841	
3130	25632	3485		1662	#	341		2025		3535		2780	
3131	25633	2580		1763	#	1023		4250		6350	*	5300	9 * 25%
3132	25634	4283	_7%	1237		1477	9	4750	5	6225	*	5488	5 * 30%
3133	25635	4190	_4%	967		341		2500		5965	*	4233	
3134	Zonal Check	3792		2697	4 #	2273	1	4056		4405		4231	
3135	25636	2075		1432		1250		3263		6510	*	4886	* 15%
3136	25637	4155	_4%	1448		1136		4375	8	5040		4708	11%
3137	25638	3295		1157		568		4156		4260		4208	
3138	25639	3048		1520	#	568		1938		5905	*	3921	
3139	25640	4550	_13%	1895	#	2045	2	4888	4 *	5890	*	5389	7 * 27%
3140	25641	4058	_1%	1083		1136		4250		5655	*	4953	* 17%
3141	25642			950				1750		7390	2 *#	4570	8%
3142	25643	2750		1077				1519		4555		3037	
3143	25644	2810		1348		1250		2750		4525		3638	
3144	25645	3882		1355		909		2500		6215	*	4358	3%
3145	25646	2857		980		682		2438		5035		3736	
3146	PA 6129 (HC)	4010		1077		1932	3	5263	2 *	6780	5 *	6021	1 * 42%
3147	25647	3782		1118		795		4250		7700	1 *#	5975	2 * 41%
3148	25648	2442		3038	1 #	455		3250		4675		3963	
3149	25649	2635		1422		795		2875		4260		3568	
3150	25650	3473		1085		682		2944		3920		3432	
3151	25651	1882		2052	#	909		3438		4100		3769	
3152	25652	2712		2247	#	1136		2125		5575	*	3850	
3153	25653	4082	_2%	1385		1364		5263	3 *	6445	*	5854	3 * 38%
3154	24721	4708	4 _17%	1203		795		3831		4565		4198	
3155	25654	2897		1033		568		4194		6270	*	5232	* 24%
3156	25655	2475		1133		795		3263		5130		4196	
3157	25656	1587		1877	#	682		2706		3480		3093	
3158	25657	3287		1172		455		1875		4825		3350	
3159	25658	2655		1998	#	682		2719		5885	*	4302	2%
3160	25659	3527		1880	#	795		3031		3585		3308	
3161	25660	3615		1665	#	1250		2138		3795		2966	
3162	Local Check	4985	1 _24%	2747	3 #	1364		2031		4970		3501	
3163	25661	1913		1218		1250		3500		6610	8 *	5055	* 19%
3164	25662	4415	_10%	857		1818	6	3300		4785		4043	
	Exp Mean	**3367**		**1645**		**962**		**3098**		**5207**		**4152**	
	C.D. 5%	1048		438		619		700		590		493	
	C.V.%	15.57		13.33		32.11		11.31		5.67		8.49	
	Sowing Date	25-Jun		03-Jul		29-Jun		26-Jun		28-Jun			
	Local ©	PR 115		Pyari		Mandakini		Rajendra Suwasini		Rajendra Bhagwati			

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Contd... Table No. 8.14 : Grain Yield (kg/ha) of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	JH		U.P.		Zonal III (2)		V								Zonal V (2) Mean			
		RCI	@	GRK	@			CG RPR		CG JDP		CG (2) Mean							
3101	25606					2592				3720		3720				3720			
3102	25607	367		879		4581	8%	2684		2585		2634				2634			
3103	25608	467				2341		1396		4018		2707				2707			
3104	25609	333				2496		1188		3228		2208				2208			
3105	25610	700		1918		4738	* 12%	3198		2749		2974				2974			
3106	25611	333				4519	7%	2826		2879		2852				2852			
3107	25612	467				2914		2991		3724		3358				3358			
3108	25613	867				5014	* 19%	2396		3133		2764				2764			
3109	25614	300		2631	3	4501	6%	2684		5803	1 *#	4243	5	**7%**		4243	5	**7%**	
3110	25615	1000	7	1461		5397	6 * 28%	4126	3	2965		3545				3545			
3111	25616	667		2408	5	5558	4 * 31%	3525		3766		3645				3645			
3112	25617	1067	5 #	1255		4411	4%	3174		4473		3823				3823			
3113	25618	567		2039	9	4783	* 13%	1972		4333		3152				3152			
3114	25619	1100	4 #	2252	7	3845		4002	5	4976	4 #	4489	3	3% **13%**		4489	3	3% **13%**	
3115	25620					5379	8 * 27%	2052		3654		2853				2853			
3116	25621	467		1738		2233		1106		2729		1917				1917			
3117	25622					3838		2119		3779		2949				2949			
3118	25623	900		1074		3559		2500		4471		3486				3486			
3119	25624	500				3874		2951		3756		3354				3354			
3120	25625	633		1624		5066	* 20%	3331		2913		3122				3122			
3121	24704	967	9	2168	8	3794		2431		3674		3052				3052			
3122	25626	1033	6 #	1557		4284	1%	3071		4376		3724				3724			
3123	25627	600		3589	1	4375	3%	2524		3299		2911				2911			
3124	25628	667		1043		4221		3698	9	4520		4109	6	**4%**		4109	6	**4%**	
3125	24461	867		1656		4081		2563		4239		3401				3401			
3126	CR Dhan 201 (NC)	800		720		3670		3136		4634		3885				3885			
3127	25629	200		1546		3848		3040		3223		3131				3131			
3128	25630	467				2888		1725		3676		2701				2701			
3129	25631			989		3841				2673		2673				2673			
3130	25632	200		1163		2780		2396		3955		3175				3175			
3131	25633	333				5300	9 * 25%	3292		4359		3826				3826			
3132	25634	667		1355		5488	5 * 30%	3747	7	4369		4058	7	**2%**		4058	7	**2%**	
3133	25635	117				4233		1680		4928	6 #	3304				3304			
3134	Zonal Check	1233	2 #	823		4231		3870	6	4888	7 #	4379	4	**10%**		4379	4	**10%**	
3135	25636	933		1418		4886	* 15%	2568		4304		3436				3436			
3136	25637	333		1610		4708	* 11%	3587		4316		3952				3952			
3137	25638	400				4208		1778		3244		2511				2511			
3138	25639	567				3921		2936		3275		3106				3106			
3139	25640	1000	8	2486	4	5389	7 * 27%	4201	2	5230	2 #	4715	2 #	8% **19%**		4715	2 #	8% **19%**	
3140	25641	500		1050		4953	* 17%	3104		4789	9 #	3946				3946			
3141	25642					4570	8%			3681		3681				3681			
3142	25643					3037		1646		3149		2397				2397			
3143	25644	600		1209		3638		3004		4023		3513				3513			
3144	25645	400				4358	3%	3280		4818	8 #	4049	8	**2%**		4049	8	**2%**	
3145	25646	600		1482		3736		2368		3079		2723				2723			
3146	PA 6129 (HC)	667				6021	1 * 42%	4028	4	3906		3967				3967			
3147	25647					5975	2 * 41%	3090		3199		3144				3144			
3148	25648	133				3963		2260		4465		3363				3363			
3149	25649	633		911		3568		2303		3234		2769				2769			
3150	25650	533		1422		3432		2647		3750		3199				3199			
3151	25651	600		1589		3769		3120		4653		3886				3886			
3152	25652	667				3850		2744		4289		3517				3517			
3153	25653	700		2277	6	5854	3 * 38%	3249		4106		3678				3678			
3154	24721	700		816		4198		1857		3695		2776				2776			
3155	25654	367				5232	* 24%	2961		3941		3451				3451			
3156	25655	200				4196		3096		4940	5 #	4018	9	**1%**		4018	9	**1%**	
3157	25656	1333	1 #			3093		2256		4211		3233				3233			
3158	25657	467				3350		1865		3750		2807				2807			
3159	25658					4302	2%	1878		3243		2560				2560			
3160	25659	267		1720		3308		2984		3698		3341				3341			
3161	25660	367		3557	2	2966		2345		2798		2571				2571			
3162	Local Check	733		1918		3501		3747	8	3503		3625				3625			
3163	25661	733				5055	* 19%	3608		4369		3988		1%		3988	1%		
3164	25662	1200	3 #			4043		4319	1	5211	3 #	4765	1 #	9% **20%**		4765	1 #	9% **20%**	
	Exp Mean	**616**		**1649**		**4152**		**2791**		**3896**		**3356**				**3356**			
	C.D. 5%	366		1848		472		771		837		612				612			
	C.V.%	29.63		55.22		8.13		13.81		10.76		13.03				13.03			
	Sowing Date	01-Jul		27-Jun				01-Jul		07-Jul									
	Local ©	BVD-203		Sarjoo-52				Indira Aerobic 1		Danteshwari									

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Contd... Table No. 8.14 : Grain Yield (kg/ha) of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	VI				VII				Zonal VII (2) Mean		Overall (7) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		GU		GU		TN		KA								
		NVS	@	DRL	@	CBT		MND								
3101	25606	1721	3 *	998		3005		2529		2767		2852		103	82	334
3102	25607	1526	7 *	2192	*	2974		2635		2804		3416		89	88	324
3103	25608	1647	4 *	1464		2458		2444		2451		2626		78	88	281
3104	25609	2145	2 *#	1597		1771		1556		1663		2107		102	87	312
3105	25610	327		1597		3010		4984	6	3997		4016	4%	95	81	294
3106	25611	291		2174	*	3172		1757		2464		3283		95	83	292
3107	25612	292		1558		2234		3249		2742		3114		78	87	296
3108	25613	810		1927		3505		2910		3208		3546		92	95	318
3109	25614	107		922		2839		2085		2462		3588		90	84	341
3110	25615	411		3389	2 *#	4729	3 * ...33% _1%	4434		4582	6 6%	4521	4 * 18%	94	89	305
3111	25616	739		2143	*	4042	...14%	5079	4	4561	7 6%	4603	3 * 20%	83	99	307
3112	25617	136		3199	3 *	4953	2 * ...39% _6%	1884		3418		3880	1%	88	86	330
3113	25618	132		2710	*	4104	...16%	4233		4168		4169	9 8%	85	95	324
3114	25619	504		2587	*	3167		3577		3372		4010	4%	84	101	277
3115	25620	250		2818	9 *	4214	7 ...19%	5577	2	4895	3 14%	4051	5%	99	87	309
3116	25621	153		1586		2969		1735		2352		2138		90	74	303
3117	25622	740		1863		3406		4275		3841		3533		93	84	334
3118	25623	896	*	1386		3990	...12%	3407		3698		3581		92	80	314
3119	25624	267		1626		3536		3894		3715		3672		79	89	241
3120	25625	272		2525	*	3266		2974		3120		3798		81	97	267
3121	24704	466		2874	8 *	3089		2444		2766		3409		87	78	285
3122	25626	1013	*	3053	6 *	4057	...14%	1947		3002		3742		86	88	317
3123	25627	414		3092	4 *	3380		3471		3426		3407		88	92	298
3124	25628	504		2251	*	2620		2349		2484		3322		85	87	270
3125	24461	93		1276		3172		2349		2761		3475		85	83	313
3126	CR Dhan 201 (	366		1291		3552		5058	5	4305	8	3814		86	94	291
3127	25629	1188	*	1574		3026		2741		2883		3145		88	97	263
3128	25630	728		960		3411		2032		2722		3049		81	85	286
3129	25631	88		614		2193		2910		2551		2877		100	82	279
3130	25632	318		2662	*	2620		1841		2231		2837		92	80	304
3131	25633	2396	1 *#	1354		3245		4593		3919		4096	6%	87	91	305
3132	25634	861	*	2034		5214	1 * ...47% _12%	2413		3813		4429	7 * 15%	89	92	331
3133	25635	72		1166		4073	...15%	2328		3200		3666		85	84	287
3134	Zonal Check	707		932		3109		2804		2957		3846		82	96	273
3135	25636	902	*	378		3443		3820		3631		3712		89	80	312
3136	25637	1142	*	3595	1 *#	3188		3354		3271		4002	4%	85	95	311
3137	25638	112		750		3255		3270		3263		3323		96	88	296
3138	25639	100		409		3307		1979		2643		3198		91	90	290
3139	25640	292		2708	*	4063	...14%	7217	1 *#	5640	1 * 31% **12%**	5148	1 * 34% **6%**	85	100	287
3140	25641	674		1077		3766	...6%	3545		3655		4167	8%	88	87	295
3141	25642	1533	6 *	380		2766		3302		3034		3778		104	84	290
3142	25643	453		97		2703		1852		2277		2596		98	75	282
3143	25644	880	*	2052		2885		1915		2400		3130		88	88	303
3144	25645	130		2586	*	4177	8 ...18%	1905		3041		3825		80	104	296
3145	25646	188		2377	*	2396		2296		2346		2924		82	97	265
3146	PA 6129 (HC)	1588	5 *	2475	*	4661	4 * ...31%	5397	3	5029	2 * 17%	4864	2 * 26%	85	89	289
3147	25647	311		1302		2932		3630		3281		4083	6%	94	93	303
3148	25648	516		2435	*	2745		2508		2626		3192		91	82	297
3149	25649	65		2535	*	3672	...3%	2646		3159		3089		82	107	282
3150	25650	366		859		3911	...10%	4434		4173		3583		86	90	288
3151	25651	168		2139	*	4130	9 ...16%	4476		4303	9	3685		86	88	305
3152	25652	151		1501		2766		4360		3563		3510		86	85	292
3153	25653	1335	9 *	2289	*	3510		4899	9	4205		4508	5 * 17%	83	103	283
3154	24721	103		2697	*	3609	...2%	3386		3498		3665		86	80	294
3155	25654	1477	8 *	2484	*	4391	5 ...24%	4974	8	4682	4 9%	4232	8 * 10%	85	83	336
3156	25655	476		2432	*	3792	...7%	2614		3203		3616		91	78	276
3157	25656	1073	*	3043	7 *	3604	...1%	2910		3257		2965		85	84	312
3158	25657	99		2083	*	3104		2392		2748		3014		98	93	283
3159	25658	310		423		2792		4836		3814		3430		95	85	312
3160	25659	847		927		3036		4656		3846		3502		87	92	309
3161	25660	632		964		3188		2582		2885		2923		88	83	292
3162	Local Check	303		857		2427		4677		3552		3763		85	90	260
3163	25661	326		1804		3255		4402		3829		3951	3%	85	79	286
3164	25662	533		3082	5 *	4234	6 ...19%	4984	7	4609	5 7%	4464	6 * 16%	84	95	308
	Exp Mean	**620**		**1846**		**3372**		**3339**		**3356**		**3588**		**88**	**88**	**297**
	C.D. 5%	151		783		1050		764		649		333		1	9	31
	C.V.%	12.23		21.22		15.58		11.45		13.81		12.50		1.93	0.00	17.45
	Sowing Date	15-Jul		03-Aug		21-Aug		13-Jul								
	Local ©	NAUR-1		GR-9		Anna (R) 4		Rasi								

* Superior to Best Check % Superior over Best Check @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 8.15: Days to 50% Flowering of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	II	III								Zone III (5) Mean	V			Zone V (2) Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	U.P.		CG	CG	CG (2)	
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	@GRK		RPR	JDP	Mean	
3101	25606	104	76	110	93	113	110	111		101	102		99	99	99
3102	25607	80	83	90	87	99	83	91	100	107	91	87	84	85	85
3103	25608	65	75	76	75	81	72	77	81	92	77	77	77	77	77
3104	25609	105	83	100	91	117	112	115	109	97	104	103	94	99	99
3105	25610	95	83	92	87	101	86	93	99	101	92	97	91	94	94
3106	25611	92	81	100	91	105	93	99	97	96	95	92	82	87	87
3107	25612	67	66	74	70	81	68	74	109	92	79	77	73	75	75
3108	25613	90	73	89	81	102	83	92	104	102	90	94	90	92	92
3109	25614	85	75	85	80	99	80	89	98	102	87	115	81	98	98
3110	25615	96	83	88	86	95	86	90	100	101	90	94	88	91	91
3111	25616	80	82	82	82	89	77	83	94	101	85	84	62	73	73
3112	25617	77	78	80	79	87	80	83	96	105	84	93	83	88	88
3113	25618	83	83	83	83	93	78	86	90	87	85	85	81	83	83
3114	25619	80	77	83	80	92	84	88	90	104	85	85	79	82	82
3115	25620	104	76	108	92	115	107	111	103	103	102	106	96	101	101
3116	25621	82	82		82	100	86	93	97	104	91	92	82	87	87
3117	25622	84	82	96	89	107	86	96	103	103	94	94	90	92	92
3118	25623		82	90	86	102	86	94	99	107	92	91	85	88	88
3119	25624	70	79	74	77	87	70	78	79	102	78	78	76	77	77
3120	25625	81	76	80	78	87	78	83	83	104	81	83	77	80	80
3121	24704	77	81	80	81	95	78	87	93	104	85	88	81	84	84
3122	25626	77	70	81	75	96	78	87	91	102	83	90	81	85	85
3123	25627	80	81	86	84	93	82	87	97	105	88	90	84	87	87
3124	25628	76	81	85	83	93	84	89	92	105	87	85	78	81	81
3125	24461	78	74	84	79	88	81	84	94	103	84	85	80	82	82
3126	CR Dhan 201 (NC)	77	80	84	82	94	78	86	89	103	85	84	79	81	81
3127	25629	79	82	84	83	102	86	94	96	105	90	85	83	84	84
3128	25630	70	72	75	74	107	68	87	81	97	80	81	76	78	78
3129	25631	107	82	100	91	117	105	111	103	106	101		96	96	96
3130	25632	81	82	88	85	102	84	93	100	110	91	93	84	88	88
3131	25633	79	79	82	80	94	77	85	98	110	86	90	84	87	87
3132	25634	83	84	84	84	98	84	91	97	105	89	90	80	85	85
3133	25635	76	79	80	80	97	77	87	97	100	86	84	76	80	80
3134	Zonal Check	81	74	76	75	89	75	82	89	101	80	83	79	81	81
3135	25636	87	82	84	83	99	83	91	96	108	89	89	81	85	85
3136	25637	79	82	82	82	94	77	85	94	102	86	86	80	83	83
3137	25638	92	79	90	84	98	86	92	108	101	92	98	94	96	96
3138	25639	82	82	88	85	105	84	94	97	108	91	92	82	87	87
3139	25640	83	81	78	80	88	78	83	95	102	84	85	80	82	82
3140	25641	78	82	82	82	101	78	90	96	102	88	85	80	82	82
3141	25642		78	110	94	115	110	112	108	101	104		100	100	100
3142	25643	98	79	104	91	113	106	109	108	108	102	97	88	92	92
3143	25644	81	82	85	83	102	86	94	94	97	90	89	83	86	86
3144	25645	75	79	76	77	93	75	84	81	95	81	84	76	80	80
3145	25646	73	70	80	75	93	77	85	90	101	82	82	79	80	80
3146	PA 6129 (HC)	79	72	78	75	89	77	83	99	101	83	86	81	83	83
3147	25647	93	75	90	83	99	88	93	102	101	91	96	85	90	90
3148	25648	81	78	88	83	99	86	93	99	109	90	92	91	91	91
3149	25649	75	78	78	78	91	77	84	86	98	82	82	78	80	80
3150	25650	77	80	83	82	92	78	85	97	106	86	84	81	82	82
3151	25651	78	81	83	82	95	81	88	95	99	87	86	81	83	83
3152	25652	79	79	83	81	88	77	83	96	104	85	89	82	85	85
3153	25653	80	81	82	81	88	81	85	94	103	85	85	81	83	83
3154	24721	76	79	78	78	89	77	83	91	109	83	89	81	85	85
3155	25654	81	79	82	80	93	77	85	91	106	84	87	80	84	84
3156	25655	84	79	85	82	102	81	91	99	103	89	91	86	88	88
3157	25656	82	81	84	82	93	80	87	91	105	86	86	83	84	84
3158	25657	103	83	103	93	106	101	103	103	106	99	101	94	97	97
3159	25658	94	79	92	86	102	84	93	101	101	91	97	97	97	97
3160	25659	83	78	82	80	100	86	93	100	100	89	88	82	85	85
3161	25660	78	80	86	83	103	84	94	95	109	90	90	81	86	86
3162	Local Check	81	86	76	81	105	89	97	100	102	91	87	79	83	83
3163	25661	77	73	81	77	102	78	90	94	105	85	85	83	84	84
3164	25662	84	73	80	76	92	80	86	90	103	83	85	81	83	83
	Exp Mean	**83**	**79**	**86**	**82**	**97**	**83**	**90**	**96**	**102**	**88**	**89**	**83**	**86**	**86**
	C.D. 5%	4	3	1	2	2	2	1	2	4	1	2	2	1	1
	C.V.%	2.19	1.90	0.86	1.44	1.24	0.97	1.11	1.11	2.16	1.26	1.21	0.99	1.14	1.16

Table No. 8.15 Contd. : Days to 50% Flowering of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	VI			Zonal VI (2) Mean	VII		Zonal VII (2) Mean	Overall (12) Mean
		GU	GU	GU (2)		TN	KA		
		NVS	DRL	Mean		CBT	MND		
3101	25606	109	97	103	103	102	108	105	103
3102	25607	99	90	94	94	91	88	89	89
3103	25608	82	80	81	81	77	94	86	78
3104	25609	106	106	106	106	94	100	97	102
3105	25610	106	94	100	100	97	103	100	95
3106	25611	108	95	101	101	84	108	96	95
3107	25612	89	72	80	80	78	83	80	78
3108	25613	93	96	94	94	89	106	97	92
3109	25614	98	89	93	93	81	94	88	90
3110	25615	107	95	101	101	95	102	98	94
3111	25616	87	85	86	86	87	92	89	83
3112	25617	104	92	98	98	92	102	97	88
3113	25618	95	81	88	88	83	84	83	85
3114	25619	88	79	83	83	78	91	84	84
3115	25620	82	99	90	90	95	98	97	99
3116	25621	100	95	97	97	81	93	87	90
3117	25622	104	97	100	100	93	86	89	93
3118	25623	98	97	98	98	91	90	90	92
3119	25624	85	84	84	84	79	84	81	79
3120	25625	92	81	86	86	79	76	78	81
3121	24704	97	88	93	93	92	91	92	87
3122	25626	100	90	95	95	92	94	93	86
3123	25627	103	88	95	95	86	88	87	88
3124	25628	94	80	87	87	87	82	85	85
3125	24461	102	87	95	95	84	86	85	85
3126	CR Dhan 201 (NC)	99	95	97	97	87	84	85	86
3127	25629	98	87	92	92	92	86	89	88
3128	25630	86	90	88	88	80	86	83	81
3129	25631	101	94	97	97	107	93	100	100
3130	25632	108	93	101	101	95	90	93	92
3131	25633	89	95	92	92	86	94	90	87
3132	25634	106	82	94	94	93	94	93	89
3133	25635	98	82	90	90	80	91	85	85
3134	Zonal Check	80	67	73	73	105	93	99	82
3135	25636	99	99	99	99	90	87	89	89
3136	25637	95	89	92	92	85	83	84	85
3137	25638	111	98	104	104	94	104	99	96
3138	25639	105	94	99	99	91	91	91	91
3139	25640	95	87	91	91	86	85	86	85
3140	25641	101	96	98	98	91	85	88	88
3141	25642	111	96	103	103	105	108	106	104
3142	25643	108	99	103	103	90	90	90	98
3143	25644	100	80	90	90	85	87	86	88
3144	25645	98	75	86	86	76	79	78	80
3145	25646	94	79	86	86	85	82	83	82
3146	PA 6129 (HC)	96	85	90	90	90	93	92	85
3147	25647	107	97	102	102	96	98	97	94
3148	25648	104	93	98	98	93	88	90	91
3149	25649	97	90	93	93	77	82	79	82
3150	25650	96	90	93	93	87	85	86	86
3151	25651	103	87	95	95	82	85	83	86
3152	25652	97	91	94	94	81	86	84	86
3153	25653	84	83	83	83	82	84	83	83
3154	24721	98	93	95	95	96	91	93	86
3155	25654	96	88	92	92	81	84	82	85
3156	25655	107	100	104	104	89	92	91	91
3157	25656	94	86	90	90	79	87	83	85
3158	25657	109	95	102	102	87	92	89	98
3159	25658	106	97	101	101	98	91	95	95
3160	25659	96	83	90	90	87	81	84	87
3161	25660	96	87	91	91	89	83	86	88
3162	Local Check	98	66	82	82	77	80	78	85
3163	25661	99	81	90	90	86	84	85	85
3164	25662	92	84	88	88	87	86	87	84
	Exp Mean	**98**	**89**	**93**	**93**	**88**	**90**	**89**	**88**
	C.D. 5%	4	3	3	3	4	6	3	1
	C.V.%	2.08	1.97	2.36	2.36	2.23	3.08	2.56	1.93

Table No. 8.16 : Plant Height (cm) of entries in IVT-AEROBIC Kharif 2015

Entry No.	IET No.	II	III								Zone III (5)Mean
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	U.P.	
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	@GRK	
3101	25606	83	99	97	98	80	110	95		61	97
3102	25607	102	99	103	101	97	83	90	68	82	90
3103	25608	96	103	98	101	96	72	84	72	81	88
3104	25609	110	103	97	100	90	112	101	66	75	94
3105	25610	89	102	86	94	93	86	90	76	80	89
3106	25611	90	103	82	93	90	93	92	69	73	87
3107	25612	102	92	95	94	97	67	82	76	83	85
3108	25613	105	92	115	104	111	83	97	68	93	94
3109	25614	90	99	96	97	93	80	87	66	83	87
3110	25615	96	94	97	96	101	86	94	91	90	94
3111	25616	119	100	115	108	122	78	100	91	102	101
3112	25617	104	107	105	106	98	79	89	80	82	94
3113	25618	121	88	113	101	106	78	92	81	114	93
3114	25619	117	98	111	104	106	84	95	99	99	100
3115	25620	86	102	97	100	98	108	103		75	101
3116	25621	85	104	72	88	87	85	86	60	63	82
3117	25622	92	105	86	95	83	85	84		82	90
3118	25623		102	89	96	95	86	91	72	78	89
3119	25624	110	102	95	98	93	69	81	77		87
3120	25625	124	72	113	93	105	78	92	93	99	92
3121	24704	92	82	82	82	83	78	81	80	80	81
3122	25626	108	103	91	97	85	78	82	75	87	86
3123	25627	110	88	96	92	113	81	97	83	87	92
3124	25628	95	93	105	99	105	84	95	80	93	93
3125	24461	97	105	96	100	100	81	91	84	92	93
3126	CR Dhan 201 (NC)	110	100	95	98	115	79	97	92	95	96
3127	25629	99	104	111	108	118	85	102	85	96	101
3128	25630	101	92	91	92	91	68	80	81	89	85
3129	25631	83	95	96	95	96	105	101		71	98
3130	25632	93	101	85	93	93	83	88	63	69	85
3131	25633	104	105	99	102	99	76	88	77	86	91
3132	25634	108	100	110	105	111	84	98	89	88	99
3133	25635	102	101	93	97	99	76	88	55	96	85
3134	Zonal Check	110	82	110	96	122	75	99	95	95	97
3135	25636	90	93	99	96	98	83	91	74	82	89
3136	25637	113	105	112	108	109	76	93	79	89	96
3137	25638	96	108	105	106	110	85	98	87	89	99
3138	25639	107	107	97	102	100	84	92	86	91	95
3139	25640	116	103	117	110	123	78	101	87	100	102
3140	25641	102	89	100	95	102	78	90	77	88	89
3141	25642		96	95	96	100	110	105		72	100
3142	25643	77	98	78	88	77	106	92		60	90
3143	25644	94	81	96	89	104	86	95	81	91	90
3144	25645	121	102	112	107	126	76	101	97		103
3145	25646	114	98	111	105	101	77	89	89	102	95
3146	PA 6129 (HC)	97	96	108	102	99	78	89	74	83	91
3147	25647	100	97	115	106	109	88	99		93	102
3148	25648	92	106	97	101	99	86	93	60	78	90
3149	25649	140	96	125	111	122	77	100	112	109	106
3150	25650	108	96	99	97	98	78	88	72	91	89
3151	25651	108	103	100	101	102	80	91	80	88	93
3152	25652	92	104	90	97	97	77	87	76	88	89
3153	25653	118	101	113	107	127	81	104	82	117	101
3154	24721	91	103	93	98	92	78	85	72	81	88
3155	25654	89	102	88	95	95	76	86	68	73	86
3156	25655	87	106	84	95	86	81	84	56	70	83
3157	25656	93	101	93	97	101	80	91	78	79	91
3158	25657	97	97	103	100	112	100	106	80	83	98
3159	25658	96	103	97	100	100	84	92		91	96
3160	25659	111	98	97	97	108	86	97	80	95	94
3161	25660	86	102	96	99	91	84	88	69	84	88
3162	Local Check	92	103	115	109	94	91	93	68	84	94
3163	25661	92	97	93	95	84	79	82	68	79	84
3164	25662	104	94	105	100	108	80	94	90	91	95
	Exp Mean	**101**	**99**	**99**	**99**	**101**	**83**	**92**	**78**	**86**	**92**
	C.D. 5%							0			7

Contd... Table No. 8.16 Contd. : Plant Height (cm) of entries in IVT-AEROBIC Kharif 2015

Entry No.	IET No.	V			Zone V (2) Mean	VI			Zone VI (2) Mean	VII		Zone VII (2) Mean	Overall (12) Mean
		CG RPR	CG JDP	CG (2) Mean		GU NVS	GU DRL	GU (2) Mean		TN CBT	KA MND		
3101	25606		71	71	71	67	62	64	64	89	65	77	82
3102	25607	86	91	89	89	77	71	74	74	92	85	88	88
3103	25608	96	100	98	98	85	70	77	77	96	73	84	88
3104	25609	86	79	83	83	79	52	65	65	100	69	85	87
3105	25610	88	75	81	81	58	72	65	65	92	60	76	81
3106	25611	96	84	90	90	63	63	63	63	93	71	82	83
3107	25612	95	106	100	100	70	82	76	76	96	72	84	87
3108	25613	105	97	101	101	85	79	82	82	107	95	101	95
3109	25614	83	104	93	93	70	65	67	67	95	70	83	84
3110	25615	97	82	90	90	65	73	69	69	102	84	93	89
3111	25616	104	95	100	100	91	74	82	82	115	89	102	99
3112	25617	83	86	85	85	53	66	59	59	99	73	86	86
3113	25618	99	109	104	104	75	84	79	79	108	82	95	95
3114	25619	110	105	108	108	90	91	90	90	109	91	100	101
3115	25620	84	80	82	82	60	73	66	66	96	77	86	87
3116	25621	75	76	76	76	48	56	52	52	83	59	71	74
3117	25622	83	84	83	83	64	67	66	66	96	75	86	84
3118	25623	80	84	82	82	64	57	60	60	87	69	78	80
3119	25624	88	106	97	97	73	72	72	72	103	77	90	89
3120	25625	104	102	103	103	88	83	85	85	106	91	98	97
3121	24704	79	75	77	77	58	65	62	62	90	69	79	78
3122	25626	91	105	98	98	75	70	72	72	103	67	85	88
3123	25627	101	103	102	102	71	77	74	74	104	82	93	92
3124	25628	97	81	89	89	70	65	68	68	100	67	84	87
3125	24461	84	86	85	85	53	60	56	56	94	63	79	83
3126	CR Dhan 201 (NC)	99	101	100	100	65	84	74	74	104	81	92	94
3127	25629	107	91	99	99	84	82	83	83	103	94	99	97
3128	25630	82	98	90	90	75	75	75	75	99	67	83	85
3129	25631		73	73	73	54	53	54	54	90	77	84	82
3130	25632	84	78	81	81	59	63	61	61	92	65	78	80
3131	25633	95	91	93	93	78	71	74	74	102	97	100	91
3132	25634	96	95	95	95	68	73	70	70	104	73	88	92
3133	25635	97	90	93	93	65	64	64	64	95	76	85	84
3134	Zonal Check	109	105	107	107	90	94	92	92	94	67	81	96
3135	25636	79	81	80	80	60	48	54	54	94	66	80	80
3136	25637	102	112	107	107	83	68	75	75	104	74	89	95
3137	25638	90	86	88	88	55	62	58	58	94	81	88	88
3138	25639	96	92	94	94	62	73	67	67	102	77	90	90
3139	25640	100	112	106	106	67	80	74	74	113	100	106	100
3140	25641	95	92	93	93	67	62	65	65	95	80	88	87
3141	25642		73	73	73	65	52	58	58	96	71	83	84
3142	25643	75	71	73	73	50	51	50	50	86	57	72	75
3143	25644	90	96	93	93	78	72	75	75	106	73	89	88
3144	25645	107	114	111	111	90	92	91	91	121	85	103	104
3145	25646	110	104	107	107	82	86	84	84	104	85	94	97
3146	PA 6129 (HC)	102	96	99	99	65	73	69	69	97	80	89	89
3147	25647	105	76	90	90	65	83	74	74	102	81	92	93
3148	25648	72	81	77	77	64	65	64	64	91	68	80	82
3149	25649	103	119	111	111	84	86	85	85	123	94	109	107
3150	25650	98	99	99	99	78	73	75	75	109	77	93	90
3151	25651	84	99	91	91	57	64	61	61	105	73	89	88
3152	25652	96	91	93	93	48	69	58	58	104	75	90	85
3153	25653	115	111	113	113	91	86	88	88	113	98	106	103
3154	24721	74	66	70	70	57	67	62	62	94	69	82	80
3155	25654	96	95	95	95	70	63	66	66	98	62	80	83
3156	25655	78	83	80	80	58	62	60	60	96	61	78	78
3157	25656	88	87	88	88	68	62	65	65	97	61	79	84
3158	25657	97	83	90	90	74	84	79	79	104	83	93	93
3159	25658	87	67	77	77	61	63	62	62	92	88	90	85
3160	25659	97	96	96	96	75	72	73	73	104	83	94	92
3161	25660	95	81	88	88	70	59	64	64	96	71	83	83
3162	Local Check	94	86	90	90	65	99	82	82	97	75	86	90
3163	25661	79	87	83	83	58	56	57	57	87	72	79	79
3164	25662	102	104	103	103	73	85	79	79	106	91	98	95
	Exp Mean	**93**	**91**	**92**	**91**	**69**	**71**	**70**	**70**	**99**	**76**	**88**	**88**
	C.D. 5%			0	0			6	6				9

Table No. 8.17 : Panicles/ M² of entries in IVT-AEROBIC 2015 Kharif 2015

Entry No.	IET No.	II	III								Zone III (5) Mean	V	
		PUN	OD	OD	OD (2)	BI	BI	BI (2)	JH	U.P.		CG	CG
		LDN	CTK	BBN	Mean	SBR	PTN-ICAR	Mean	RCI	@GRK		RPR	JDP
3101	25606	450	240		240	140	343	241		93	241		300
3102	25607	490	264	188	226	317	250	283	172	209	238	251	215
3103	25608	305	297	156	227	187	293	240	146	158	216	224	270
3104	25609	400	215		215	342	281	311	128	152	241	285	269
3105	25610	360	182		182	284	261	272	170	294	224	246	256
3106	25611	465	314		314	179	257	218	153	210	226	254	249
3107	25612	440	330	170	250	270	287	279	152	28	242	206	326
3108	25613	410	215	228	221	221	214	218	803		336	257	273
3109	25614	620	281	225	253	303	254	278	170	299	246	244	330
3110	25615	430	264	260	262	267	270	268	180	266	248	264	246
3111	25616	460	347	287	317	286	227	256	108	300	251	255	277
3112	25617	580	264	253	259	319	213	266	207	193	251	237	483
3113	25618	410	149	320	234	259	278	268	160	320	233	261	430
3114	25619	460	248	185	216	277	255	266	186	126	230	272	275
3115	25620	500	248		248	300	248	274		270	265	233	220
3116	25621	289	297		297	258	299	278	150	136	251	225	330
3117	25622	375	248		248	249	289	269		298	262	238	418
3118	25623		314	108	211	272	280	276	232	295	241	270	385
3119	25624	410	149	128	138	137	223	180	151		157	225	244
3120	25625	485	198	198	198	252	196	224	140	207	197	248	272
3121	24704	400	297	157	227	307	221	264	147	237	226	250	288
3122	25626	575	347	172	259	201	230	215	224	234	235	251	316
3123	25627	500	281	240	260	282	288	285	125	110	243	267	323
3124	25628	415	248	135	191	231	189	210	135	241	187	245	270
3125	24461	440	363	220	292	291	241	266	146	260	252	257	479
3126	CR Dhan 201 (NC)	430	330	185	258	223	251	237	141	238	226	247	468
3127	25629	380	297		297	186	198	192	87	210	192	261	307
3128	25630	480	215	148	181	184	229	206	163	175	188	237	472
3129	25631	440	215	125	170	220	244	232		190	201		271
3130	25632	365	330	178	254	233	295	264	113	144	230	235	475
3131	25633	445	363	213	288	288	260	274	130	185	251	278	322
3132	25634	610	165	208	187	324	244	284	168	286	222	267	439
3133	25635	405	264	126	195	233	263	248	121	174	201	241	440
3134	Zonal Check	440	165	170	168	228	207	217	182	206	190	241	429
3135	25636	705	182	210	196	256	287	271	162	255	219	266	354
3136	25637	415	231	286	259	304	271	287	144	260	247	267	243
3137	25638	550	215	228	221	343	249	296	83	205	223	257	306
3138	25639	455	248	188	218	260	281	270	195	265	234	262	385
3139	25640	430	264	385	325	256	222	239	160	270	257	262	331
3140	25641	530	215	120	167	272	313	292	187	251	221	258	371
3141	25642		149		149	198	239	218		63	195		278
3142	25643	505	149		149	208	222	215		204	193	226	288
3143	25644	420	149	214	181	200	248	224	182	331	198	265	338
3144	25645	620	198	253	226	201	204	202	130		197		450
3145	25646	520	248	265	256	220	216	218	88	240	207	262	127
3146	PA 6129 (HC)	400	198	248	223	240	237	238	111	167	207	224	227
3147	25647	420	182	253	217	307	278	292		233	255	245	257
3148	25648	465	297	236	267	300	257	278	128	93	244	239	224
3149	25649	370	297	272	285	224	289	256	150	165	246	265	280
3150	25650	380	198	169	184	275	231	253	169	250	208	259	340
3151	25651	390	248	178	213	226	325	275	149	227	225	221	505
3152	25652	435	198	220	209	280	295	287	178	229	234	252	405
3153	25653	390	314	216	265	227	271	249	141	250	234	249	310
3154	24721	485	330	237	284	286	239	262	172	286	253	256	278
3155	25654	620	281	180	230	309	288	298	133	238	238	272	341
3156	25655	350	182	223	202	273	273	273	93	190	209	247	438
3157	25656	410	347	238	292	235	269	252	147		247	234	325
3158	25657	500	314	197	255	204	296	250	125	228	227	257	248
3159	25658	550	297	225	261	289	269	279		228	270	244	269
3160	25659	460	281	218	249	264	238	251	133	209	227	256	242
3161	25660	475	248	240	244	334	236	285	121	238	235	256	237
3162	Local Check	430	231	166	199	225	265	245	123	241	202	232	263
3163	25661	375	198	225	212	270	352	311	184		246	235	230
3164	25662	405	209	142	175	205	213	209	112		176	254	454
	Exp Mean	**454**	**250**	**208**	**231**	**253**	**257**	**255**	**160**	**216**	**228**	**250**	**323**
	C.D. 5%	132	54	0	28	51	72	43	251	54	51	40	88
	C.V.%	14.55	10.88	0.00	8.68	10.07	14.01	11.93	78.16	12.41	25.65	8.07	13.59

Contd... Table No. 8.17 Contd. : Panicles/ M² of entries in IVT-AEROBIC 2015 Kharif 2015

IET No.	V	Zone V (2) Mean	VI			Zone VI (1) Mean	VII		Zone VII (2) Mean	Overall (11) Mean
	CG (2)		GU	GU	GU (1)		TN	KA		
	Mean		NVS	@DRL	Mean		CBT	MND		
25606	300	300	534	77	534	534	365	305	335	334
25607	233	233	739	91	739	739	370	309	339	324
25608	247	247	711	106	711	711	253	254	253	281
25609	277	277	671	40	671	671	253	278	265	312
25610	251	251	522	69	522	522	378	285	331	294
25611	251	251	369	89	369	369	353	326	339	292
25612	266	266	549	42	549	549	270	257	264	296
25613	265	265	274	33	274	274	343	258	300	318
25614	287	287	638	73	638	638	405	281	343	341
25615	255	255	359	101	359	359	463	350	406	305
25616	266	266	539	63	539	539	323	271	297	307
25617	360	360	320	99	320	320	460	295	378	330
25618	345	345	667	101	667	667	300	333	316	324
25619	273	273	345	100	345	345	225	323	274	277
25620	226	226	398	105	398	398	330	309	319	309
25621	278	278	431	92	431	431	393	360	376	303
25622	328	328	488	79	488	488	385	322	354	334
25623	328	328	625	71	625	625	398	257	327	314
25624	234	234	406	60	406	406	333	244	288	241
25625	260	260	332	111	332	332	285	333	309	267
24704	269	269	554	73	554	554	265	251	258	285
25626	283	283	554	83	554	554	345	275	310	317
25627	295	295	341	91	341	341	335	295	315	298
25628	258	258	554	66	554	554	330	220	275	270
24461	368	368	348	70	348	348	275	381	328	313
CR Dhan 201 (NC)	357	357	334	50	334	334	264	326	295	291
25629	284	284	238	108	238	238	320	360	340	263
25630	354	354	447	79	447	447	308	271	289	286
25631	271	271	377	11	377	377	330	291	311	279
25632	355	355	488	65	488	488	323	312	317	304
25633	300	300	500	61	500	500	263	299	281	305
25634	353	353	438	73	438	438	463	316	389	331
25635	340	340	525	86	525	525	288	258	273	287
Zone Check	335	335	362	53	362	362	290	295	293	273
25636	310	310	475	52	475	475	303	230	266	312
25637	255	255	590	56	590	590	338	336	337	311
25638	281	281	339	41	339	339	313	377	345	296
25639	323	323	340	82	340	340	268	309	288	290
25640	296	296	300	113	300	300	303	247	275	287
25641	314	314	397	52	397	397	285	302	293	295
25642	278	278	529	98	529	529	345	292	318	290
25643	257	257	360	54	360	360	283	299	291	282
25644	301	301	789	99	789	789	308	223	265	303
25645	450	450	354	64	354	354	275	281	278	296
25646	195	195	460	54	460	460	288	219	253	265
PA 6129 (HC)	226	226	618	82	618	618	400	274	337	289
25647	251	251	428	55	428	428	308	354	331	303
25648	231	231	420	118	420	420	403	302	352	297
25649	272	272	379	110	379	379	293	281	287	282
25650	299	299	489	66	489	489	323	333	328	288
25651	363	363	520	92	520	520	283	316	299	305
25652	328	328	371	94	371	371	255	319	287	292
25653	279	279	443	73	443	443	258	295	276	283
24721	267	267	309	84	309	309	283	364	323	294
25654	306	306	572	83	572	572	363	340	351	336
25655	342	342	340	43	340	340	335	288	312	276
25656	279	279	638	93	638	638	308	281	294	312
25657	252	252	339	92	339	339	310	322	316	283
25658	256	256	294	37	294	294	333	357	345	312
25659	249	249	701	69	701	701	283	326	304	309
25660	246	246	536	110	536	536	263	268	265	292
Local Check	247	247	399	85	399	399	260	264	262	260
25661	232	232	451	72	451	451	273	360	316	286
25662	354	354	821	86	821	821	300	275	287	308
Exp Mean	**288**	**289**	**468**	**76**	**468**	**468**	**319**	**299**	**309**	**297**
C.D. 5%	46	48	33	4	32	32	99	105	71	31
C.V.%	11.40	12.04	3.49	2.35	3.44	3.47	15.46	17.58	16.51	17.45

Billions of people around the world and in India suffer from 'hidden hunger' or micronutrient malnutrition affecting the health of an individual directly and development of nations indirectly. The micronutrient malnutrition is distressing phenomena observed mostly in developing nations owing to their dependence on rice as a major staple food. Biofortification is the genetic enhancement strategy for breeding rice with increased nutrients especially iron and zinc. With national and international efforts during the last decade, several micronutrient dense rice breeding lines have been developed in India. In order to assess the micronutrient dense breeding lines developed by different centers across the country, the Rice Biofortification trial was initiated during Kharif 2013 under AICRIP and the performance of entries under IVT, AVT 1 and AVT 2 are presented below. The entries in AVT 2 trials for different duration and ecology group were also analyzed for iron and zinc content in the milled rice. The Iron and Zinc content of the entries are present in the tables. The soil analysis of the experimental sites were analyzed for ECe, pH and available Iron and zinc contents presented in table.

ADVANCE VARIETAL TRIAL 2 – RICE BIOFORTIFICATION (AVT-2 BIOFORT)

Locations : 22 **Entries: 9**

Checks : Micronutrient check: Kalanamak and Chittimuthyalu. Tables: 9.1
Yield Check: BPT 5204 & IR64

The trial was constituted with 9 test entries including 2 checks for yield - IR64 (LS) and BPT 5204 (MS) as well as 2 checks for micronutrient content-Chittimuthyalu and Kalanamak. The second yield check, IR 64 was included as per the recommendations of the 49th ARGM. Biofortification trial targets to identify entries having both high zinc and yield.

The trial was sent to 22 locations spread over 13 states. Data was received from 20 locations (except Gorkhpur and Bangalore) and seed samples were received from 20 centers viz., Pattambi, Navsari, Cuttack, Rewa, Aduthurai, Sakoli, Moncompu, Ludhiana, Chinsurah, Mugad, Coimbattore, Ratnagiri, Shirgaon, Puriliya, Hathwara, Nawagam, Karjat, Bangalore, Raipur, IIRR, Mandya and Brahmavar (samples spoiled). Samples from each centre were analyzed for iron and zinc content in polished rice through X-ray Fluorescence spectrophotometer (XRF) available at IIRR.

Based on the criteria set during 48th ARGM, entries possessing ≥ 20 ppm (parts per million) zinc and/or ≥ 10 ppm iron in polished rice are eligible for promotion. However, as the XRF values at DRR are 4 ppm lesser than ICP values for zinc, the entries with ≥ 16 ppm zinc in polished rice and yield on par or more than yield checks can be considered for promotion.

Yield data from 20 locations were analyzed, but data were not considered from Masodha (3237 kg/ha), Karjat (2691 kg/ha), Nawagam (2124 kg/ha), IIRR (1340 kg/ha), Aduthurai (2768 kg/ha), Mandya (2746 kg/ha) and Mugad (1320 kg/ha) due to low experimental yield and from IIRR (1340 kg/ha) due to high CV (>25). The CV for other locations ranged from 3.52% (Hathwara) to 20.69% (Moncompu). Mean yield of locations ranged from 1320 kg/ha (Mugad) to 5194 kg/ha (Hathwara) and mean yield of entries varied from 2962 kg/ha (Kalanamak) to 4552 kg/ha (IET 24780) (Table 9.2 to 9.5).

Values for iron and zinc content in polished rice and the mean of lowest and highest values recorded across locations and across entries are presented in Table. The checks for micronutrients viz., Kalanamak has 17.1 ppm zinc and 4.5 ppm iron, while Chittimuthyalu has 22.4 ppm zinc and 4.9 ppm iron in polished grains. None of the entries including the checks possessed polished grain iron content above the threshold value (i.e. ≥10 ppm). The protein content of the entries estimated from the seed grown at Navsari and Aduthurai ranged from 7.43 to 9.99%, indicating no significant difference (Table 9.9).

Range of iron and zinc in polished rice (in ppm) in entries and locations

	Across locations		Across entries	
	Lowest	**Highest**	**Lowest**	**Highest**
Iron	Aduthurai & Coimbatore (2.8)	Karjat (5.0)	IET 24780 (3.4)	Chittimuthyalu (4.9)
Zinc	Coimbatore (5.6)	Shirgoan (23.8)	IET 24780 (14.4)	Chittimuthyalu (22.4)

Entries varied with respect to plant type, crop duration and grain type and are comparable with the checks based on the selective parameters. All the entries were separated based on crop duration (50% flowering duration) and compared for yield with either IR 64 (≤ 95) or BPT 5204 (≥ 96). All the test entries except IET 24780 recorded zinc content above the Kalanamak (check for micronutrients) and also above the threshold value of 16 ppm in the polished grains, however, these values were less than other micronutrient check, Chittimuthyalu. The check entries - BPT 5204 and IR 64 gave an overall mean yield of 4431 kg/ha and 4250 kg/ha respectively and (Table 9.2), all test entries except IET No. 24780 recorded lower yield than the checks.

Yield performance and zinc content of superior entries

IET No.	Zinc in ppm	Yield in kg/ha (%yield advantage over yield check)						FD	Remarks
		Over all	II	III	V	VI	VII		
23834 RP Bio 5477 – NH 686	19.0	3450 (-18.8)	3640 (-26.5)	3589 (-23.0)	2976 (-32.5)	3658 (-14.9)	3551 (-2.0)	88	Discontinued
23824 R- RHZ-2	19.6	3771 (-11.3)	460 (-7.02)	4443 (-4.7)	3694 (-16.3)	3664 (-38.0)	3170 (-12.5)	90	**Promising in the states of Punjab, Telangana & Karnataka**
24780* CR 2829-PLN-37	14.4	4552 **(7.1)**	3602 (-27.2)	5294 **(13.6)**	4877 **(10.6)**	4333 **(0.8)**	4100 **(13.2)**	94	Repeat
IR 64	**17.3**	**4250**	**4241**	**4661**	**4411**	**4298**	**3622**	**91**	-
23829 R-RHZIH-7	18.9	3950 (-10.9)	3644 (-24.2)	4380 (-7.2)	**4178 (1.1)**	3937 (-8.4)	3539 (-19.8)	99	**Promising in the state of Madhya Pradesh**
23832 RP 5886-HP 3-IR80463-B39-3	18.9	4068 (-8.2)	4445 (-7.5)	3988 (-15.5)	4062 (-1.7)	**4305 (0.2)**	3869 (-12.3)	97	**Promising in the states of Andhra Pradesh (united), Karnataka and Tamil Nadu**
BPT 5204	**15.9**	**4431**	**4807**	**4719**	**4133**	**4296**	**4410**	**111**	-

*High protein line. FD – Flowering duration.

IET 23832 (RP 5886-HP 3-IR80463-B39-3), a cross from IR 73707-45-3-23-/IR 77080-B-34-3 with semi-dwarf stature, long slender grains and 97 days 50% flowering duration. It ranked 2nd in VI region and 3rd in VII region. It recorded significant yield advantage over checks in the states of Tamil Nadu, Andhra Pradesh and Karnataka during the

last two years. However, it stood at 2nd position in Tamil Nadu as well as Kerala and 7th in Karnataka in this year of testing. Presently, it showed yield advantage of 6.8 % in region VII and on par yield in VI region over IR 64, however, it showed on par yield in region VI compared with BPT 5204. It recorded overall mean of 18.9 ppm zinc and 4.2 ppm iron in polished rice. Quality wise though it's HRR% was varying, but, it's AC was consistently under desirable (intermediate) category all the three years of testing. It is moderately resistant to blast, sheath rot and rice tungro virus. **Based on the zinc content and yield performance, it is found promising in the states of Andhra Pradesh (United), Karnataka and Tamil Nadu.**

IET 24780 (CR 2829-PLN-37) a cross from HP-2/Naveen is with semi-dwarf stature, medium slender grains and 94 days 50% flowering duration. It showed yield advantage of 7.1 across the regions over IR 64. Compared with the same check, it showed >10% yield advantage in regions III, V and VII and similar yield in region VI. Quality wise, it showed moderate HRR% (58.3), high AC (25.93%), hard GC (34) and ASV (4.0) (Table 9.6). It's is a high protein line and it's average zinc content is consistently (both the years) less than approximately 1.0 ppm than the threshold value.

IET 23829 (R-RHZIH-7) a cross from IR 681444/HMT with semi-dwarf plant stature, short slender grains and 99 days 50% flowering duration, recorded on par yield with BPT 5204 in region V with overall mean of 18.90 ppm zinc and 4.1 ppm iron in polished rice. Despite it's mean yield was 10.9% less than the check, it recorded slightly less mean yield of -2.18 (first year) and -1.92 (second year) compared with BPT 5204 and IR 64 respectively. In second year, it showed yield advantage of 16.63% in region IV and on par yield (-0.53) in region III. Quality-wise, it showed HRR of 63.5% and 50.5% in 2nd and 1st year's respectively. Desirable intermediate AC was consistently noticed in all the three years of testing. **Based on zinc content and yield, it is found promising in the state of Madhya Pradesh.**

IET 23824 (R-RH2-2) a cross from Poornima/Annada with 94 cm plant height, long bold grains and 90 days of 50% flowering duration, recorded a mean yield of 3771 kg/ha. It showed yield advantage consistently in the states of Punjab, Telangana and Karnataka. It recorded overall mean of 15.9, 17.6 and 18.8 ppm zinc in polished rice in 2013, 2014 and 2015 respectively. Quality-wise, it consistently showed desirable AC (24.08%), high ASV (7.0) and medium GC (43 mm). It is resistant to white backed plant hopper. **Based on the above, this entry is promising in the states of Punjab, Telangana and Karnataka.**

IET No. 23834 has zinc content above threshold level of 16.0ppm, however, it's yield performance is inferior to the check, therefore, it is discontinued.

Yield performance of promising entries in AVT 2 Biofortification, Kharif-2015

IET No.	Year	Over all mean	State Rank	Yield Kg/ha	%BVC	Region Rank	Yield Kg/ha	%BVC
23832	2013	4356 (-10.04)	UT- 2	3127	128.4	R II	4291	31.6
			PUN	4431	2.5	R V-6	4874	39.8
			HAR- 6	4150	88.7			
			CG	4800	6.9			
			MH- 5	4723	-0.9			
			AP	3289	22.1			
			TN- 6	5924	30.8			
			KA- 2	5944	99.3			
	2014	4222 (-1.2)	J&K- 1	3578	22.9	R IV-2	4027	-2.2
			MP- 2	4514	21.9	R V-1	4738	14.9
			GU- 1	4536	13.6			
			TN- 1	4527	23.4			
			KA- 1	4504	26.2			
	2015	4068 (-8.2)	UP- 3	3573	26.9	R V-5	4062	-1.7
			MP- 4	4740	42.6	R VI-2	4305	0.2
			GU- 3	4283	2.5			
			TS- 4	1461	0.0			
			TN- 2	4333	5.1			
24780	2014	4483 (4.9)	J&K	2950	1.3	R III- 4	4996	25.3
			OD- 3	7075	164.4	R IV	4143	0.6
			UP- 5	4814	9.2	R V	4573	10.9
			MP- 5	6297	70.0			
			MH	4189	-0.3			
			GU	4073	2.0			
			TN	4361	18.8			
			KA- 2	4941	38.4			
	2015	4552 (2.7)	OD[1]	3768	0.9	R III-1	5294	12.2
			WB- 1	6057	16.2	R V-1	4877	18.0
			UP- 8	2923	3.8	R VI-1	4333	0.9
			MP- 2	4852	45.9			
			MH- 1	5057	7.7			
			TS- 2	1542	5.5			
			TN- 1	4388	6.4			
			KA- 3	4611	-2.7			
23829	2013	3872 (-2.18)	**UT**	1960	43.2	R II-9	4641	42.3
			PUN- 9	5483	26.8	R V	3992	14.5
			HAR- 7	3799	72.8			
			CG	4640	3.3			
			TN- 8	5770	27.4			
			KA	3567	19.6			
	2014	3661 (-14.3)	OD- 6	2750	2.8			
			JH- 2	2249	56.9			
			MP- 4	**4056**	**9.5**			
			GU- 2	4475	12.1			
	2015	3950 **(**-10.9**)**	UP- 2	3674	30.5	R V-3	4178	1.1
			MP- 1	**5113**	**53.8**			
			GU- 2	4288	2.6			

IET No.	Year	Over all mean	State Rank	Yield Kg/ha	%BVC	Region Rank	Yield Kg/ha	%BVC
23824	2013	3787 (-4.33)	UT- 9	2041	49.1	**R II**-7	4813	47.6
			PUN- 4	5956	37.8			
			HAR- 9	3669	66.8			
			AP	2812	4.4			
			TN	4831	6.6			
			KA- 7	5336	78.9			
	2014	90.4 (-9.6)	OD[2]	3173	18.6	**R V-3**	4097	-0.6
			JH[3]	1918	33.8			
			UP[1]	4779	8.4			
			TS[1]	4642	28.0			
			KA[2]	4422	23.9			
	2015	3771 (-14.9)	WB[4]	5232	0.4			
			UP[6]	2959	5.1			
			MP[5]	3880	16.7			
			KA[2]	4712	-0.6			
23834	2013	3835 (-3.11)	UT	2019	47.5	R II	3950	21.1
			PUN	4819	11.5	R V	4548	30.5
			HAR	3082	40.2			
			CG	4563	1.6			
			MH[6]	4614	-3.2			
			AP[5]	3676	36.5			
			TN	5218	15.2			
			KA	4954	66.1			
	2014	3535 **(**-17.3**)**	OD- 3	3155	17.9	R III- 2	3868	-3.0
			JH- 6	1698	18.5			
			MP- 5	3978	7.4			
	2015	3450 (-22.1)	UP- 5	3160	12.2			

Zinc content (in ppm) of promising entries across locations in AVT 2 Biofortification, Kharif-2015*

IET No.	Year	UT	PUN	J & K	OD	WB		UP	MP		CH	MH	
		PTN	LDH	CHT	CRRI	CHN	HTW	MSD	REW	JBP	RPR	SKL	KJT
23824	2013	17.3	-	-	-	21.9	-	-	13.4	-	-	-	-
	2014	-	20.9	19.5	23.1	-	-	-	13.3	16.1	16.8	13.7	24.5
	2015	-	25.0		19.3	17.2	16.2	-	12.5		18.7	15.1	18.6
Location mean		**17.3**	**23.0**	**19.5**	**21.2**	**19.6**	**16.2**	**-**	**13.1**	**16.1**	**17.8**	**14.4**	**21.5**
23829	2013	16.7	-	-	-	16.3	-	15.8	-	-	-	-	-
	2014	-	28.9	16.6	21.9	-	-	-	12.7	11.9	15.3	16.5	22.9
	2015	-	25.0	-	20.9	16.1	16.8	-	10.5		17.6	18.8	16.0
Location mean		**16.7**	**27.0**	**-**	**21.4**	**16.2**	**16.8**	**15.8**	**11.6**	**11.9**	**16.5**	**17.6**	**19.4**
23832	2013	16.7	-	-	-	16.7	-	13.6	8.6	-	-	-	-
	2014	-	27.9	23.2	21.7	-	-	-	8.1	13.0	15.8	18.0	22.8
	2015	-	27.2	-	21.4	15.0	16.1		8.8		17.4	-	18.0
Location mean		**16.7**	**27.5**	**23.2**	**21.5**	**15.9**	**16.1**	**13.6**	**8.5**	**13.0**	**16.6**	**18.0**	**20.4**
23834	2013	15.4	-	-	-	18.7	-	19.7	17.8	-	-	-	-
	2014	-	23.3	-	21.7	-	-	-	15.6	17.3	18.2	17.4	19.7
	2015	-	24.1	-	17.5	17.7	16.2	-	12.9	-	17.9	16.0	18.4
Location mean		**15.4**	**23.7**	**-**	**19.6**	**18.2**	**16.2**	**19.7**	**15.4**	**17.3**	**18.1**	**16.7**	**19.1**
BPT5204	2014	-	18.5	10.0	13.2	13.6	-	-	-	11.0	12.5	8.8	22.7
	2015	-	23.4		17.1	11.3	13.3	-	7.7		13.6	10.8	13.5
Location mean		**-**	**21.0**	**10.0**	**15.2**	**12.5**	**13.3**	**-**	**7.7**	**11.0**	**13.1**	**9.8**	**18.1**
	2013	17.2		-	-	14.7	-	19.0	7.0	-	-	-	-
	2014	-	19.2	14.3	19.5	-	-	-	12.8	11.5	12.0	9.7	16.2
	2015	-	23.9	-	-	13.1	12.5	-	9.9		13.2	13.0	12.5
Location mean		**17.2**	**21.5**	**14.3**	**19.5**	**13.9**	**12.5**	**19.0**	**9.9**	**11.5**	**12.6**	**11.4**	**14.3**
	2014	-	19.7	19.7	18.9	-	-	-	10.8	15.1	15.2	11.9	18.4
	2015	-	24.2	-	15.6	16.5	14.6	-	9.3	-	15.3	13.3	16.5
Location mean		**-**	**21.9**	**19.7**	**17.2**	**16.5**	**14.6**	**-**	**10.0**	**15.1**	**15.2**	**12.6**	**17.5**

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IET No.	Year	GU			TS	TN			KE	KA				Over all mean
		NWG	NVS	SHR	IIRR	CBT	MNC	ADT	PTB	DWD	MND	BNG	MGD	
23824	2013	-	-	-	8.4	-	21.7	-	-	-	14.0	14.8	-	**15.9**
	2014	-	16.3	25.7	16.7	6.9	-	-	-	-	16.0	-	17.1	**17.6**
	2015	15.8	24.3	22.1	16.2	3.2	27.1	23.5	26.2	18.1	18.3	19.0	-	**18.8**
Location mean		**15.8**	**20.3**	**23.9**	**13.8**	**5.1**	**24.4**	**23.5**	**26.2**	**18.1**	**16.1**	**16.9**	**17.1**	**17.4**
23829	2013	-	-	-	12.5	-	18.9	-	-	-	15.6	16.0	-	**16.0**
	2014		17.0	26.4	23.7	10.9	-	-	-	-	24.9	-	18.9	**19.2**
	2015	17.2	21.3	30.0	11.9	4.8	24.2	20.9	22.7	-	12.9	17.8	-	**18.1**
Location mean		**17.2**	**19.2**	**28.2**	**16.0**	**7.8**	**21.6**	**20.9**	**22.7**	**-**	**17.8**	**16.9**	**18.9**	**17.7**
23832	2013	-	-	-	17.3	-	24.5	-	-	-	16.5	14.9	-	**16.1**
	2014	-	14.9	19.4	24.0	5.6	-	-	-	-	15.8	-	16.1	**17.6**
	2015	16.9	18.8	27.9	9.7	7.5	23.1	-	23.1	15.9	14.5	28.8		**18.2**
Location mean		**16.9**	**16.9**	**23.6**	**17.0**	**6.6**	**23.8**	**-**	**23.1**	**15.9**	**15.6**	**21.9**	**16.1**	**17.3**
23834	2013	-	-	-	13.6	-	21.8	-	-	-	14.8	-	-	**17.4**
	2014	-	11.4	25.5	14.9	9.4	-	-	-	-	16.5	28.3	21.3	**18.6**
	2015	13.2	17.9	23.5	17.0	5.7	24.5	22.6	23.0	-	17.3	-	-	**18.0**
Location mean		**13.2**	**14.6**	**24.5**	**15.2**	**7.6**	**23.2**	**22.6**	**23.0**	**-**	**16.2**	**28.3**	**21.3**	**18.0**
BPT5204	2014	-	14.2	18.0	10.4	3.6	-	-	-	-	10.7	-	-	**12.9**
	2015	10.1	12.1	24.1	7.0	3.3	18.5	17.8	18.2	10.2	10.6	19.0	-	**13.8**
Location mean		**10.1**	**13.2**	**21.1**	**8.7**	**3.5**	**18.5**	**17.8**	**18.2**	**10.2**	**10.7**	**19.0**	**-**	**13.3**
	2013	-	-	-	10.5		21.1	-	-	-	14.9	18.7	-	**15.4**
	2014		13.1	23.1	15.4	10.9	-	-	-	-	17.8	-	15.1	**15.0**
	2015	14.8	16.9	22.1	9.9	6.1	21.9	16.0	17.4	-	15.9	21.0	-	**15.3**
Location mean		**14.8**	**15.0**	**22.6**	**11.9**	**8.5**	**21.5**	**16.0**	**17.4**	**-**	**16.2**	**19.9**	**15.1**	**15.2**
	2014	-	13.4	18.0	13.5	6.6	-	-	-	-	14.0	-	17.0	15.1
	2015	19.9	16.1	20.9	16.2	5.2	19.8	24.5	15.4	16.4	13.5	23.3	-	16.7
Location mean		**19.9**	**14.7**	**19.4**	**14.9**	**5.9**	**19.8**	**24.5**	**15.4**	**16.4**	**13.8**	**23.3**	**17.0**	**15.9**

*Means of the entries of 2015 year in this table slightly less (from the other tables showing zinc value of this trial) since Coimbatore values were also included

ADVANCE VARIETAL TRIAL 1 – RICE BIOFORTIFICATION (AVT-Biofort)

Locations : 19 **Entries: 29**
Checks : Micronutrient check: Kalanamak and Chittimuthyalu. **Tables: 9.10**
Yield Check: BPT 5204, IR64, Hybrid Check: DRRH 3

The trial was constituted with 24 test entries and five checks which include 2 for yield - IR64 (LS) & BPT 5204 (MS), Hybrid- DRRH3 as well as 2 for micronutrient content- Chittimuthyalu and Kalanamak. The second yield check- IR 64, was included as per the recommendations of the 49th ARGM and hybrid check- DRRH3 was included following the recommendations of 50th ARGM. The trial was sent to 22 locations spread over 13 states. Data was received from 19 locations (except Gorkhpur, Rewa and Bangalore) and seed samples were received from 17 centers viz., Pattambi, Navsari, Cuttack, Aduthurai, Sakoli, Moncompu, Ludhiana, Chinsurah, Coimbatore, Shirgaon, Hathwara, Nawagam, Karjat, Bangalore, Raipur, IIRR and Mandya. Samples from each centre were analyzed for iron and zinc content in polished rice through X-ray Fluorescence spectrophotometer (XRF) available at DRR.

Based on the criteria set during 48th ARGM, entries possessing ≥ 20 ppm (parts per million) zinc and/or ≥ 10 ppm iron in polished rice are eligible for promotion. Further, it was realized that BPT 5204 and IR 64 were found to possess zinc content around the threshold value and the AICRIP target is 4 ppm less than the Harvest plus target of 24 ppm. Henceforth, 24 ppm will be considered as threshold. However, as the XRF values at DRR are 4 ppm lesser than ICP values for zinc, the entries with ≥ 20 ppm zinc in polished rice and yield on par or more than the respective yield check can be considered for promotion.

Yield data from 19 locations were analyzed, but data were not considered from Masodha (3197 kg/ha), Nawagam (2856 kg/ha), Mugad (357 Kg/ha) and Brahmavar (2824 kg/ha) due to low experimental yield and IIRR (1312 kg/ha) and Audthurai (4899 kg/ha) due to high CV (>25). The CV for other locations ranged from 4.25% (Chinsurah) to 20.86% (Pattambi). Mean yield of locations ranged from 357 kg/ha (Mugad) to 5507 kg/ha (Hathwara) and mean yield of entries varied from 3202 kg/ha (Kalanamak) to 5097 kg/ha (DRRH 3) (Tables 9.11 to 9.14).

The checks for micronutrients viz., Kalanamak has 17.9 ppm zinc and 4.3 ppm iron, while Chittimuthyalu has 22.8 ppm zinc and 4.2 ppm iron in polished grains. None of the entries including the checks possessed polished grain iron content ≥ the threshold value (10 ppm). Zinc content of the entries at Coimbatore location was very low and hence not considered. The protein content of the entries was analysed by NIR spectroscopy in 10% milled rice from the seed samples of Cuttack, Aduthurai and Navsari. The result indicated that mean protein content of the entries ranged from 5.39 to 10.11%. The entries with more than 9% protein contents were IET 24360, IET 24772, IR 64, IET 24291, IET 24550, IET 24336, IET 24765, IET 24783 and IET 24777 (Table 9.19).

Entries varied with respect to plant type, crop duration and grain type and are comparable with the checks based on crop duration. All the entries were separated based on crop duration and compared for yield with either IR 64 (≤ 95) or BPT 5204 (≥ 96) across the zones (Table). Test entries having zinc content ≥ 20 ppm along with similar or higher yield in comparison with the respective check zone or overall basis were considered for promotion. The check entries - BPT 5204 and IR 64 gave an overall mean yield of 4713 kg/ha and 4197 kg/ha respectively.

IET 24555 (RP 5898-182-22-4-3-2-1), a derivative from RP Bio 226*1/CSR 27, has 97 cm plant height, medium slender grains and 106 days to 50% flowering. It's overall yield advantage was 5.9% over BPT 5204 with 2nd rank and stood at 3rd position in zone II. In polished rice grain, it has 20.1 ppm overall mean zinc content and 24.4 and 23.9 ppm zinc content in zones II and VII respectively, where it recorded either similar or more yield compared with the check. With respect to grain quality parameters, the entry recorded high HRR (63.6%), desirable AC (24.49%), high ASV (7.0) and hard GC (25 mm). **This entry is promoted to AVT 2.**

Yield performance and zinc content of superior entries

IET No.	Yield in kg/ha (%yield advantage) and zinc content in ppm												FD	Grain type	Remarks
	Overall mean		II		III		V		VI		VII				
	Yield	Zn	Yield	Zn	Yield	Zn	Yield	Zn	Yield	Zn	Yield	Zn			
24438	4527 (-3.9)	21.6	**6521 (5.9)**	**25.7**	4729 (-6.6)	21.3	3641 (-16.6)	19.4	4684 (-6.0)	22.5	**4201 (3.6)**	**22.0**	108	MS	**Promoted**
24440	4423 (-6.2)	20.7	**6241 (1.3)**	**26.7**	4883 (-3.6)	18.9	3419 (-21.7)	20.5	4284 (-14.1)	20.9	**4229 (4.3)**	**21.5**	109	MS	**Promoted**
24557	4079 (-13.5)	20.6	4252 (-31.0)	16.3	4602 (-9.1)	21.9	3617 (-17.2)	16.5	**5079 (1.9)**	**22.8**	3123 (-23.0)	19.8	107	MS	**Promoted**
24779	4283 (-9.1)	20.3	5137 (-16.6)	20.3	4653 (-8.1)	18.1	6930 (58.7)	18.5	3961 (-20.5)	20.9	**4209 (3.8)**	**21.6**	102	MS	**Promoted**
24555	**4989 (5.9)**	**19.8**	**6240 (1.3)**	**24.4**	5051 (-0.3)	17.1	4140 (-5.2)	16.2	5312 (6.6)	17.5	**4811 (18.6)**	**23.9**	106	MS	**Promoted**
24760	**4693 (-.04)**	**20.0**	**6112 (-0.7)**	**23.7**	5403 (6.7)	17.0	3931 (-10.0)	17.5	5075 (1.8)	18.5	3899 (-3.9)	22.7	110	MS	**Promoted**
24774	4685 (-0.6)	18.8	4692 (-23.8)	25.9	5059 (-0.1)	14.8	4590 (5.1)	15.5	4833 (-3.0)	**20.8**	**4341 (7.0)**	**21.5**	104	LB	**Promoted**
24775	4623 (-1.9)	18.9	4962 (-19.4)	21.0	4973 (-1.8)	14.8	4238 (-2.9)	13.5	5049 (1.3)	18.8	**4148 (2.3)**	**22.9**	110	SB	**Promoted**
24783	4883 (3.6)	18.3	4970 (-19.3)	21.4	5745 (13.4)	17.2	4465 (2.3)	12.7	4176 (-16.2)	17.2	**4955 (22.2)**	**21.6**	96	MS	**Promoted**
24360	4422 (-6.2)	18.2	4833 (-21.5)	19.1	5225 (3.2)	17.0	3637 (-16.7)	14.4	4465 (-10.4)	18.1	**4076 (0.5)**	**20.2**	96	LS	**Promoted**
24772	4285 (-9.1)	17.9	4124 (-33.0)	21.7	4643 (-8.3)	16.3	4707 (7.8)	14.4	3979 (-20.2)	16.7	**4073 (0.4)**	**21.2**	96	LB	**Promoted**
BPT5204	**4713**	**16.2**	**6158**	**20.2**	**5065**	**13.2**	**4366**	**12.4**	**4985**	**15.8**	**4056**	**18.6**	**112**	**MS**	-
24336	4598 (9.6)	17.8	**5711 (7.6)**	**21.5**	4945 (2.6)	16.0	5381 (33.4)	13.9	4209 (1.2)	17.3	3434 (-3.6)	20.4	93	MS	**Promoted**
IR64	**4197**	**16.8**	**5307**	**22.8**	**4818**	**17.2**	**4035**	**13.9**	**4159**	**18.1**	**3562**	**16.6**	**94**	**LS**	-

FD – Flowering duration

IET 24783 (CR 2829-PLN-32) derived from the cross HP-2/Naveen, possessed medium slender grains, 114 cm plant height, 96 days 50% flowering and recorded overall mean yield of 4883 kg/ha with 3.6% yield advantage over BPT 5204. It exhibited significant yield advantage in zone VII followed by zones III and V. In zone VII, it contains mean grain zinc content (21.6 ppm) in polished rice and also significant yield advantage with HRR (58%), desirable AC (23.32%), medium ASV (4.0) and hard GC (24 mm) (Table 9.15). **Based on the yield advantage and zinc content above the threshold level, this entry is promoted to AVT 2 trial.**

IET 24438 (RP 5898-138-14-9-8-4-2) derived from the cross RP Bio 226*1/CSR 27, has medium slender grains, 97 cm plant height, 108 days 50% flowering and yielded 4527 kg/ha. It ranked 1st in zone II with yield advantage of 5.9% over BPT 5204. Among the test entries, this entry possessed grain highest zinc content of 21.6 ppm in polished rice with good HRR (57.1%), desirable AC (24.25%), medium ASV (4.0) and hard GC (22 mm). **Based on its yield advantage (3.6%) and zinc content in zones VII and II, this entry is promoted to AVT 2 trial.**

IET 24779 (RP 5912-17-8-4-3-2-2) derived from the cross IR68703/BPT 5204//RP Bio-226, possessed medium slender grains, 107 cm plant height and 102 days 50% flowering.

It showed significant yield advantage (58.7%) in zone V and 3.8% yield advantage in zone VII over BPT 5204. The entry has overall mean grain zinc content of 20.3 ppm in polished rice. It has high HRR (65%), **it recorded marginally high AC (25.75%) and medium GC (41 mm) in the two years of testing. This entry is promoted to AVT 2 based on zinc content (21.6 ppm) and yield advantage in zone VII.**

IET 24774 (RP 5917-HP-8-IR 94064), a derivative from IR 91153-AC 316/IR 05F102, has 104 cm plant height, long bold grains and 104 days of 50% flowering. Compared with BPT 5204, it noted similar yields across the zones (4685 kg/ha). It showed yield advantage in zones V and VII and similar yield in zone III. With respect to grain quality parameters, the entry recorded good HRR (56.4%), intermediate AC (23.67%), high ASV (7.0) and medium GC (45 mm). **This entry promoted to AVT 2 based on zinc content above threshold level (21.5 ppm) and yield advantage in zone VII.**

IET 24775 (RP 4920-Bio -51(B)) derived from the cross BPT 5204/O. rufipogon, has short bold grains, 92 cm plant height and 110 days of 50% flowering with yield similar to Samba Mahsuri across the zones (4623 kg/ha) except zone II. It has HRR (55.9%), desirable AC (23.96%), medium ASV (4.0) and hard GC (25 mm). **This entry promoted to AVT 2 based on zinc content above threshold level (22.9 ppm) and yield advantage in zone VII.**

IET No. 24360 (RP 5892-32-9-5-4-3-2) derived from the BPT 5204/ IR 81519-21-5-6//IR 29 / Pokkali, possessed long slender grains, 90 cm plant height, showed 96 days of 50% flowering. It showed 3.2% yield advantage over Samba Mahsuri in zone III and similar yield in zone VII. The entry possessed HRR of 46%, desirable AC of 23.7%, ASV of 4.0 and GC of 25 mm. **This entry promoted to AVT 2 based on zinc content above threshold level (20.2 ppm) and similar yield in zone VII.**

IET 24772 (CR 2829-PLN-100) derived from the cross HP-2/Naveen, has long bold grains, 115 cm plant height, 96 days of 50% flowering and recorded lower overall mean yield than Samba Mahsuri, but, showed yield advantage in zone V and similar yield in zone VII. It has HRR of 54.4%, desirable AC of 23.49 %, medium ASV of 4.0 and hard GC of 25 mm. **This entry promoted to AVT 2 based on zinc content above threshold level (21.2 ppm) and similar yield in zone VII.**

IET 24440 (RP 5898-54-21-9-4-2-2) derived from the cross RP Bio 226*1/CSR 27, has medium slender grains, 97 cm plant height, 109 days of 50% flowering and recorded yield advantage of 4.3% in zone VII with zinc content above threshold level (21.5 ppm). It has HRR of 58.6%, marginally high AC of 25.54 %, high ASV of 7.0 and hard GC of 22 mm. **This entry is promoted to AVT 2.**

IET 24557 (RP 5898-38-7-2-1-1) derived from the cross RP Bio 226*1/CSR 27, has medium slender grains, 115 cm plant height, 96 days 50% flowering and recorded similar yield to Samba Mahsuri in zone VI with zinc content above threshold level (22.8 ppm). It has high HRR of 59.1%, desirable AC of 24.08 %, high ASV of 7.0 and hard GC of 22 mm. **This entry promoted to AVT 2.**

Other test entries were dropped due to lower yield than the respective check and mean zinc content less than 20.0 ppm either overall or zone wise.

Based on the above, twelve test entries viz., IET Nos. 24438, 24440, 24557, 24779, 24555, 24760, 24774, 24775, 24783, 24360, 24772 and 24336 are promoted to next year of testing (AVT 2 Biofortification trial).

INITIAL VARIETAL TRIAL – RICE BIOFORTIFICATION (IVT-Biofort)

Locations : 19 **Entries: 45**
Checks : Micronutrient check: Kalanamak and Chittimuthyalu. **Table: 9.20**
Yield Check: BPT 5204 (late) & IR64 (mid early)

The trial was constituted with 45 entries including 2 checks for yield - IR64 (mid early) and Samba Mahsuri (late), Hybrid check- DRRH3 as well as 2 more checks for micronutrient content-Chittimuthyalu and Kalanamak. The trial was sent to 22 locations spread over 13 states. Data was received from 19 locations except Rewa, Mugad and Bangalore. Harvested seed samples were received from only 16 centres except Masodha, Gorakhpur, Rewa, Mugad, Bangalore and Brahmavar. The received samples of each centre were analyzed for iron and zinc content in polished rice through X-ray Fluorescence spectrophotometer (XRF) available at IIRR. Biofortification trial targets to identify entries with both high zinc and yield.

Based on the criteria set during 48th ARGM, entries possessing ≥ 20 ppm zinc and/or ≥ 10 ppm iron in polished rice are eligible for promotion. Further, it was realized that BPT 5204 and IR 64 were found to possess zinc content around the threshold value of 20 ppm and the AICRIP target is 4ppm less than the Harvest plus target of 24 ppm. Henceforth, 24 ppm will be considered as threshold. However, as the XRF values at DRR are 4 ppm lesser than ICP values for zinc, the entries with ≥ 20 ppm zinc in polished rice and yield on par or more than the respective yield check can be considered for promotion.

Yield data from 19 locations were analyzed, but data were not considered from Masodha (3444 kg/ha), Karjat (2744 kg/ha) and Brahmavar (2211 kg/ha) due to low experimental yield and from IIRR, Aduthurai and Pattambi due to high CV (>25). The CV for other locations varied from 5.59% (Chinsurah) to 23.22% (Gorakhpur). Mean yield of locations ranged from 1741 kg/ha (IIRR) to 4957 kg/ha (Sakoli) and mean yield of entries varied from 2509 kg/ha (IET 25442) to 5210 kg/ha (IET 25460) (Table 9.21` to 9.24).

Values in ppm for iron and zinc content in polished rice and the mean of lowest and highest values recorded across locations and across entries are given in Table. The checks for micronutrients, Kalanamak has 17.3 ppm zinc and 4.1 ppm iron while Chittimuthyalu has 18.3 ppm zinc and 2.9 ppm iron in the polished grains. None of the entries including the checks has grain iron content ≥ the threshold value of 10 ppm. The protein content of the entries was analysed by NIR spectroscopy in 10% milled rice from the seed samples of Cuttack. The result indicated that mean protein content of the entries ranged from 4.6% to 10.25%. The entries with more than 9% protein content were IET 25470, IET 25476, IET 25459, IET 25454 and IET 25460 (Table 9.27).

Entries varied with respect to plant type, crop duration and grain type and are comparable with the checks based on duration. All the entries were separated based on the crop duration and compared for yield with either IR 64 (≤ 95) or BPT 5204 (≥ 96) across the zones (Table). Test entries having zinc content ≥ 20 ppm along with similar or higher yield in comparison to the respective check in zone or over all bases were considered for promotion. The check entries-Samba Mahsuri and IR 64 gave an overall mean yield of 4216 kg/ha and 3933 kg/ha respectively.

IET 25446 (R-RHZ-HI-11), a derivative from HMT/ IR 681444B-18-2-1-1, has 80 cm plant height, 94 days of 50% flowering, noted overall mean yield (3857 kg/ha) which is

similar to IR64. It recorded similar yield to IR64 in zones III and VII and showed highly significant yield advantage of 48% over the same check in zone V. In polished grain, it has 20.5 ppm over all mean zinc and 23.0 ppm in zone VII. **This entry is promoted to AVT 1 on averall mean yield and zinc content.**

IET 25461 (R-RHZ-MI-30) derived from the cross Moroberekan /IR 681444B-18-2-1-1, with 97 cm plant height, 95 days of 50% flowering and recorded mean yield of 3767 kg/ha. However, it ranked 1st in zone V with yield advantage of 6.8% and recorded similar yield to IR64 in zones III and VI. It has 20.7 ppm overall mean zinc content and 23.1 ppm in zone VI in the polished grain. **This entry is promoted to AVT-1 considering it's yield and zinc content in zones III and VI.**

Yield performance and zinc content of superior entries

IET No.	Yield in Kg/ha (% of yield advantage) and zinc content in ppm of the entries												FD	Remarks
	Overall mean		Zone II		Zone III		Zone V		Zone VI		Zone VII			
	Yield	Zinc	Yield	Zinc	Yield	Zinc	Yield	Zinc	Yield	Zinc	Yield	Zinc		
25475	**3881 (-1.3)**	**23.1**	5400 (-5.3)	29.5	**4367 (13.6)**	**21.2**	**4147 (19.4)**	**20.3**	3496 (-13.0)	25.1	2935 (-20.4)	23.9	91	**Promoted**
25446	**3857 (-1.9)**	**20.5**	3554 (-37.7)	31.5	3808 (-0.9)	18.7	5140 (48.0)	17.3	3389 (-15.6)	20.4	**3634 (-1.4)**	**23.0**	94	**Promoted**
25461	3767 (-4.2)	20.7	3469 (-39.2)	-	**3959 (3.0)**	**19.7**	3710 (6.8)	18.3	**3904 (-2.8)**	**23.1**	3510 (-4.8)	20.4	95	**Promoted**
IR 64 Check	**3933**	**17.2**	**5702**	**22.9**	**3844 (0.0)**	**16.4**	**3473 (0.0)**	**12.6**	**4017 (0.0)**	**17.6**	**3686 (0.0)**	**18.1**	**91**	-
25477	3620 (-14.1)	24.4	3563 (-40.7)	-	3656 (-12.3)	23.1	3752 (-11.2)	25.7	**4108 (6.7)**	**24.7**	3014 (-25.5)	24.4	101	**Promoted**
25450	3133 (-25.7)	23.7	2902 (-51.7)	33.6	3309 (-20.6)	22.8	3115 (-26.3)	24.1	**3856 (0.2)**	**23.7**	2265 (-44.0)	22.0	99	**Promoted**
25467	4047 (-4.0)	21.0	**6081 (1.2)**	**26.1**	**4085 (-2.0)**	**19.9**	3393 (-19.7)	18.8	3728 (-3.1)	21.5	**4073 (0.7)**	**21.1**	104	**Promoted**
25451	**4420 (4.8)**	**20.6**	**6414 (6.8)**	**31.2**	4230 (1.5)	18.6	4677 (10.7)	18.1	**4295 (11.6)**	**19.9**	**3962 (-2.1)**	**21.2**	103	**Promoted**
25458	**4331 (2.7)**	**20.5**	**6073 (1.1)**	**28.9**	**4562 (9.5)**	**20.0**	4212 (-0.3)	19.3	**4073 (5.8)**	**20.7**	3780 (-6.6)	19.4	105	**Promoted**
25465	3656 (-13.3)	20.5	4135 (-31.2)	31.4	3747 (-10.1)	18.4	3879 (-8.2)	17.35	**4017 (4.4)**	**20.3**	2867 (-29.1)	21.0	101	**Promoted**
25443	3629 (-13.9)	20.4	-	-	3295 (-20.9)	18.4	3641 (-13.8)	18.7	3543 (-8.0)	21.5	**4152 (2.6)**	**21.3**	109	**Promoted**
25470	4772 (13.2)	18.8	**6890 (14.7)**	**24.0**	4965 (19.2)	14.1	4632 (9.6)	17.4	**3824 (-0.6)**	**21.0**	4852 (19.9)	19.2	96	**Promoted**
BPT 5204 Check	**4216**	**15.4**	**6007**	**22.1**	**4167**	**12.8**	**4225**	**13.0**	**3849**	**15.6**	**4046**	**16.6**	**109**	-

IET No. 25477 (R-RHZ-LI-23) derived from the cross Lalmati / IR 681444B-13-2-1-1, with 99 cm plant height, showed 101 days of 50% flowering and recorded mean yield of 4020 kg/ha. However, it showed 6.7% yield advantage over IR64 in zone VI. The entry possessed 24.4 ppm overall mean zinc content and 24.7 ppm in zone VI in the polished rice grain. **Based on high zinc and yield advantage in zone VI, this entry is promoted to AVT1.**

IET 25450 (R-RHZ-LI-22) derived from the cross Lalmati / IR 681444B-13-2-1-1, has 99 cm plant height, 99 days of 50% flowering and recorded significantly lower overall mean yield (3133 kg/ha) compared with BPT 5204, but, showed similar yield against the same check in zone VI. The entry has 23.7 ppm over all mean grain zinc content and in zone VI in polished rice. **Based on high zinc and similar yield in zone VI, this entry is promoted to AVT1.**

IET 25467 (RP 5898-101-9-3-1-1) derived from the cross RP Bio 226*1/CSR 27, with 99 cms plant height, showed 104 days of 50% flowering and recorded lower overall mean yield (4047 kg/ha) than Samba Mahsuri. However, it showed similar yield against the same check in zones II, III and VII. In polished rice, this entry showed 21.0, 26.1 and 21.1

ppm zinc content in overall mean, zone II and zone VII respectively. **Based on its yield and zinc content in zone VII, this entry is promoted to AVT 1.**

IET 25451 (RP 5898-19-8-6-1-1-1) derived from the cross RP Bio 226*1/CSR 27, 98 cm plant height, 103 days 50% flowering and recorded overall mean yield of 4420 kg/ha with 4.8% yield advantage over Samba Mahsuri. Further, it showed yield advantage of 10.7, 11.6 and 6.8% in zones V, VI and II (2nd rank) respectively and similar to Samba Mahsuri yield in zones III and VII. The entry has overall mean grain zinc content of 20.6 ppm in polished rice. **Based on the overall mean yield and zinc content, this entry is being promoted to AVT 1 trial.**

IET 25458 (RP 5898-101-3-2-1-1) derived from the cross RP Bio 226*1/CSR 27, 96 cm plant height, 105 days of 50% flowering and recorded overall mean yield of 4331 kg/ha which is similar to Samba Mahsuri. It recorded significant yield advantage of 9.5 and 5.8% in zones III and VI respectively and similar yield to Samba Mahsuri in zones II and V. The entry has overall mean grain zinc content of 20.5 ppm in polished rice. **This entry recorded zinc content ≥ the threshold value in all the zones and promoted to AVT 1 trial.**

IET 25465 (Dadaji HMT) has 105 cm plant height, 101 days of 50% flowering and recorded lower overall mean yield of 3656 kg/ha than Samba Mahsuri. However, it recorded yield advantage of 4.4% over the same check in zones VI. The entry possessed over all mean grain zinc content of 20.5 ppm and 20.3 ppm in zone VI in polished rice. **The entry is promoted to AVT 1 trial considering its good performance in zone VI.**

IET 25443 (RP 4993-300-22-18-1-4-1) derived from the cross BPT 5204/Chittimutyalu, 94 cm plant height and 109 days 50% flowering with lower overall mean yield of 3629 kg/ha and mean yield similar to Samba Mahsuri in zone VII. The entry possessed over all mean grain zinc content of 20.4 ppm and 21.3 ppm in zone VII in polished rice. **Considering its good performance in zone VII, this entry is promoted to AVT 1 trial.**

IET 25470 (R-RHZ-R56) derived from the cross IR 91181-96-1-1-1-2, 104 cm plant height and 96 days 50% flowering. In comparison with Samba Mahsuri, it recorded overall mean yield of 4772 kg/ha with yield advantage of 13.23%. It recorded yield advantage of 9.6, 14.7, 19.2 and 19.9% in zones V, II, III and VII respectively and similar was observed in zone VI. It also showed zinc content above threshold level in zones II (24.0) and VII (21.0). **The entry is promoted to AVT 1 trial due to its good performance in zone VII.**

IET 25475 (R-RHZ-SM-14) derived from the cross Swarna/Moroberekan, has 94 cm plant height, 91 days 50% flowering and recorded overall mean yield of 3881 kg/ha which is similar to IR 64. This entry recorded significant yield advantage of 13.6 and 19.4% in zones III and V respectively. In polished rice grain, it has over all mean zinc content of 23.1 ppm and also 21.2 and 20.3 ppm in zones III and V. **The entry is promoted to AVT 1 trial considering it's good performance in overall mean and in zones III and V.**

IET Nos. 25472, 25462 and 25466 contain over all mean grain zinc content above the threshold level, however, they were dropped due to lower yields across the zones than their respective checks.

Based on the above, eleven entries viz., IET Nos. 25475, 25446, 25461, 25477, 25450, 25467, 25451, 25458, 25465, 25443 and 25470 are promoted to next year of testing (AVT 1 Biofortification trial).

Table 9.1: Composition of entries in Advance Variety Trial 2 – Rice Bio-fortification (AVT 2-Biofort), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
3201	23829	R- RHZIH-7	IR 681444/HMT	SS
3202	**IR 64 Check**			
3203	23834	RP Bio 5477 – NH 686	Mutant of Nagina 22	SB
3204	**Kalanamak Check**			
3205	23824	R- RHZ-2	Poornima/Annada	LB
3206	**BPT 5204 Check**			
3207	23832	RP 5886-HP 3-IR80463-B39-3	IR 73707-45-3-2-3/ IR 77080-B-34-3	LS
3208	**Chittimuthyalu Check**			
3209	24780	CR 2829-PLN-37	HP-2/Naveen	MS

Table No. 9.2: Grain Yield (kg/ha) of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II		III										Zone III (3) Mean		V						Zone V (3) Mean	
		PUN		OD		W.B		W.B		W.B (2)		U.P.				M.P.		CH		MH			
		LDN		CTK		CHN		HTW		Mean		@MSD				REW		RPR		SKL			
3201	23829	3644	5	3107	3	5233	4	4800	6	5017	6	3674	2 *	4380	6	5113	1 * ...6%	3023	7	4398	4	4178	3
3202	IR 64 Check (M)	4950	1	3001	4	5050	5	5933	3 *	5492	3	3895	1 *	4661	4	4839	3 *	3358	4	5035	2	4411	2
3203	23834	3640	6	2880	5	3900	8	3987	8	3943	8	3160	5 *	3589	8	2157	8	3268	5	3501	7	2976	8
3204	Kalanamak Check			2496	9	3700	9	3760	9	3730	9	2931	7	3319	9	2036	9	2668	8	4225	5	2976	7
3205	23824	4602	3	2867	6	4667	7	5797	4 *	5232	4	2959	6	4443	5	3880	5	3178	6	4022	6	3694	6
3206	BPT 5204 Check (L)	4807	2	3734	2 £	5333	3	5090	5	5212	5	2816	9	4719	3	3325	6	4098	2 £	4977	3	4133	4
3207	23832	4445	4	2720	8	4883	6	4360	7	4622	7	3573	3 *	3988	7	4740	4 *	3385	3			4062	5
3208	Chittimuthyalu Check			2765	7	5350	2	6303	2 *£	5827	2 6%	3204	4 *	4806	2 2%	2739	7	2128	9	2604	8	2490	9
3209	24780	3602	7	3768	1 £ ...1%	5400	1 £	6713	1 *£	6057	1 10%	2923	8	5294	1 12%	4852	2 *	4367	1 £ ...7%	5411	1 *£	4877	1 11%
	Exp Mean	**4241**		**3037**		**4835**		**5194**		**5014**		**3237**		**4355**		**3742**		**3275**		**4272**		**3743**	
	C.D. 5%	758		566		322		267				322				574		531		290			
	C.V.%	12.02		12.77		4.56		3.52				6.82				10.51		11.11		4.62			
	Sowing Date	29-May		18-Jun		02-Jun		24-Jun				01-Jul				11-Jul		24-Jun		15-Jun			
	Planting Date	02-Jul		30-Jul		04-Aug		19-Jul				30-Jul				03-Aug		16-Jul		10-Jul			

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Table No. 9.2 Contd.:Grain Yield (kg/ha) of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI												Zone VI (2) Mean		VII							
		MH		MH		MH (2)		GU		GU		GU (1)				TEL		TN		TN		TN (1)	
		KJT	@	SHR		Mean		NWG	@	NVS		Mean				IRR	@	CBT		ADT	@	Mean	
3201	23829	2582	4	3586	9	3992	6	3307	1 £	4288	2	4288	2	3937	5	974	9	3913	4	3020	2	3913	4
3202	IR 64 Check (M)	2580	5	4296	5	4666	3	3108	3	4299	1	4299	1	4298	3	1120	7	3902	5	2620	7	3902	5
3203	23834	2009	7	3802	7	3652	9	1521	7	3514	6	3514	6	3658	8	1299	6	2815	8	3137	1	2815	8
3204	Kalanamak Check	2473	6	3654	8	3939	7	794	9	2403	9	2403	9	3028	9	1088	8	3095	7	2777	3	3095	7
3205	23824	2007	8	4068	6	4045	5	1918	5	3261	7	3261	7	3664	7	1380	5	2510	9	2763	4	2510	9
3206	BPT 5204 Check (L)	4054	1 £	4414	3	4695	2	3307	2 £	4179	4	4179	4	4296	4	1461	3	4123	3	2690	6	4123	3
3207	23832	3824	2 £	4327	4	4327	4	1389	8	4283	3	4283	3	4305	2	1461	4	4333	2			4333	2 5%
3208	Chittimuthyalu Check	2000	9	4833	1	3719	8	1984	4	2675	8	2675	8	3754	6	1737	1	3433	6	2407	8	3433	6
3209	24780	2688	3	4704	2	5057	1 8%	1786	6	3963	5	3963	5	4333	1 1%	1542	2	4388	1	2733	5	4388	1 6%
	Exp Mean	**2691**		**4187**		**4227**		**2124**		**3651**		**3651**		**3919**		**1340**		**3612**		**2768**		**3612**	
	C.D. 5%	416		571				185		349						686		502		716			
	C.V.%	10.58		9.34				5.96		6.56						35.08		9.52		17.58			
	Sowing Date	15-Jun		12-Jun				09-Jun		12-Jun						24-Jun		19-Jun		19-Jun			
	Planting Date	11-Jul		04-Jul				16-Jul		20-Jul						04-Aug		21-Jul		15-Jul			

Table No. 9.2 Contd.: Grain Yield (kg/ha) of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII																Zone VII (4) Mean		Overall (13) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KE		KE		KE (2)		KA		KA		KA		KA (1)										
		PTB		MNC		Mean		MND	@	MGD	@	BRM		Mean										
3201	23829	3464	6	3187	6	3326	6	2321	7	881	5	3594	6	3594	6			3539	6	3950	5	99	93	282
3202	IR 64 Check (M)	2786	8	3435	5	3111	7	2900	3 *	1724	3	4363	4	4363	4			3622	4	4250	3	91	89	281
3203	23834	4107	3 £	3568	3	3838	3	2852	4 *	2040	2 £	3714	5	3714	5			3551	5	3450	8	88	90	264
3204	Kalanamak Check	3179	7	1207	8	2193	9	2413	6	1528	4	3121	8	3121	8			2650	9	2962	9	106	131	265
3205	23824	2321	9	3138	7	2730	8	2729	5 *	2172	1 £	4712	2	4712	2			3170	8	3771	6	90	94	262
3206	BPT 5204 Check (L)	4464	1 £	4315	1	4390	1	2104	8			4740	1	4740	1			4410	1	4431	2	111	95	285
3207	23832	4036	4 £			4036	2	3717	2 *£	347	7	3237	7	3237	7			3869	3	4068	4	97	103	266
3208	Chittimuthyalu Check	4143	2 £	3474	4	3808	4	1773	9			2989	9	2989	9			3510	7	3620	7	110	97	283
3209	24780	3536	5	3865	2	3701	5	3902	1 *£	551	6	4611	3	4611	3			4100	2	4552	1 3%	94	110	295
	Exp Mean	**3560**		**3274**		**3425**		**2746**		**1320**		**3898**		**3898**				**3595**		**3902**		**98**	**100**	**276**
	C.D. 5%	1072		996				380		117		484											0	
	C.V.%	20.63		20.69				9.49		5.96		8.51											0.00	
	Sowing Date	29-Jun		09-Jul				03-Aug		18-Jun		20-Jun												
	Planting Date	28-Jul		24-Jul				08-Sep				20-Jul												

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Table No. 9.3: Days to 50% Flowering of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III (3) Mean	V CEN			Zone V(3) Mean	VI		
		PUN	OD	W.B	W.B	W.B (2)	U.P.		M.P.	V CEN	MH		MH	MH	MH (3)
		LDN	CTK	CHN	HTW	Mean	@MSD		REW	RPR	SKL		KJT	SHR	Mean
3201	23829	120	119	91	95	93	106	102	96	96	100	97	83	103	96
3202	IR 64 Check (M)	104	112	89	86	88	102	96	81	82	85	83	88	87	87
3203	23834	91	105	82	101	92	92	96	79	79	81	79	106	83	90
3204	Kalanamak Check		130	109	98	104	108	112	100	108	120	110	109	128	119
3205	23824	93	106	84	89	87	92	93	79	78	80	79	106	82	89
3206	BPT 5204 Check (L)	132	135	115	111	113	102	120	103	107	112	107	108	112	111
3207	23832	93	121	91	94	92	107	102	88	82		85	91	98	94
3208	Chittimuthyalu Check		133	115	109	112	108	119	101	111	122	111	117	128	122
3209	24780	102	110	90	92	91	103	98	86	86	86	86	86	89	87
	Exp Mean	**105**	**119**	**96**	**97**	**97**	**102**	**104**	**90**	**92**	**99**	**93**	**99**	**101**	**100**
	C.D. 5%	1	0	1	1		2		1	1	1		1	1	
	C.V.%	0.87	0.00	0.47	0.84		1.18		1.00	0.65	0.47		0.86	0.70	

Table No. 9.3 Contd.: Days to 50% Flowering of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI			Zone VI (4) Mean	VII												Zone VII (8) Mean	Overall (19) Mean
		GU	GU	GU (2)		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)			
		NWG	NVS	Mean		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean			
3201	23829	102	87	95	94	107	94	94	94	95	83	89	98	119	100	106		99	99
3202	IR 64 Check (M)	91	96	94	91	105	91	94	93	86	65	76	94	100	100	98		92	91
3203	23834	84	85	85	90	103	90	89	89	83	65	74	88	89	98	92		88	88
3204	Kalanamak Check	119	123	121	120	108	109	90	99	84	76	80	88	114	93	98		95	106
3205	23824	88	85	86	90	100	89	87	88	87	66	77	117	89	103	103		92	90
3206	BPT 5204 Check (L)	108	123	116	113	106	111	85	98	105	92	98	115	123	104	114		105	111
3207	23832	103	87	95	95	100	105		105	94		94	98	110	102	103		101	97
3208	Chittimuthyalu Check	110	123	117	119	113	99	94	96	101	89	95	93	125	96	105		101	110
3209	24780	100	95	98	93	100	91	87	89	89	71	80	95	114	114	108		95	94
	Exp Mean	**101**	**101**	**101**	**100**	**105**	**97**	**90**	**94**	**92**	**76**	**84**	**98**	**109**	**101**	**103**		**96**	**98**
	C.D. 5%	0	2			18	1	9		3	1		3	0	0				
	C.V.%	0.00	1.19			11.56	0.90	7.06		2.08	0.69		2.38	0.00	0.00				

Table No. 9.4: Plant Height (cm) of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III (3) Mean	V			Zone V (3) Mean	VI		
		PUN	OD	W.B	W.B	W.B (2)	U.P.		M.P.	V CEN	MH		MH	MH	MH (3)
		LDN	CTK	CHN	HTW	Mean	@MSD		REW	RPR	SKL		KJT	SHR	Mean
3201	23829	89	98	90	94	92	99	94	80	101	111	97	102	112	108
3202	IR 64 Check (M)	94	96	82	90	86	97	89	80	97	107	95	95	101	101
3203	23834	104	85	80	87	84	96	84	86	100	84	90	97	107	96
3204	Kalanamak Check		148	135	120	128	130	134	133	165	187	162	172	116	158
3205	23824	112	97	92	96	94	100	95	88	108	95	97	97	113	101
3206	BPT 5204 Check (L)	87	98	105	107	106	115	103	77	97	97	90	100	100	99
3207	23832	107	108	90	91	91	96	96	101	122		112	125	129	127
3208	Chittimuthyalu Check		100	85	92	89	110	92	88	101	98	96	107	124	110
3209	24780	117	127	105	110	108	110	114	115	136	120	124	129	121	123
	Exp Mean	**102**	**106**	**96**	**99**	**97**	**106**	**100**	**94**	**114**	**112**	**107**	**114**	**114**	**113**

Table No. 9.4 Contd.: Plant Height (cm) of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI			Zone VI (4)Mean	VII										Zone VII (8) Mean	Over all Mean
		GU	GU	GU (2)		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA (3)		
		NWG	NVS	Mean		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean	
3201	23829	90	112	101	104	92	83	88	86	111	95	103	74	61	86	73	86	93
3202	IR 64 Check (M)	92	95	94	96	92	79	80	79	95	84	90	68	70	87	75	82	89
3203	23834	98	102	100	101	81	86	83	84	95	83	89	65	97	85	82	84	90
3204	Kalanamak Check	96	154	125	134	101	132	147	140	139	108	124	96	89	126	104	117	131
3205	23824	96	102	99	102	86	95	83	89	103	80	92	76	76	93	82	86	94
3206	BPT 5204 Check (L)	126	111	119	109	95	82	96	89	93	97	95	68		82	75	88	95
3207	23832	113	123	118	122	74	102		102	118		118	86	66	88	80	89	103
3208	Chittimuthyalu Check	84	120	102	109	94	83	102	92	113	98	105	60		98	79	92	97
3209	24780	114	121	118	121	79	107	102	104	120	101	110	89	68	100	86	96	110
	Exp Mean	**101**	**116**	**108**	**111**	**88**	**94**	**97**	**96**	**110**	**93**	**102**	**76**	**75**	**94**	**82**	**91**	**100**

Table No. 9.5 : Panicles/ M² of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III Mean (3)	V			Zone V Mean (3)	VI						Zone VI Mean (4)
		PUN	OD	W.B	W.B	W.B (2)	U.P.		M.P.	V CEN	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		LDN	CTK	CHN	HTW	Mean	@MSD		REW	RPR	SKL		KJT	SHR	Mean	NWG	NVS	Mean	
3201	23829	328	245	310	277	294	300	277	327	260	232	273	183	185	200	265	263	264	224
3202	IR 64 Check (M)	350	270	308	299	303	307	292	221	390	262	291	126	200	196	252	227	239	201
3203	23834	357	213	306	308	307	289	276	161	312	246	240	136	188	190	209	255	232	197
3204	Kalanamak Check		364	294	275	284	276	311	247	266	236	249	184	183	201	208	182	195	189
3205	23824	363	238	295	316	305	282	283	184	278	227	230	142	188	186	259	242	250	208
3206	BPT 5204 Check (L)	342	211	319	305	312	306	278	301	342	312	319	165	223	234	257	274	266	230
3207	23832	304	216	309	259	284	320	261	232	283		258	155	178	167	253	271	262	214
3208	Chittimuthyalu Check		226	318	317	317	305	287	298	349	245	297	194	156	198	255	214	234	205
3209	24780	371	209	307	321	314	306	279	199	321	240	253	163	173	192	253	270	261	215
	Exp Mean	**345**	**243**	**307**	**297**	**302**	**299**	**283**	**241**	**311**	**250**	**268**	**161**	**186**	**197**	**245**	**244**	**245**	**209**
	C.D. 5%	56	78	16	9		24		50	72	21		11	17		28	31		
	C.V.%	10.89	21.93	3.63	2.04		5.59		14.11	15.79	5.71		4.88	6.24		7.93	8.66		

Table No. 9.5 Contd.: Panicles/ M² of entries in AVT 2-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII											Zone VII Mean (8)	Overall Mean (19)
		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)		
		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean		
3201	23829	267	369	226	297	429	258	343	293	355	282	310	310	282
3202	IR 64 Check (M)	268	388	196	292	413	258	336	293	360	261	305	305	281
3203	23834	321	325	234	280	356	258	307	327	287	229	281	292	264
3204	Kalanamak Check	255	363	207	285	402	215	309	360	250	275	295	291	265
3205	23824	303	325	206	266	336	215	275	310	312	231	284	280	262
3206	BPT 5204 Check (L)	273	388	201	294	342	301	322	330		238	284	296	285
3207	23832	291	313		313	342		342	290	287	266	281	298	266
3208	Chittimuthyalu Check	281	400	180	290	400	301	350	360		317	339	320	283
3209	24780	296	444	204	324	416	387	401	443	318	273	345	348	295
	Exp Mean	**284**	**368**	**207**	**292**	**382**	**274**	**331**	**334**	**310**	**264**	**302**	**304**	**276**
	C.D. 5%	93	46	54		106	0		68	19	27			
	C.V.%	22.40	8.58	17.66		19.07	0.00		13.86	4.08	7.12			

Table 9.6: Grain quality characteristics of entries in AVT 2- Biofortification Kharif 2015

		IIRR								
Entry No.	**IET NO.**	**HULL**	**MILL**	**HRR**	**KL**	**KB**	**L/B**	**Grain Type**	**Grain Chalk**	**VER**
3201	23829	76.5	62	20	5.39	1.71	3.15	SS	VOC	5.3
3202	IR64-(C)	77.6	64.8	40.7	6.42	2.08	3.08	LS	VOC	5.1
3203	23834	78.6	64.8	11.4	4.9	2.27	2.15	SB	VOC	5.5
3204	Kalanamak	77.8	64.5	40.4	4.77	1.88	2.53	MS	VOC	5.3
3205	23824	79.5	65.5	17.6	6.15	2.24	2.74	LB	VOC	4.7
3206	BPT 5204(C)	75.6	62.8	30.1	4.96	1.86	2.66	MS	VOC	4.3
3207	23832	77.3	66.4	29.1	6.49	2.11	3.07	LS	VOC	4.1
3208	Chittimuthyalu (C)	77.2	68.2	42.8	3.85	2.05	1.87	SB	VOC	4.3
3209	24780	79.8	69.6	58.3	5.8	2.13	2.72	MS	VOC	4.7

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 9.6 Contd.: Grain quality characteristics of entries in AVT 2- Biofortification Kharif 2015

		IIRR							NRRI		
Entry No.	**IET NO.**	**WU**	**KLAC**	**ER**	**ASV**	**AC**	**GC**	**ARO MA**	**ASV**	**AC**	**GC**
3201	23829	220	9.1	1.68	4	22.23	28	NS	6.0	23.02	35
3202	IR64-(C)	210	9.4	1.46	4	21.2	46	NS	5.0	22.27	37
3203	23834	290	8.9	1.81	7	24.52	22	NS	7.0	25.50	35
3204	Kalanamak	130	9.5	1.99	4	21.82	60	SS	6.0	25.57	36
3205	23824	295	9.5	1.63	7	24.17	40	MS	7.0	25.27	38
3206	BPT 5204(C)	220	10.4	1.61	4	23.73	23	NS	5.3	23.62	30
3207	23832	240	10.2	1.57	4	21.5	48	NS	3.0	21.82	30
3208	Chittimuthyalu (C)	180	7.2	1.87	7	22.14	22	NS	4.0	27.07	35
3209	24780	165	9.6	1.65	4	25.93	34	NS	5.0	28.87	31

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 9.7: Iron content in ppm for polished rice samples of entries in AVT 2-Biofortification, Kharif 2015

Entry No.	IET No.	PTB	NVS	CTK	REW	ADT	SKL	MNC	LDN	CHN	MGD	CBT @
3201	23829	3.8	5.6	3.7	3.4	3.8	3.6	4.3	6.0	3.2		2.6
3202	IR 64 Check	4.8	3.2	2.1	2.2	2.4	2.6	5.0	5.6	3.8	3.0	2.0
3203	23834	4.8	2.2	3.1	5.6	1.6	3.0	4.9	2.1	3.5	3.8	2.4
3204	Kalanamak Check	4.0	4.7	3.6	4.3	3.0	2.7	6.4	5.0	3.8	4.9	3.8
3205	23824	4.5	4.1	2.8	3.8	2.3	3.2	3.5	4.0	3.2	4.0	2.6
3206	BPT 5204 Check	2.9	3.2		3.7	3.2	3.4	3.5	4.0	4.0		2.2
3207	23832	4.3	3.3	4.2	3.6			3.5	4.4	4.6	4.7	3.4
3208	Chittimuthyalu Check	3.9	6.0	4.6	5.3	4.3	4.1	5.1		4.7	4.4	3.6
3209	24780	1.7	4.2	2.8	4.7	1.5	4.1	3.3	3.4	4.0	4.8	2.3
3210		1.9	2.9	1.5					3.5		3.2	
3211		2.8							4.1		4.2	
Location mean		**3.6**	**3.9**	**3.2**	**4.1**	**2.8**	**3.3**	**4.4**	**4.2**	**3.9**	**4.1**	**2.8**

Table 9.7: (Contd.): Iron content in ppm for polished rice samples of entries in AVT 2-Biofortification, Kharif 2015

Entry No.	IET No.	SHR	HTW	NWG	KJT	BGL	RPR	IIRR	MND	Mean
3201	23829	4.2	3.8	5.1	7.0	3.1	3.1	2.7	2.8	**4.1**
3202	IR 64 Check	4.7	3.0	5.9	4.6	5.6	3.3	6.4	2.7	**3.9**
3203	23834	4.2	2.6	4.8	3.8	5.2	5.7	2.6	3.6	**3.7**
3204	Kalanamak Check	9.0	4.8	3.6	6.0	5.3	3.1	4.0	3.5	**4.5**
3205	23824	3.5	4.0	3.5	3.7	4.9	3.7	7.2	3.1	**3.8**
3206	BPT 5204 Check	4.0	4.4	4.1	4.3	4.4	3.6	3.2	4.7	**3.8**
3207	23832	4.3	3.7	3.7	6.0	5.3	3.6	4.1	4.2	**4.2**
3208	Chittimuthyalu Check	4.2	5.1	5.5	4.5	5.9	5.8	3.9	5.5	**4.9**
3209	24780	5.5	2.7	2.3	4.9	4.0	3.1	2.1	2.5	**3.4**
3210		4.5				5.3				**3.3**
3211		4.2				4.8				**4.0**
Location mean		**4.8**	**3.8**	**4.3**	**5.0**	**4.9**	**3.9**	**4.0**	**3.6**	

Table 9.8: Zinc content in ppm for polished rice samples of entries in AVT 2-Biofortification, kharif 2015

Entry No.	IET No.	LDN	CTK	CHN	HTW	Zone III Mean	REW	SKL	RPR	Zone V Mean	NVS	NWG	KJT	SHR	Zone VI Mean
3201	23829	25	20.9	16.1	16.8	17.93	10.5	18.8	17.6	15.63	21.3	17.2	16	30	21.13
3202	IR 64 Check	24.2	15.6	16.5	14.6	15.57	9.3	13.3	15.3	12.63	16.1	19.9	16.5	20.9	18.35
3203	23834	24.1	17.5	17.7	16.2	17.13	12.9	16	17.9	15.60	17.9	13.2	18.4	23.5	18.25
3204	Kalanamak Check	20.6	16.1	13.3	13.2	14.20	9.5	14.1	13.2	12.27	18.1	19.3	17.2	19.9	18.63
3205	23824	25	19.3	17.2	16.2	17.57	12.5	15.1	18.7	15.43	24.3	15.8	18.6	22.1	20.20
3206	BPT 5204 Check	23.9		13.1	12.5	12.80	9.9	13	13.2	12.03	16.9	14.8	12.5	22.1	16.58
3207	23832	27.2	21.4	15	16.1	17.50	8.8		17.4	13.10	18.8	16.9	18	27.9	20.40
3208	Chittimuthyalu Check		21.3	19.9	20.3	20.50	15.4	17.5	23.7	18.87	21.8	24.9	22.5	27.2	24.10
3209	24780	23.4	17.1	11.3	13.3	13.90	7.7	10.8	13.6	10.70	12.1	10.1	13.5	24.1	14.95
3210	Check	18.6	13.2			13.20					12.8			26.4	19.60
3211	Check	22.1												17.2	17.20
Location mean		**23.4**	**18**	**15.6**	**15.5**	16.37	**10.7**	**14.8**	**16.7**	14.07	**18**	**16.9**	**17**	**23.8**	18.93

Table 9.8 Contd.: Zinc content in ppm for polished rice samples of entries in AVT 2-Biofortification, kharif 2015

Entry No.	IET No.	PTB	ADT	CBT @	MNC	MGD	BGL	IIRR	MND	Zone VII Mean	Mean
3201	23829	22.7	20.9	4.8	24.2		17.8	11.9	12.9	18.40	**18.9**
3202	IR 64 Check	15.4	24.5	5.2	19.8	16.4	23.3	16.2	13.5	18.44	**17.3**
3203	23834	23	22.6	5.7	24.5	14.3	28.3	17	17.3	21.00	**19**
3204	Kalanamak Check	25.3	21	4.7	23.8	14.5	20.8	13.6	13.4	18.91	**17.1**
3205	23824	26.2	23.5	3.2	27.1	18.1	19	16.2	18.3	21.20	**19.6**
3206	BPT 5204 Check	17.4	16	6.1	21.9		21	9.9	15.9	17.02	**15.9**
3207	23832	23.1		7.5	23.1	15.9	28.8	9.7	14.5	19.18	**18.9**
3208	Chittimuthyalu Check	24	23.9	10	28.8	20.1	31.2	14.9	22.9	23.69	**22.4**
3209	24780	18.2	17.8	3.3	18.5	10.2	19	7	10.6	14.47	**14.4**
3210	Check	18.1				17	20			18.37	**18**
3211	Check	23.2				11.6	24			19.60	**19.6**
Location mean		**21.5**	**21.3**	**5.6**	**23.5**	**15.3**	**23**	**12.9**	**15.5**	19.00	

Table 9.9: Grain protein content of the entries tested in AVT 2- Biofort, kharif 2015.

IET No.	Navsari	Aduthurai	Mean
	Grain protein content (%)	Grain protein content (%)	
23829	7.16	7.7	7.43
IR 64 Check	8.36	8.79	8.575
23834	9.66	9.66	9.66
Kalanamak Check	7.96	-	7.96
23824	9.88	10.1	9.99
BPT 5204 Check	6.82	9.25	8.035
23832	6.86	8.64	7.75
Chittimuthyalu Check	8.21	-	8.21
24780	8.54	9.28	8.91
Check	9.05	7.5	8.275
Check	-	8.86	8.86

Table 9.10: Zinc contents of the entries in AVT 2 trials during kharif 2014 and 2015 in polished rice.

2014						2015		
IET No.	**Iron**	**Zinc**	**IET No.**	**Iron**	**Zinc**	**IET No.**	**Iron**	**Zinc**
23334	2.5	19.7	23805	3.1	20.4	25062	2.8	22.8
23337	3.0	19.2	24577	3.2	20.0	23782	2.7	20.0
23355	3.7	20.1	Pusa Sugandh 5	2.2	20.6	23784	2.4	21.4
Tulasi	2.9	20.1	24578	3.5	23.1	CSR 10	2.8	21.7
23004	1.8	19.8	24579	1.6	22.7	23680	3.1	19.5
22986	2.5	23.3	24580	1.9	20.3	24143	2.7	19.0
22302	3.6	22.3	24582	2.9	22.1	IR 64	1.7	21.2
24544	2.3	19.6	24584	2.2	20.2	23339	3.9	23.0
24556	3.3	22.5	24585	4.0	23.6	23392	3.2	21.5
CSR 10	3.2	21.4	24592	3.3	22.7	23356	3.7	19.2
24438	5.6	29.9	24594	2.2	20.9	23979	4.4	19.1
24440	3.9	26.7	24596	3.2	22.6	Tu.lasi	3.8	23.6
23450	3.8	20.1	24597	3.5	20.3	25059	2.5	19.5
23466	1.9	20.5	24599	2.4	24.6	25087	1.7	19.0
22716	3.6	22.8	24600	2.1	21.6			
23362	2.4	23.8	24602	2.2	20.8			
24562	3.0	20.6	24316	1.9	20.1			
Taroari Basmati	4.0	21.8	23804	3.8	21.3			
23367	3.2	22.6						

Table 9.11: Composition of entries in Advance Variety Trial 1 – Rice Bio-fortification (AVT1-Biofort), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
2nd year of testing				
3301	24771	RP 5911-52-13-3-2-2-1	Mahsuri/RP Bio-226	SS
3302	24766	CR 2829-PLN-36	HP-2/Naveen	LB
3303	24316	KMP-200	IR-64/IET 16348	MS
3304	24391	CN 1477-19-5-3	Swarna/ Bhasamanik	SS
3305	24440	RP 5898-54-21-9-4-2-2	RP Bio 226*1/CSR 27	MS
3306	24777	CR 2829-PLN-109	HP-2/Naveen	MS
3307	**BPT 5204 Check**			
3308	24555	RP 5898-182-22-4-3-2-1	RP Bio 226*1/CSR 27	MS
3309	24319	OR 2545-5	Birupa/IR 62957	LS
3310	24760	NP-9685	PRN-19045/PRN-14	MS
3311	24775	RP 4920-Bio -51(B)	BPT 5204 / O. rufipogon	SB
3312	24783	CR 2829-PLN-32	HP-2/Naveen	MS
3313	24360	RP 5892-32-9-5-4-3-2	BPT 5204/ IR 81519-21-5-6//IR 29 / Pokkali	LS
3314	24438	RP 5898-138-14-9-8-4-2	RP Bio 226*1/CSR 27	MS
3315	**DRRH 3 (HC)**			
3316	24765	RP 5910-69-11-4-2-2-2	BPT 5204/ IC 330850	MS
3317	24553	RP 5706-112-4-5-3-2	IR 64/ CSR 36	SB
3318	24544	CSR 57	CSR 21/CSR 10	MS
3320	24336	NLR 3238	BPT 5204/MTU 1010	MS
3321	24772	CR 2829-PLN-100	HP-2/Naveen	LB
3322	**Kalanamak Check**			
3323	**IR 64 Check**			
3324	24557	RP 5898-38-7-2-1-1	RP Bio 226*1/CSR 27	MS
3325	24550	CSR 58	CSR 27/ CSR 11	SB
3326	24779	RP 5912-17-8-4-3-2-2	IR68703/BPT 5204//RP Bio-226	MS
3327	**Chittimuthyalu Check**			
3328	24774	RP 5917-HP-8-IR 94064	IR 91153-AC 316/IR 05F102	LB
3329	24291	RP 5889-117-46-9-3-3-2	Vijaya/Mahsuri//BPT 5204	MS
3330	24787	RP 5919-HP-9-IR 94293	IR 92954/IR 92944	MS

Table No. 9.12: Grain Yield (kg/ha) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II		III									
		PUN		OD		W.B		W.B		W.B (2)			
		LDN		CTK		CHN		HTW		Mean			
3301	24771	5167	_12%	4485	8 …3%	4917		5833	8 #	5375	5%		
3302	24766	5609	8 # _21%	2724		4383		4887		4635			
3303	24316	5227	_13%	2297		3383		4260		3822			
3304	24391			3801		5583	1 *£ #	5243		5413	9 # **5%**		
3305	24440	6241	2 # …1% _35%	4099		4850		5700	#	5275	3%		
3306	24777	3976		5657	2 *£ …30% _14%	4083		5757	#	4920			
3707	BPT 5204 Check	6158	4 # _33%	4363		4467		6367	5 #	5417	8 # **5%**		
3308	24555	6240	3 # …1% _35%	4133		5400	4 *£ #	5620		5510	7 # 2% **7%**		
3309	24319	4163		4268		5217	6 *£	6880	2 *£ #	6048	2 *£ # 12% **18%**		
3310	24760	6112	5 # _32%	4743	6 …9%	4867		6600	3 #	5733	4 *£ # 6% **12%**		
3311	24775	4962	_7%	4404	9 …1%	4700		5817	9 #	5258	2%		
3312	24783	4970	_7%	4634	7 …6%	5217	7 *£	7383	1 *£ #	6300	1 *£ # 16% **23%**		
3313	24360	4833	_4%	4336		5217	8 *£	6123	7 #	5670	5 # 5% **10%**		
3314	24438	6521	1 # …6% _41%	3997		4417		5773	#	5095			
3315	DRRH 3 (HC)	4632		4946	4 …13%	4967		5310		5138			
3316	24765	5995	6 # _29%	3848		5583	2 *£ #	4997		5290	3%		
3317	24553	3787		3313		4800		5647		5223	2%		
3318	24544	4721	_2%	5894	1 *£ #…35% _19%	4950		6367	6 #	5658	6 # 4% **10%**		
3320	24336	5711	7 # _23%	4980	3 …14% _1%	4700		5157		4928			
3321	24772	4124		4946	5 …13%	4633		4350		4492			
3322	Kalanamak Check			3733		5050		5117		5083			
3323	IR 64 Check	5307	9 _15%	3963		4850		5640		5245	2%		
3324	24557	4252		3747		5000		5060		5030			
3325	24550	3717		4167		4083		3277		3680			
3326	24779	5137	_11%	3862		4667		5430		5048			
3327	Chittimuthyalu Check			3252		5417	3 *£ #	5190		5303	3%		
3328	24774	4692	_1%	3692		5100	9	6383	4 #	5742	3 *£ # 6% **12%**		
3329	24291	4453		4336		5283	5 *£	4967		5125			
3330	24787	3617		2649		4750		4573		4662			
	Exp Mean	**5013**		**4113**		**4846**		**5507**		**5177**			
	C.D. 5%	882		845		337		383		253			
	C.V.%	10.73		12.57		4.25		4.26		4.28			
	Sowing Date	02-Jun		03-Jun		25-Jun		24-Jun					
	Planting Date	01-Jul		29-Jul		28-Jul		20-Jul					

Table No. 9.12 Contd.: Grain Yield (kg/ha) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	III		Zone III (3) Mean		V				Zone V (2) Mean	
		U.P.				V CEN		MH			
		MSD	@			RPR		SKL			
3301	24771	3135	#	5078	7	3684	8 …7%	4977		4331	
3302	24766	3247	#	3998		2229		5093		3661	
3303	24316	3368	9 #	3313		3291		4398		3845	
3304	24391	3382	7 #	4876		2929		3356		3143	
3305	24440	3494	3 #	4883		3338		3501		3419	
3306	24777	2976	#	5166	6 2% **2%**	4040	5 …18%	6250	1 *£	5145	4 *£ 18%
3707	BPT 5204 Check	2772		5065	9	3438		5295	8	4366	
3308	24555	3731	2 *£ #	5051		3622	…5%	4659		4140	
3309	24319	3113	#	5455	3 *£ # 8% **8%**	3636	…6%	5266	9	4451	9 2%
3310	24760	2939	#	5403	4 *£ # 7% **6%**	3464	…1%	4398		3931	
3311	24775	3341	#	4973		3644	9 …6%	4832		4238	
3312	24783	3136	#	5745	1 *£ # 13% **13%**	3780	7 …10%	5150		4465	8 2%
3313	24360	3332	#	5225	5 3% **3%**	2702		4572		3637	
3314	24438	3449	4 #	4729		3404		3877		3641	
3315	DRRH 3 (HC)	2670		5074	8	4296	3 *£ …25%	6163	2 *£	5229	2 *£ 20%
3316	24765	3111	#	4809		3389		5903	4 *£	4646	6 6%
3317	24553	2925	#	4587		3307		5469	6	4388	
3318	24544	4120	1 *£ #	5737	2 *£ # 13% **13%**	4289	4 *£ …25%	6076	3 *£	5183	3 *£ 19%
3320	24336	3196	#	4945		5178	1 *£ #…51% _21%	5584	5	5381	1 *£ 23% **3%**
3321	24772	2885		4643		4322	2 *£ …26% _1%	5093		4707	5 8%
3322	Kalanamak Check	3046	#	4633		2713		3183		2948	
3323	IR 64 Check	3408	5 #	4818		3036		5035		4035	
3324	24557	3033	#	4602		3009		4225		3617	
3325	24550	3180	#	3842		2878		4109		3493	
3326	24779	3054	#	4653		3260		4601		3930	
3327	Chittimuthyalu Check	2617		4620		1991		2865		2428	
3328	24774	3371	8 #	5059		3856	6 …12%	5324	7	4590	7 5%
3329	24291	3403	6 #	4862		3384		5093		4239	
3330	24787	3264	#	3991		2587		4543		3565	
	Exp Mean	**3197**		**4822**		**3403**		**4789**		**4096**	
	C.D. 5%	239		317		765		572		420	
	C.V.%	4.58		7.07		13.74		7.30		8.96	
	Sowing Date	01-Jul				24-Jun		16-Jun			
	Planting Date	30-Jul				16-Jul		10-Jul			

Table No. 9.12 Contd.: Grain Yield (kg/ha) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI												Zone VI (3) Mean	
		MH		MH		MH (3)		GU		GU		GU (1)			
		KJT		SHR		Mean		NWG	@	NVS		Mean			
3301	24771	4838	7	3784		4533		2844	*£	6089	5 *£ #	6089	5 19% **17%**	4904	6%
3302	24766	4022		4704	4 #	4606		3638	6 *£	5121		5121		4615	
3303	24316	3177		3704		3760		1455		3389		3389		3423	
3304	24391	3084		3901		3447		661		4256		4256		3747	
3305	24440	4051		3846		3799		3571	7 *£	4956		4956		4284	
3306	24777	3709		5228	1 *£ #	5063	2	3042	*£	5124		5124		4687	1%
3707	BPT 5204 Check	5613	2 #	4370	9	5093	1	2447		4971		4971		4985	8 **8%**
3308	24555	5110	5	5006	2 #	4925	6	3042	*£	5819		5819	13% **12%**	5312	1 # 7% **15%**
3309	24319	3455		4432	7	4384		1521		4443		4443		4110	
3310	24760	4664		4259		4441		3042	*£	6302	3 *£ #	6302	3 23% **21%**	5075	4 2% **9%**
3311	24775	4722		4537	5	4697	8	3042	*£	5889	9 *£	5889	9 15% **13%**	5049	6 1% **9%**
3312	24783	3264		4327		4247		2513		4937		4937		4176	
3313	24360	4549		3377		4166		3902	4 *£	5470		5470	7% **5%**	4465	
3314	24438	4832	8	3775		4161		3241	9 *£	5444		5444	6% **4%**	4684	1%
3315	DRRH 3 (HC)	4815		3883		4954	5	3902	5 *£	5214		5214	2%	4637	
3316	24765	4826	9	4395	8	5041	3	3307	8 *£	5925	8 *£ #	5925	8 15% **14%**	5049	7 1% **9%**
3317	24553	4850	6	4759	3 #	5026	4	2579		5546		5546	8% **6%**	5052	5 1% **9%**
3318	24544	2888		3617		4194		4497	1 *£ #	6130	4 *£ #	6130	4 19% **18%**	4212	
3320	24336	3877		4519	6	4660	9	2712		6330	2 *£ #	6330	2 23% **21%**	4909	9 **6%**
3321	24772	2969		4346		4136		2447		4624		4624		3979	
3322	Kalanamak Check	2245		3537		2988				3146		3146		2976	
3323	IR 64 Check	3287		4056		4126		2513		5135		5135		4159	
3324	24557	5359	4	3858		4480		2778		6019	6 *£ #	6019	6 17% **15%**	5079	3 2% **10%**
3325	24550	5689	1 #	3975		4591		2381		4435		4435		4700	1%
3326	24779	3247		3630		3826		4101	3 *£	5006		5006		3961	
3327	Chittimuthyalu Check	2899		3901		3222		1058		4495		4495		3765	
3328	24774	4317		4164		4602		3042	*£	6019	7 *£ #	6019	7 17% **15%**	4833	4%
3329	24291	5498	3 #	4080		4890	7	2315		6343	1 *£ #	6343	1 24% **22%**	5307	2 # 6% **14%**
3330	24787	3571		3741		3951		4365	2 *£ #	4768		4768		4027	
	Exp Mean	**4118**		**4128**		**4345**		**2856**		**5219**		**5219**		**4488**	
	C.D. 5%	649		657		357		327		688				469	
	C.V.%	9.64		9.73		8.83		7.00		8.05				11.23	
	Sowing Date	16-Jun		12-Jun				09-Jun		12-Jun					
	Planting Date	10-Jul		03-Jul				16-Jul		19-Jul					

Table No. 9.12 Contd: Grain Yield (kg/ha) of entries in AVT 1-BIOFORT Kharif 2015

Entry No.	IET No.	VII											
		TEL		TN		TN		TN (1)		KE		KE	
		IRR	@	CBT		ADT	@	Mean		PTB		MNC	
3301	24771	1944	4	4639	4	5185		4639	4 3%	6318	1	5559	9
3302	24766	1306		3040		3852		3040		3227		6014	7 *£
3303	24316	1235		888		1481		888		3273		4799	
3304	24391	620		4347	8	5481		4347	8	4227		2566	
3305	24440	1204		3269		5481		3269		5909	2	5572	8
3306	24777	1741	6	4678	3	4667		4678	3 4%	4386		5110	
3707	BPT 5204 Check	1843	5	4512	6	5630	7	4512	6	5091	7	4303	
3308	24555	935		4336	9	6074	1	4336	9	5455	4	6183	3 *£
3309	24319	1562		4484	7	5704	5	4484	7	4682		6060	6 *£
3310	24760	960		3035		6074	2	3035		4727		4931	
3311	24775	997		4521	5	3630		4521	5	4182		5144	
3312	24783	1176		3904		5111		3904		4227		6218	2 *£
3313	24360	602		3506		4593		3506		3636		5279	
3314	24438	2176	2	3872		5037		3872		4773		5396	
3315	DRRH 3 (HC)	1651	9	5804	1 *£	4963		5804	1 29%	4909	9	6583	1 *£
3316	24765	2236	1	4163		5630	8	4163		2955		6170	4 *£
3317	24553	1509		3801		5852	3	3801		4591		5202	
3318	24544	1596		5044	2	5630	9	5044	2 12%	3682		5125	
3320	24336	1407		1746		5333		1746		3409		4788	
3321	24772	1735	7	3172		5704	6	3172		3773		4604	
3322	Kalanamak Check	1688	8	2566		5852	4	2566		2273		1963	
3323	IR 64 Check	2015	3	3096		4667		3096		2091		4634	
3324	24557	1173		2812		4667		2812		5318	5	2961	
3325	24550	963		1763		4000		1763		4227		4022	
3326	24779	481		4264		4148		4264		5045	8	3320	
3327	Chittimuthyalu Check	537		3067		4000		3067		3455		3878	
3328	24774	574		3957		5407		3957		5545	3	4243	
3329	24291	750		3046		4074		3046		5273	6	6068	5 *£
3330	24787	1426		3130		4148		3130		4227		3735	
	Exp Mean	**1312**		**3602**		**4899**		**3602**		**4306**		**4842**	
	C.D. 5%	876		891		2391				1469		1293	
	C.V.%	40.85		15.13		29.84				20.86		16.33	
	Sowing Date	24-Jun		19-Jun		19-Jun				29-Jun		09-Jul	
	Planting Date	27-Jul		21-Jul		18-Jul				28-Jul		24-Jul	

Table No. 9.12 : Grain Yield (kg/ha) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII																Zone VII (4) Mean			Overall (13) Mean			Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KE (2)			KA			KA			KA			KA (1)													
		Mean			MND			MGD	@		BRM	@		Mean													
3301	24771	5938	1 ₹£	26% **3%**	4157			368	3 £		2582			4157				5168	2 ₹£	27%	4958	3 ₹£	5%	107	111	286
3302	24766	4621			4598	7		348	4 £		3668	3 ₹£		4598	7	4%		4220		4%	4281			94	107	279
3303	24316	4036			3836			553	1 £		2648			3836				3199			3532			87	97	264
3304	24391	3397			4512	8					1793			4512	8	2%		3913			3984			110	118	249
3305	24440	5741	4 ₹£	22%	2167						2903			2167				4229		4%	4423			109	97	282
3306	24777	4748		1%	5026	2 ₹£					3059	7		5026	2 ₹£	13% **6%**		4800	6 ₹£	18%	4848	6	3%	96	121	295
3707	BPT 5204 Check	4697			2317						2632			2317				4056			4713	8		112	93	300
3308	24555	5819	2 ₹£	24% **1%**	3271						2685			3271				4811	5 ₹£	19%	4989	2 ₹£	6%	106	97	303
3309	24319	5371	6	14%	4098						3635	4 ₹£		4098				4831	4 ₹£	19%	4699			102	106	296
3310	24760	4829		3%	2905						3026	9		2905				3899			4693			110	93	303
3311	24775	4663			2745			278	5 £		2804			2745				4148		2%	4623			110	92	284
3312	24783	5223	7	11%	5469	1 ₹£ #					3729	2 ₹£		5469	1 ₹£ #	23% **15%**		4955	3 ₹£	22%	4883	5	4%	96	114	275
3313	24360	4458			3881						2401			3881				4076			4422			96	90	284
3314	24438	5084	8	8%	2762			543	2 £		2664			2762				4201		4%	4527			108	97	299
3315	DRRH 3 (HC)	5746	3 ₹£	22%	4743	6					3524	5 ₹£		4743	6	7%		5510	1 ₹£	36%	5097	1 ₹£	8%	105	112	277
3316	24765	4562			4031						2780			4031				4330		7%	4783	7	1%	101	97	275
3317	24553	4896	9	4%	3538						2179			3538				4283		6%	4508			101	95	283
3318	24544	4404			4898	3					2220			4898	3	11% **3%**		4687	7 ₹£	16%	4899	4	4%	98	109	286
3320	24336	4099			3793						4190	1 ₹£ #		3793				3434			4598			93	97	269
3321	24772	4188			4745	5					3454	6 ₹£		4745	5	7%		4073			4285			96	115	287
3322	Kalanamak Check	2118			2898			55	6 £		2582			2898				2425			3202			108	133	281
3323	IR 64 Check	3362			4429	9					3022			4429	9			3562			4197			94	91	301
3324	24557	4139			1402						3059	8		1402				3123			4079			107	96	288
3325	24550	4124			4848	4					2632			4848	4	9% **2%**		3715			3938			94	94	269
3326	24779	4183			4207						2558			4207				4209		4%	4283			102	107	280
3327	Chittimuthyalu Check	3666			1650						2262			1650				3012			3505			111	95	264
3328	24774	4894		4%	3617						1715			3617				4341	9	7%	4685			104	104	293
3329	24291	5670	5	21%	3380						2796			3380				4442	8	10%	4708	9		107	99	297
3330	24787	3981			3848						2701			3848				3735			3826			97	109	280
	Exp Mean	**4574**			**3716**			**357**			**2824**			**3716**				**4117**			**4426**			**102**	**103**	**284**
	C.D. 5%	992			594			45			312			508				557			241			1		15
	C.V.%	18.97			9.77			6.92			6.74			8.37				16.83			12.25			2.78		13.97
	Sowing Date				05-Aug			10-Jul			20-Jun																
	Planting Date				10-Sep						20-Jul																

Table No. 9.13 : Days to 50% Flowering of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III (3) Mean	V		Zone V (2) Mean	VI						Zone VI (4) Mean
		PUN	OD	W.B	W.B	W.B (2)	U.P.		V	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		LDN	CTK	CHN	HTW	Mean	@MSD		RPR	SKL		KJT	SHR	Mean	NWG	NVS	Mean	
3301	24771	119	130	110	102	106	111	114	101	100	101	100	104	102	92	117	104	103
3302	24766	101	113	89	86	88	108	96	91	84	87	81	90	85	94	102	98	92
3303	24316	81	104	77	100	89	108	94	77	77	77	101	78	85	77	82	80	85
3304	24391		139	113	102	107	104	118	120	93	106	95	129	106	141	124	133	122
3305	24440	121	133	109	99	104	107	113	99	101	100	95	105	100	117	122	120	110
3306	24777	103	122	93	87	90	91	101	85	85	85	85	92	88	98	106	102	95
3707	BPT 5204 Check	129	142	113	97	105	111	117	111	110	111	103	118	110	126	124	125	118
3308	24555	121	133	107	101	104	111	114	99	100	99	97	105	100	112	113	113	107
3309	24319	106	125	101	98	100	91	108	90	93	91	84	99	92	102	121	111	101
3310	24760	127	132	112	102	107	119	115	103	105	104	101	120	109	121	122	122	116
3311	24775	116	132	110	108	109	110	117	102	103	102	100	118	107	120	123	121	115
3312	24783	105	123	94	82	88	90	100	85	88	86	84	90	87	94	103	99	93
3313	24360	106	114	98	94	96	91	102	90	91	91	83	96	90	100	104	102	96
3314	24438	120	132	103	98	101	102	111	100	100	100	97	106	101	115	114	115	108
3315	DRRH 3 (HC)	119	130	104	104	104	103	112	95	100	98	92	106	99	113	115	114	106
3316	24765	105	120	98	96	97	107	105	96	96	96	91	103	97	105	114	110	103
3317	24553	112	124	101	98	99	111	107	90	91	91	93	98	94	102	108	105	100
3318	24544	97	126	100	91	95	94	105	90	88	89	82	96	89	100	107	104	96
3320	24336	103	114	92	95	94	118	100	82	86	84	80	90	85	99	104	101	93
3321	24772	99	122	94	99	97	95	105	85	85	85	83	90	86	100	105	102	94
3322	Kalanamak Check		129	112	103	108	94	115	112	120	116	114	127	121		123	123	121
3323	IR 64 Check	97	127	93	95	94	120	105	82	84	83	78	90	84	92	103	98	91
3324	24557	113	131	110	100	105	115	114	101	100	100	95	105	100	112	123	118	109
3325	24550	97	120	93	92	92	120	101	82	86	84	81	94	87	92	103	98	93
3326	24779	115	124	102	98	100	121	108	96	99	97	91	105	98	112	114	113	105
3327	Chittimuthyalu Check		133	112	120	116	112	122	112	117	114	112	127	118	139	119	129	124
3328	24774	110	134	102	101	102	95	112	93	101	97	90	116	102	112	116	114	109
3329	24291	121	134	111	101	106	107	115	101	105	103	101	104	103	120	122	121	112
3330	24787	105	124	91	96	94	105	104	86	91	88	82	90	88	98	103	101	93
	Exp Mean	**110**	**126**	**102**	**98**	**100**	**106**	**109**	**95**	**96**	**95**	**92**	**103**	**97**	**107**	**112**	**110**	**104**
	C.D. 5%	2	0	1	2	1	2		1	1	1	2	2	1	0	3	1	1
	C.V.%	0.99	0.00	0.41	1.30	0.94	0.88		0.62	0.61	0.58	1.62	0.90	1.10	0.00	1.48	1.07	1.15

Table No. 9.13 Contd.: Days to 50% Flowering of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII											Zone VII (8) Mean	Overall (18) Mean
		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)		
		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean		
3301	24771	98	120	103	112	102	82	92	110	130	101	114	106	107
3302	24766	101	101	90	96	86	71	79	98	119	87	101	94	94
3303	24316	95	89	87	88	79	58	68	84	107	110	100	89	87
3304	24391	98	120	105	112	105	85	95	96		101	99	101	110
3305	24440	96	119	97	108	105	85	95	112	147	98	119	107	109
3306	24777	105	106	96	101	92	72	82	96	121	86	101	97	96
3707	BPT 5204 Check	107	119	103	111	107	82	95	112		98	105	104	112
3308	24555	98	119	100	110	105	80	92	109		97	103	101	106
3309	24319	97	109	97	103	97	77	87	104	147	89	113	102	102
3310	24760	98	115	83	99	108	83	95	100	147	99	115	104	110
3311	24775	90	119	100	110	101	83	92	110	146	98	118	106	110
3312	24783	103	100	89	94	90	71	80	91	145	85	107	97	96
3313	24360	96	106	95	101	99	78	88	95		87	91	94	96
3314	24438	105	116	108	112	99	84	91	108	143	94	115	107	108
3315	DRRH 3 (HC)	96	105	102	104	101	78	89	102	135	94	110	102	105
3316	24765	103	99	95	97	95	80	88	101	132	91	108	100	101
3317	24553	100	105	100	102	101	77	89	99	132	91	107	101	101
3318	24544	103	109	91	100	99	70	84	103	130	86	106	99	98
3320	24336	90	90	94	92	87	67	77	86	120	90	99	90	93
3321	24772	95	101	99	100	92	73	82	90	130	87	102	96	96
3322	Kalanamak Check	99	101	107	104	88	78	83	83	137	95	105	98	108
3323	IR 64 Check	96	104	86	95	85	69	77	91	130	82	101	93	94
3324	24557	99	116	96	106	101	85	93	114	129	96	113	104	107
3325	24550	100	100	100	100	86	67	77	93	132	80	102	95	94
3326	24779	95	101	98	100	94	78	86	99	133	93	108	99	102
3327	Chittimuthyalu Check	99	110	94	102	96	80	88	84	142	98	108	100	111
3328	24774	88	111	90	100	97	78	87	96	137	96	110	99	104
3329	24291	98	112	94	103	98	85	91	101	132	96	110	102	107
3330	24787	103	102	96	99	93	73	83	92	142	88	107	99	97
	Exp Mean	**98**	**108**	**96**	**102**	**96**	**77**	**86**	**99**	**134**	**93**	**107**	**99**	**102**
	C.D. 5%	14	1	9	5	6	1	3	5	0	0	2	2	1
	C.V.%	8.48	0.77	5.89	4.01	4.01	0.72	3.11	3.20	0.00	0.00	1.72	4.05	2.78

Table No. 9.14: Plant Height (cm) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III (3) Mean	V		Zone V (2) Mean	VI						Zone VI (4) Mean
		PUN	OD	W.B	W.B	W.B (2)	U.P.		V	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		LDN	CTK	CHN	HTW	Mean	@MSD		RPR	SKL		KJT	SHR	Mean	NWG	NVS	Mean	
3301	24771	124	115	117	102	110	93	111	117	130	123	133	120	128	113	133	123	125
3302	24766	127	105	109	97	103	92	104	124	137	131	125	132	131	111	123	117	123
3303	24316	119	95	90	98	94	125	94	107	111	109	97	114	107	99	113	106	106
3304	24391		118	120	120	120	122	119	126	137	131	151	148	145	103	120	112	131
3305	24440	109	100	100	105	103	114	102	107	99	103	109	124	111	106	107	107	111
3306	24777	135	118	125	113	119	110	119	146	141	143	134	132	136	126	118	122	127
3707	BPT 5204 Check	94	88	100	97	99	130	95	94	109	102	102	100	104	88	105	97	99
3308	24555	103	92	102	98	100	105	97	97	99	98	110	116	108	86	110	98	105
3309	24319	107	107	108	102	105	113	106	104	114	109	107	136	119	114	118	116	119
3310	24760	95	97	92	92	92	132	94	97	98	97	106	99	101	90	102	96	99
3311	24775	97	98	95	97	96	102	97	91	95	93	108	102	102	87	110	99	102
3312	24783	123	112	115	110	113	145	112	138	133	135	138	130	134	117	109	113	124
3313	24360	89	96	85	97	91	122	93	92	98	95	104	110	104	90	95	93	100
3314	24438	106	106	105	102	104	86	104	96	106	101	113	112	110	100	105	103	107
3315	DRRH 3 (HC)	117	114	120	109	115	115	114	115	121	118	120	125	122	111	116	114	118
3316	24765	107	92	95	101	98	102	96	102	112	107	114	131	119	91	119	105	114
3317	24553	98	90	100	99	100	86	96	100	109	104	108	101	106	93	103	98	101
3318	24544	114	115	110	103	107	95	109	128	132	130	126	139	132	112	121	117	124
3320	24336	107	97	90	97	94	93	95	116	115	116	108	126	116	111	93	102	110
3321	24772	138	115	105	107	106	94	109	142	131	136	126	147	135	120	122	121	129
3322	Kalanamak Check		135	137	134	136	110	135	179	178	178	179	139	166		135	135	151
3323	IR 64 Check	106	98	80	90	85	105	89	100	111	106	88	101	100	91	86	89	91
3324	24557	106	99	90	86	88	102	92	103	109	106	110	120	113	90	113	102	108
3325	24550	103	100	85	86	86	109	90	104	114	109	112	107	111	99	95	97	103
3326	24779	122	110	110	101	106	85	107	121	124	123	125	118	122	112	120	116	119
3327	Chittimuthyalu Check		86	110	98	104	135	98	104	110	107	114	128	117	84	105	95	108
3328	24774	112	108	106	103	105	125	106	122	123	122	126	120	123	106	114	110	117
3329	24291	105	98	100	96	98	90	98	106	106	106	116	105	109	90	117	104	107
3330	24787	116	115	105	109	107	97	110	131	130	130	128	118	125	100	117	109	116
	Exp Mean	**111**	**104**	**104**	**102**	**103**	**108**	**103**	**114**	**118**	**116**	**118**	**121**	**119**	**101**	**112**	**107**	**113**
	C.D. 5%					0		0			0						0	
	C.V.%					0.00		0.00			0.00						0.00	

Table No. 9.14 Contd.: Plant Height(cm) of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII											Zone VII (8) Mean	Overall (18)
		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)		
		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean		
3301	24771	95	98	110	104	134	104	119	87	48	111	82	98	111
3302	24766	84	99	107	103	109	89	99	95	47	106	83	92	107
3303	24316	84	87	93	90	105	76	90	85	76	99	87	88	97
3304	24391	83	108	120	114	127	107	117	92		107	99	106	118
3305	24440	91	84	99	91	106	94	100	68	54	94	72	86	97
3306	24777	103	105	118	112	130	104	117	100		113	106	110	121
3707	BPT 5204 Check	87	78	102	90	106	85	95	61		90	76	87	93
3308	24555	103	82	103	93	102	88	95	68		92	80	91	97
3309	24319	95	99	107	103	116	86	101	78		97	87	97	106
3310	24760	85	79	104	92	100	100	100	62		83	73	88	93
3311	24775	95	82	106	94	97	90	94	66	57	83	69	85	92
3312	24783	91	97	106	102	115	104	110	92		105	99	102	114
3313	24360	86	75	91	83	94	78	86	66		78	72	81	90
3314	24438	88	87	108	98	99	97	98	70	58	87	72	87	97
3315	DRRH 3 (HC)	96	110	110	110	125	103	114	79		105	92	104	112
3316	24765	93	90	101	95	104	94	99	74	45	83	67	85	97
3317	24553	107	83	101	92	99	87	93	69	69	89	76	88	95
3318	24544	84	100	108	104	114	104	109	86	53	104	81	94	109
3320	24336	89	83	88	86	104	90	97	75	55	99	76	85	97
3321	24772	96	104	118	111	128	100	114	99	76	104	93	103	115
3322	Kalanamak Check	95	138	150	144	145	104	125	112	51	123	95	115	133
3323	IR 64 Check	93	89	80	85	98	72	85	76		86	81	85	91
3324	24557	90	84	106	95	113	94	104	71	61	92	75	89	96
3325	24550	84	84	112	98	101	82	91	76	64	85	75	86	94
3326	24779	99	101	110	106	129	97	113	85	52	90	76	95	107
3327	Chittimuthyalu Check	79	88	99	93	111	84	98	56	65	94	72	84	95
3328	24774	81	104	96	100	124	94	109	89	58	96	81	93	104
3329	24291	89	92	105	99	115	97	106	72	63	105	80	92	99
3330	24787	80	105	106	106	138	105	121	95	64	95	85	99	109
	Exp Mean	**91**	**94**	**106**	**100**	**113**	**93**	**103**	**80**	**59**	**96**	**81**	**93**	**103**
	C.D. 5%											6		
	C.V.%											0.00		

Table No. 9.15: Panicles/ M² of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III					Zone III (3) Mean	V		Zone V (2) Mean	VI					
		PUN	OD	W.B	W.B	W.B (2)	U.P.		V	MH		MH	MH	MH (3)	GU	GU	GU (2)
		LDN	CTK	CHN	HTW	Mean	@MSD		RPR	SKL		KJT	SHR	Mean	NWG	NVS	Mean
3301	24771	262	260	279	337	308	263	292	251	217	234	256	194	222	262	207	235
3302	24766	323	210	299	284	291	313	264	256	269	262	264	228	254	267	222	244
3303	24316	398	211	311	289	300	322	270	257	253	255	204	234	231	250	206	228
3304	24391		238	316	267	292	317	274	247	215	231	183	176	191	117	298	208
3305	24440	282	245	292	287	289	294	274	331	273	302	228	184	228	267	254	260
3306	24777	288	247	268	278	273	311	264	303	271	287	242	218	244	262	260	261
3707	BPT 5204 Check	361	312	301	308	305	288	307	268	244	256	279	202	241	259	221	240
3308	24555	279	245	313	297	305	284	285	297	313	305	259	227	266	263	306	285
3309	24319	341	236	302	269	286	302	269	310	232	271	235	234	234	244	197	221
3310	24760	332	316	295	264	280	276	292	288	262	275	232	200	231	263	307	285
3311	24775	379	245	274	287	281	310	269	257	329	293	242	200	257	263	262	262
3312	24783	288	242	294	246	270	314	261	253	240	247	183	209	211	260	207	233
3313	24360	330	262	301	274	288	306	279	253	267	260	235	199	234	270	261	265
3314	24438	317	241	264	258	261	293	254	334	270	302	229	187	229	264	257	261
3315	DRRH 3 (HC)	255	234	307	309	308	307	283	227	199	213	218	164	194	270	275	272
3316	24765	269	282	315	281	298	281	293	239	224	231	231	198	218	265	282	274
3317	24553	321	255	304	314	309	351	291	267	279	273	225	219	241	260	267	263
3318	24544	330	253	284	287	286	237	275	310	292	301	158	191	214	274	304	289
3320	24336	266	279	270	309	290	303	286	307	219	263	215	197	210	260	325	293
3321	24772	297	253	283	287	285	313	274	304	226	265	148	194	189	259	254	256
3322	Kalanamak Check		303	289	262	275	285	285	321	294	307	135	160	197		189	189
3323	IR 64 Check	385	244	292	276	284	322	271	303	314	309	212	227	251	260	287	273
3324	24557	330	215	298	316	307	305	276	286	263	274	239	210	237	261	307	284
3325	24550	306	257	272	313	293	280	281	243	214	229	261	171	216	258	242	250
3326	24779	290	239	279	319	299	292	279	279	240	260	172	155	189	270	284	277
3327	Chittimuthyalu Check		290	314	291	302	279	298	253	223	238	216	167	202	161	264	213
3328	24774	303	300	288	340	314	287	309	296	269	283	218	151	213	258	306	282
3329	24291	343	300	307	287	297	311	298	272	264	268	225	218	236	252	316	284
3330	24787	286	308	295	315	305	282	306	316	204	260	170	151	175	279	259	269
	Exp Mean	**314**	**259**	**293**	**291**	**292**	**297**	**281**	**280**	**255**	**267**	**218**	**195**	**223**	**253**	**263**	**258**
	C.D. 5%	67	54	20	13	12	18	19	73	28	24	25	23	14	6	39	20
	C.V.%	13.07	12.78	4.23	2.76	3.59	3.67	7.38	15.86	6.61	7.83	7.11	7.04	6.74	1.42	9.04	6.73

Table No. 9.15 Contd.: Panicles/ M² of entries in AVT 1-BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	Zone VI (4) Mean	VII											Zone VII (8) Mean	Overall (18) Mean
			TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA	KA (3)		
			IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	MGD	BRM	Mean		
3301	24771	230	258	542	165	353	442	416	429	313	210	270	264	327	286
3302	24766	245	293	433	130	282	384	444	414	323	118	273	238	300	279
3303	24316	224	250	283	48	166	318	401	360	287	280	266	277	267	264
3304	24391	194	218	383	162	273	344	272	308	283		266	275	276	249
3305	24440	233	225	500	168	334	380	401	391	327	145	280	251	303	282
3306	24777	245	360	433	118	276	469	416	442	333		256	294	341	295
3707	BPT 5204 Check	240	291	600	157	378	380	358	369	303		266	285	336	300
3308	24555	264	255	442	192	317	431	416	423	353		263	308	336	303
3309	24319	227	272	650	133	392	376	416	396	333		259	296	348	296
3310	24760	250	318	550	186	368	298	416	357	343		273	308	341	303
3311	24775	242	266	467	118	293	429	416	422	330	98	252	227	297	284
3312	24783	215	265	450	201	325	347	444	395	303		249	276	323	275
3313	24360	241	265	408	140	274	349	416	382	337		263	300	311	284
3314	24438	234	365	608	164	386	342	358	350	327	340	249	305	344	299
3315	DRRH 3 (HC)	231	223	567	147	357	304	401	353	333		277	305	322	277
3316	24765	244	227	450	152	301	331	416	373	313	205	273	264	296	275
3317	24553	243	298	442	175	309	347	444	395	307	90	273	223	297	283
3318	24544	232	241	558	149	354	380	444	412	307	133	249	230	308	286
3320	24336	249	198	392	176	284	324	459	392	303	115	231	216	275	269
3321	24772	214	272	508	188	348	460	444	452	377	172	245	264	333	287
3322	Kalanamak Check	162	280	408	195	302	551	272	412	353	218	270	280	318	281
3323	IR 64 Check	246	213	558	120	339	460	387	423	340		238	289	331	301
3324	24557	254	290	375	197	286	431	301	366	333	272	263	289	308	288
3325	24550	233	249	358	137	248	324	358	341	350	248	284	294	289	269
3326	24779	220	193	475	171	323	578	347	462	317	162	277	252	315	280
3327	Chittimuthyalu Check	202	137	492	156	324	433	358	396	330	98	308	245	289	264
3328	24774	233	235	533	173	353	371	387	379	317	195	340	284	319	293
3329	24291	253	233	467	145	306	362	430	396	337	343	249	310	321	297
3330	24787	215	213	408	156	282	424	387	406	330	293	252	292	308	280
	Exp Mean	**232**	**255**	**474**	**156**	**315**	**392**	**394**	**393**	**326**	**197**	**266**	**271**	**312**	**284**
	C.D. 5%	13	117	111	61	44	151	45	76	56	14	17	21	30	15
	C.V.%	6.87	27.91	14.26	24.00	12.36	23.54	6.94	16.99	10.44	4.19	3.88	8.41	16.91	13.97

Table 9.16: Grain quality characteristics of entries in AVT-1 Biofortification Kharif 2015

ENTRY NO.	IET NO.	IIRR							
		HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chake
3301	IET 24771	80.3	69.9	63.9	5.36	1.77	3.02	SS	A
3302	24766	81	70.6	61.4	6.18	2.28	2.71	LB	VOC
3303	24316	80.6	68.5	59.2	4.83	1.86	2.61	MS	A
3304	24391	80.3	71.1	66.8	5.89	1.83	3.21	SS	A
3305	24440	79.2	68.2	58.6	4.83	1.91	2.52	MS	VOC
3306	24777	78.4	69.9	59.6	5.36	2.1	2.55	MS	VOC
3307	BPT 5204	77.6	69.6	59.7	4.96	1.86	2.66	MS	A
3308	24555	80.2	72.1	63.6	4.89	1.9	2.57	MS	VOC
3309	24319	81	70.2	55	6.57	2.06	3.18	LS	VOC
3310	24760	78.9	69.1	61	4.89	1.78	2.74	MS	A
3311	24775	79.8	68.7	55.9	4.81	1.94	2.47	SB	VOC
3312	24783	81.3	68.4	58	5.42	2.12	2.55	MS	VOC
3313	24360	77.5	65.9	46	6.01	1.96	3.06	LS	VOC
3314	24438	80.7	70	57.1	4.74	1.87	2.53	MS	A
3315	DRRH3 HC	78.7	67.7	54.1	5.13	2.03	2.52	MS	VOC
3316	24765	78.7	69.7	64.9	4.78	1.83	2.61	MS	A
3317	24553	76.3	67.8	56.6	4.72	1.99	2.37	SB	VOC
3318	24544	78.7	66.8	58.2	5.59	1.9	2.94	MS	VOC
3320	24336	77.7	68.9	52.7	5.76	2.14	2.69	MS	VOC
3321	24772	76.7	67.7	54.4	6.34	2.3	2.75	LB	VOC
3322	KALANAMAK C	79.5	70.1	56	4.88	1.88	2.59	MS	A
3323	IR64	78	69.1	60.2	6.66	2.16	3.08	LS	VOC
3324	24557	81	70.6	59.1	5.66	1.89	2.99	MS	VOC
3325	24550	78.1	67.5	54.8	5.54	2.25	2.46	SB	VOC
3326	24779	79.1	68.4	65	5.14	1.83	2.8	MS	VOC
3327	CHITTIMUTHALU C	76.6	69.1	55.1	3.91	2	1.95	SB	A
3328	24774	78.4	69.4	56.4	6.18	2.37	2.6	LB	VOC
3329	24291	79.6	67.8	53.6	4.95	1.77	2.79	MS	A
3330	24787	80.7	69.1	59.4	5.61	2.04	2.75	MS	VOC

Table 9.16 Contd.: Grain quality characteristics of entries in AVT-1 Biofortification Kharif 2015

ENTRY NO.	IET NO.	IIRR								NRRI		
		VER	WU	KLAC	ER	ASV	AC	GC	AROMA	ASV	AC	GC
3301	IET 24771	4.7	190	9.7	1.83	4	23.87	22	NS	4.0	23.10	39
3302	24766	5.2	90	11.7	1.98	4	23.87	40	MS	3.0	24.45	32
3303	24316	4.8	155	9	1.86	4	24.66	25	NS	4.0	23.80	34
3304	24391	5.3	130	9.8	1.66	4	25.25	24	SS	5.0	22.50	39
3305	24440	5.6	300	9.7	2	7	25.54	22	NS	6.6	23.70	30
3306	24777	5.5	195	10.1	1.88	4	22.76	24	NS	5.0	24.52	30
3307	BPT 5204	4	195	9.9	1.99	4	24.37	58	NS	5.0	21.45	36
3308	24555	4.7	350	8.5	1.73	7	24.49	25	NS	7.0	23.77	35
3309	24319	5.2	295	10.8	1.64	7	24.58	24	NS	5.5	22.12	32
3310	24760	5.3	175	9.8	2	4	23.73	23	NS	5.0	20.85	40
3311	24775	5.6	155	9.6	1.99	4	23.96	25	NS	4.0	20.25	41
3312	24783	4.8	175	9	1.66	4	23.32	24	NS	5.0	23.02	65
3313	24360	5.2	195	10.1	1.68	4	23.7	25	NS	4.0	21.83	48
3314	24438	4.8	310	9.6	2.02	7	24.25	22	NS	7.0	22.20	45
3315	DRRH3 HC	4.7	230	8.4	1.63	4	24.46	53	NS	5.0	22.35	59
3316	24765	4.7	170	8.7	1.82	4	24.02	23	NS	5.0	21.00	65
3317	24553	4.7	295	7.6	1.61	7	24.49	24	MS	7.0	21.00	65
3318	24544	4.8	255	10.1	1.8	4	24.34	32	NS	6.0	20.78	67
3320	24336	4.7	220	11.8	2.04	3.5	24.05	41	NS	5.0	21.52	37
3321	24772	5	180	10	1.78	4	23.49	25	NS	6.0	22.35	59
3322	KALANAMAK C	4.6	160	8.8	1.8	4	23.73	60	SS	6.0	21.75	66
3323	IR64	4.7	225	9.4	1.41	4	22.17	64	NS	5.0	20.32	60
3324	24557	4.7	295	10.1	1.78	7	24.08	22	NS	7.0	21.75	42
3325	24550	4.8	300	9.6	1.73	7	25.37	22	MS	7.0	23.55	47
3326	24779	4.4	215	8.4	1.63	4	25.34	41	MS	6.0	22.87	38
3327	CHITTIMUTHALU C	4.8	185	6.5	1.66	4	22.26	22	MS	6.0	21.07	39
3328	24774	5	290	11.5	1.86	7	23.67	45	NS	5.0	19.72	50
3329	24291	4.8	220	8.4	1.69	4	22.55	53	NS	6.0	20.32	47
3330	24787	5.2	260	9.7	1.54	4	21.31	57	NS	6.0	20.85	51

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

Table 9.17: Iron content in ppm for polished rice samples of entries in AVT 1- Biofortification, kharif 2015

Entry No.	IET No.	PTB	NVS	CTK	ADT	SKL	MNC	LDN	CHN	CBT @
3301	24771	4.5	2.5	2.5	3.9	3.3	3.9	3.4	2.1	2
3302	24766	3.7	3	2	3.4	2.5	2.6	2	2.3	3.2
3303	24316	4.2	3	2.8	2.4	5.9	4.4	2.9	2.1	2.7
3304	24391	3	1.9	2.3	2.9	3	2.5		2.4	1.5
3305	24440	3.2	3.5	2.7	4.2	3.9	3.3	3	3.1	2.7
3306	24777	2.4	1.8	1.9	3.2	2.1	2.6	3.1	2.7	3
3307	BPT 5204 Check	2	3.5	2.3	5	2.9	3.2	3.1	3.7	4.1
3308	24555	2.8	2.6	5.4	2.9	2.9	2.4	3.6	3.3	2
3309	24319	5	2.4	3.4	3.2	3.3	4.1	3.5	2.2	2.3
3310	24760	3.6	3.7	3.5	3.1	2.2	3.6	3.9	3	2.9
3311	24775	4.1	3.2	2.9	4.9	2.1	4.6	4.2	3.5	3.8
3312	24783	3.2	2.9	3.4	3.1	1.6	3.1	2.9	4.1	2.3
3313	24360	3.1	2.1	3.1	1.7	3.3	3.1	3.6	3.4	3.2
3314	24438	3.5	4.1	5.2	2.6	2.4	2.7	3.3	2.8	2.5
3315	DRRH 3 (HC)	3.1	2.4	3.7	4.4	1.6	2.6	2.5	2.5	2.8
3316	24765	3.6	2.2	3.6	3.3	2.1	4.2	4.1	2.4	2.5
3317	24553	4	2.2	2.7	2.4	2.9	3.6	2.2	3	1.8
3318	24544	1.6	0.7	2.6	3.1	1.5	2.5	2.7	2.5	0.7
3320	24336	2.5	2	3.7	2	2	2.3	3	1.9	2.2
3321	24772	3	2.2	2	3	1.8	3.1	4.4	2.8	2.2
3322	Kalanamak Check	5.2	4	3.1	4.3	2.5	4.4		3.7	3.2
3323	IR 64 Check	3.2	4.9	1.6	4.1	2.6	4.1	4	2.1	2.8
3324	24557	3.1	5.3	4.6	2.6	1.9	3.6	1.7	4	2.7
3325	24550	2.5	3.2	3	3.6	2.6	2.6	2.2	4.9	2
3326	24779	3.3	3.8	3	2.5	3.5	2.8	2	3.8	2.7
3327	Chittimuthyalu Check	3.3	1.6	3.2	2.5	4.2	2.8		3.2	2.3
3328	24774	1		4.7	2.3	1.5		3	2.2	1.2
3329	24291	4.3		3.8	5.1	2	3.7	3.4	3	2.2
3330	24787	3		4.4	2.8	2.4	3.3	3.5	3.5	2
3331	Check							2.5		
Location mean		3.3	2.9	3.2	3.3	2.6	3.3	3.1	3.0	2.5

Table 9.17(Contd.): Iron content in ppm for polished rice samples of entries in AVT 1- Biofortification, kharif 2015

Entry No.	IET No.	SHR	HTW	NWG	KJT	BGL	RPR	IIRR	MND	Mean
3301	24771	5.9	4	4	4.9	5.7	5.1	4.5	4	**4.0**
3302	24766	4.7	4.2	4.9	4.6	4	4.1		3.7	**3.4**
3303	24316	4.8	2.4	5.9	3.5	2.6	7.5	6.4	2.4	**4.0**
3304	24391	3.8	2	4.5	3.2		4.2	3.7	2.5	**3.0**
3305	24440	7	3.7	4.4	5	5.7	4.8	3	3.1	**4.0**
3306	24777	4.3	3	2.5	3.5	2.6	3.5	2.3	2.1	**2.7**
3307	BPT 5204 Check	6.1	3.3	4.5	4.1	5.6	3.7	2.3	3.9	**3.7**
3308	24555	5.9	4.2	4.3	4.8	6.6	4.8	4	3.6	**4.0**
3309	24319	4.5	3.7	4.4	5	3.6	5.4	3	2.6	**3.7**
3310	24760	4.1	6.1	4.4	9.2	5.4	4.1	3.2	4	**4.2**
3311	24775	6	5.1	5.7	5.4	8.3	3.4	5.3	4.5	**4.6**
3312	24783	3.6	5.5	4.4	2.9	4.9	3.9	3.9	1.7	**3.4**
3313	24360	3.9	3.6	4.2	2.3	3	4	2.5	1.9	**3.1**
3314	24438	7	6.3	4.5	4.5		4.3	3.7	4.4	**4.1**
3315	DRRH 3 (HC)	4.7	3.2	2.4	2.7	1.9	2.1	2.5	2.1	**2.8**
3316	24765	3.6	3.7	3	5	4.3	2.6	3.1	1.6	**3.3**
3317	24553	5.6	4	3.7	4.9	8.8	4.2	3.3	3.2	**3.8**
3318	24544	5.3	3.3	1.6	3.5	2.1	2.3	1.8	2.3	**2.5**
3320	24336	3.3	3.8	3.2	4.5	3.5	1.8	3.1	2.4	**2.8**
3321	24772	2.9	2.4	5.9	4.1	3.1	3.4	4.6		**3.2**
3322	Kalanamak Check	5.6	1.6	5.9	6.9	5.4	3.1	4.6	6	**4.4**
3323	IR 64 Check	2.9	4.1	4.6	6.1	0.9	2.1	2.4	3.4	**3.3**
3324	24557	8.2	3.2	5.2	6.4	5.9	2.7	2.9	4.1	**4.1**
3325	24550	4.6	2	4.4	5.8	2.3	4.6	3.4	2.6	**3.4**
3326	24779	6.2	4.9	5.5	5.7	5	6.1	4.6	2.6	**4.1**
3327	Chittimuthyalu Check	6.9	5.4	4.8	5.2	6	6.1	5.1	4.7	**4.3**
3328	24774	4	2.6	4.1	4.4	5.7	2.9	3.4	2	**3.1**
3329	24291	5.2	4.4	5.2	4.7	3.5	4	3.6	4.2	**4.0**
3330	24787	3.4	4.8	5.7	4.4	3.9	3.4	3.3	2.8	**3.6**
3331	Check									**2.5**
Location mean		**5.0**	**3.8**	**4.4**	**4.7**	**4.5**	**3.9**	**3.6**	**3.2**	

Table 9.18: Zinc content in ppm for polished rice samples of entries in AVT 1- Biofortification, kharif 2015

Entry No.	IET No.	II	III	III	III		V	V		VI	VI	VI
		LDN	CTK	CHN	HTW	Zone III Mean	SKL	RPR	Zone V Mean	NVS	SHR	NWG
3301	24771	21.5	15.1	10.7	10.7	12.2	14.7	15	14.9	14	30.8	13.3
3302	24766	19.4	14.6	15.7	17.2	15.8	11.2	12.1	11.7	14.6	18.1	11
3303	24316	24.4	18.6	16.4	16.4	17.1	17.4	16.7	17.1	16.2	29.7	15.7
3304	24391		16.1	16.2	14.9	15.7	17.3	15.9	16.6	16.5	23.4	22.6
3305	24440	26.7	20	18.2	18.5	18.9	20	20.9	20.5	15.7	32.9	16.5
3306	24777	21.4	15.6	14.3	15	15.0	13.1	12.2	12.7	11.4	19	9.3
3307	BPT 5204 Check	20.2	15.9	11.6	12.1	13.2	12.5	12.2	12.4	13.8	24.9	13.4
3308	24555	24.4	16.4	17.8	17	17.1	16.6	15.8	16.2	14.5	26.6	13.5
3309	24319	18.7	15.9	13.3	13.4	14.2	13.3	14.4	13.9	16	27.3	12.9
3310	24760	23.7	17.2	16	17.7	17.0	16.5	18.5	17.5	15.3	26.6	16.7
3311	24775	21	14.9	14.6	15	14.8	12.7	14.2	13.5	16.6	24.6	19.1
3312	24783	21.4	16.1	19.5	15.9	17.2	13.6	11.7	12.7	15.8	24.1	13.5
3313	24360	19.1	17.1	15.7	18.2	17.0	13.8	15	14.4	14.8	28.1	14.4
3314	24438	25.7	21.1	20.8	22	21.3	18	20.8	19.4	17.9	35.1	17.2
3315	DRRH 3 (HC)	17	11.2	11.3	11.5	11.3	10.2	10.8	10.5	11.5	20.9	10.3
3316	24765	17.2	13.8	13.4	17.1	14.8	11.2	12.4	11.8	13.5	23	13.1
3317	24553	18.3	12.2	8.6	9.4	10.1	11.4	12.6	12.0	13	23	11.4
3318	24544	21.6	13.4	15.6	16.9	15.3	12.3	13.3	12.8	14.7	33.8	12.5
3320	24336	21.5	12.7	17.5	17.8	16.0	12.5	15.3	13.9	14.6	21.9	13.8
3321	24772	21.7	15.3	16.1	17.5	16.3	15.2	13.5	14.4	14.3	24.9	14.2
3322	Kalanamak Check		13.7	14.2	12	13.3	15.3	14.5	14.9	13.7	18.5	16
3323	IR 64 Check	22.8	15.6	17.7	18.4	17.2	13.3	14.5	13.9	15.2	23.3	16.3
3324	24557	16.3	18.8	23.5	23.5	21.9	10.1	22.9	16.5	21.1	35	14.5
3325	24550	19.8	15.4	23.3	21.8	20.2	14.4	14.7	14.6	18.1	30	14.2
3326	24779	20.3	17.6	17.9	18.7	18.1	16.7	20.3	18.5	17.9	28.8	17.9
3327	Chittimuthyalu Check		19.7	16.7	19.4	18.6	18.7	21.8	20.3	11.3	32.6	24.5
3328	24774	25.9	15.7	15.5	13.1	14.8	17.2	13.7	15.5		30.3	16.3
3329	24291	21.9	15	14.7	14.2	14.6	11.5	13.5	12.5		23.2	15.9
3330	24787	20.1	17.5	16.1	18	17.2	14.3	14.6	14.5		26.3	15
3331	Check	17.6										
Location mean		**21.1**	**15.9**	**16**	**16.3**	16.1	**14.3**	**15.3**	14.8	**15.1**	**26.4**	**15**

Table 9.18 contd.: Zinc content in ppm for polished rice samples of entries in AVT 1- Biofortification, kharif 2015

Entry No.	IET No.	VI		VII	VII	VII	VII	VII	VII	VII	Zone VII Mean	Over all Mean
		KJT	Zone VI Mean	PTB	ADT	CBT @	MNC	IIRR	BGL	MND		
3301	24771	15.5	18.4	18.4	15.7	6.3	21.6	21.5	26.5	11.9	19.3	**17.3**
3302	24766	16.2	15.0	14.9	19	3.2	17.1		14.7	10.3	15.2	**15.1**
3303	24316	11.1	18.2	21.4	20.3	5	24.4	22.8	11.6	13.8	19.1	**18.6**
3304	24391	22.9	21.4	25.4	20.9	3.1	29.4	27.3		16.1	23.8	**20.4**
3305	24440	18.6	20.9	20	19	3.6	20.8	24.5	28.7	16.1	21.5	**21.1**
3306	24777	13.9	13.4	16.5	18.8	2.6	18.3	16.8	21.2	10.7	17.1	**15.5**
3307	BPT 5204 Check	11	15.8	15.1	16.1	6.5	20.7	19.7	25.5	14.6	18.6	**16.2**
3308	24555	15.3	17.5	24.9	16	5.2	25.7	20.2	40.7	15.9	23.9	**20.1**
3309	24319	14	17.6	21.4	16.8	5	20.4	19.8	17.7	11.4	17.9	**16.7**
3310	24760	15.5	18.5	24.1	17.7	5.5	26.7	20.9	28.9	18.1	22.7	**20**
3311	24775	14.9	18.8	22.8	16.6	5	23	23.7	35.5	15.6	22.9	**19.1**
3312	24783	15.2	17.2	25.2	23	3	21.1	18.8	31.5	9.8	21.6	**18.5**
3313	24360	15	18.1	19.2	19.6	3.8	22.9	23.7	23.7	12.1	20.2	**18.3**
3314	24438	19.8	22.5	27.4	16.5	3.2	28.3	20.6		17	22.0	**21.9**
3315	DRRH 3 (HC)	9.7	13.1	15	15.3	3.5	21.3	22.4	13.3	10.1	16.2	**13.9**
3316	24765	9.8	14.9	18.3	21.1	5.3	20.1	19.8	24.5	10.6	19.1	**16.2**
3317	24553	11.3	14.7	19.1	18.6	3.6	22.2	20.6	25.6	11.2	19.6	**15.5**
3318	24544	15.1	19.0	19.5	18.9	6.9	20.8	21.6	16.6	13.4	18.5	**17.5**
3320	24336	18.8	17.3	22.8	23.5	3.9	19.4	17.6	23.6	15.5	20.4	**18.1**
3321	24772	13.3	16.7	23.7	23.2	3.3	20.6	22.9	15.5		21.2	**18.1**
3322	Kalanamak Check	18.9	16.8	26.2	23.4	4.7	24.9	18.7	25.7	12.6	21.9	**17.9**
3323	IR 64 Check	17.5	18.1	20.6	21.4	3.1	18	16.2	10.8	12.7	16.6	**17.1**
3324	24557	20.6	22.8	17.1	13.7	4.5	21.3	20.1	33.1	13.3	19.8	**20.3**
3325	24550	14.2	19.1	22	24.8	3.3	26.2	19.8	12.3	12.9	19.7	**19**
3326	24779	19	20.9	18.4	22.1	6.7	24.5	28.3	20.5	15.9	21.6	**20.3**
3327	Chittimuthyalu Check	22.3	22.7	21.4	24.9	3.7	27.1	30.1	31.3	19.5	25.7	**22.8**
3328	24774	15.8	20.8	20.3	22.1	6.3		20.9	31.7	12.4	21.5	**19.4**
3329	24291	13	17.4	19.1	15.6	4.3	20.5	19.6	20.4	13.7	18.2	**16.8**
3330	24787	15.6	19.0	18.2	22.1	6.7	22.7	16.4	14.8	13.1	17.9	**17.7**
3331	Check											**17.6**
Location mean		**15.6**	18.0	**20.6**	**19.5**	**4.5**	**22.5**	**21.3**	**23.2**	**13.6**	20.1	

Table 9.19: Grain protein content of the entries tested in AVT 1- Biofort, kharif 2015.

IET No.	Cuttack	Aduthurai	Nausari	Mean
	Grain protein content (%)	Grain protein content (%)	Grain protein content (%)	
24771	8.07	8.39	7.78	8.08
24766	8.14	9.41	8.66	8.74
24316	9.02	10.08	9.23	9.44
24391	5.38		5.39	5.39
24440	8.59	8.4	6.94	7.98
24777	9.22	9.6	8.19	9.00
BPT 5204 Check	7.85	10.27	7.76	8.63
24555	8.04	8.8	7.46	8.10
24319	7.22	9.25	7.14	7.87
24760	9.08	9.54	8.22	8.95
24775	8.03	9.86	8.09	8.66
24783	9.74	10.07	9.31	9.71
24360	10.31	10.16	9.87	10.11
24438	8.7	9.21	8.18	8.70
DRRH 3 (HC)	6.54	8.45	9.43	8.14
24765	9.01	9.43	9.34	9.26
24553	6.45	9.37	8.18	8.00
24544	7.78	9.45	6.68	7.97
24336	8.23	10.82	8.74	9.26
24772	10.55	9.77	9.98	10.10
Kalanamak Check	8.02		8.07	8.05
IR 64 Check	9.62	10.86	9.84	10.11
24557	8.87	9.37	9.43	9.22
24550	8.12	10.25	10.53	9.63
24779	6.6	7.92	6.84	7.12
Chittimuthyalu Check	8.92		6.44	7.68
24774	7.53	8.82	8.82	8.39
24291	8.19	9.95	9.89	9.34
24787	7.08	8.13	8.7	7.97

Table 9.20 : Composition of entries in Initial Variety Trial - Biofortification (IVT-Biofort), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing				
3401	25441	CR 2826-1-1-1-2B-1-2B-1	Swarna/ARC 10075	MS
3402	25442	ARB-10	Azucena/Moro mutant	LS
3403	25443	RP 4993-300-22-18-1-4-1	BPT 5204/Chittimutyalu	MS
3404	25444	NPQ-23	NP 6565/IET 22461	SB
3405	25445	RP 4993-183-40-5-2-1-1	BPT 5204/ Chittimuthyalu	MS
3406	25446	R-RHZ-HI-11	HMT/ IR 681444B-18-2-1-1	MS
3407	25447	RP Bio 4918-236 K	Swarna/ O. nivara	MS
3408	25448	RTN RR-4	Munga / MO-17	SB
3409	25449	RP 5177-435-8-5-3	Swarna/ Sinnasivappu	MS
3410	25450	R-RHZ-LI-22	Lalmati / IR 681444B-13-2-1-1	MS
3411	25451	RP 5898-19-8-6-1-1-1	RP Bio 226*1/CSR 27	MS
3412	25452	NPQ-50	NP 18299/IET 19810	MS
3413	25453	CR 2829-PLN-23	ARC10075/Naveen	MS
3414	25454	ARB-11	Azucena/Moro mutant	MS
3415	25455	RP 5958-IR 94052-117-13-4-11-1-1	IR 83317 / IR 64	MS
3416	25456	NPQ-49	NP 14/IET 19810	MS
3417	25457	R-RHZ-GI-56	Selection from land race Chapti Gurmatiya of Chhattisgarh.	SB
3418	25458	RP 5898-101-3-2-1-1	RP Bio 226*1/CSR 27	MS
3419	25459	RP Bio 4918-233K	Swarna/ O. nivara	MS
3420	25460	CR 2915-1-1-3-1-B-6-2B-1	Basmati 370/RCPL-1-87-4-1//HP1	LS
3421	**IR 64 Check**			
3422	25461	R-RHZ-MI-30	Moroberekan /IR 681444B-18-2-1-1	SB
3423	25462	ARB-13	Budda/IR 64	MS
3424	25463	RP 5947-38-5-2-1-1-1	BPT 5204/IC 115366	MS
3425	**BPT 5204 Check**			
3426	25464	ARB-12	Azucena/Moro mutant	MS
3427	25465	Dadaji HMT		MS
3428	**Gontra Bidhan 3 Check**			
3429	25466	R-RHZ-MI-32	Moroberekan / IR 681444B-18-2-1-1	SB
3430	25467	RP 5898-101-9-3-1-1	RP Bio 226*1/CSR 27	MS
3431	**Chittimuthyalu Check**			
3432	25468	CR 2829-PLN-114	ARC10075/Naveen	MS
3433	25469	RP 5163-102-3-5-2-2	Jagtial Sannalu/ IC 346255	MS
3434	25470	R-RHZ-R56	IR 91181-96-1-1-1-2	LB
3435	25471	RP 5948-26-11-3-1-1-1	BPT 5204/IC 115376//RP Bio 226	MS
3436	**DRR H-3 (HC)**			
3437	25472	R-RHZ-IB-13	IR 681444B-18-2-1-1 / Bas.1	LS
3438	25473	CN 1987-4-2	Nayanmoni/ MTU 7029	MB
3439	25474	CR 2826-1-1-2-4B-10-1	Swarna /ARC 10075	MS
3440	25475	R-RHZ-SM-14	Swarna / Moroberekan	SB
3441	25476	RP Bio 5477-NH 787-1	N-22 mutant	SB
3442	25477	R-RHZ-LI-23	Lalmati / IR 681444B-13-2-1-1	LB
3443	**Kalanamak Check**			
3444	25478	RP 5959-IR 94065-68-42-6-3-1-1	IR 91158 / IR 07F289	LB
3445	25479	RP 5949-29-5-1-1-1	BPT 5204*3/O.rufipogon	MS

Table No.9.21 : Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II		III							
		PUN		OD		W.B		W.B		W.B (2)	
		LDN		CTK		CHN		HTW		Mean	
3401	25441	5486		3869	...10%	3725		4105		3915	
3402	25442	1728		3555	...1%	3050		3605		3328	
3403	25443			3874	...10%	4325		2425		3375	
3404	25444	4054		5541	3 *£ ...58% _6%	3200		4840		4020	
3405	25445	5293		3680	...5%	3550		5230		4390	5%
3406	25446	3554		3555	...1%	3975		5150		4563	*£ 9%
3407	25447	4454		3934	...12%	5525	3	5975	4 *£	5750	2 *£ # 38% **9%**
3408	25448	5756				3890		6395	3 *£ #	5143	6 *£ 23%
3409	25449	6214	5 ...3%	3988	...13%	3425		5405	*£	4415	6%
3410	25450	2902		2771		3800		4165		3983	
3411	25451	6414	2 ...7% _2%	3672	...4%	4075		4530		4303	3%
3412	25452	5688		3869	...10%	4350		5770	6 *£	5060	7 *£ 21%
3413	25453	5225		3723	...6%	3700		5760	7 *£	4730	*£ 13%
3414	25454	1364		2305		5325	4	3045		4185	
3415	25455	4890				4050		4360		4205	1%
3416	25456	5260		4156	...18%	4575		4800		4688	*£ 12%
3417	25457	2567		5877	2 *£ ...67% _12%	3825		4830		4328	4%
3418	25458	6073	7 ...1%	5011	5 *£ ...42%	4125		4535		4330	4%
3419	25459	4090		4399	*£ ...25%	4000		3500		3750	
3420	25460	5649		5920	1 *£ ...68% _13%	5975	1 #	5000		5488	3 *£ 31% **4%**
3421	IR 64 Yield check (Medium)	5702		2998		3125		4740		3933	
3422	25461	3469		2987		4355		5105		4730	*£ 13%
3423	25462	2154				3775		4330		4053	
3424	25463	6341	3 ...6%	4340	*£ ...23%	3125		5080		4103	
3425	BPT 5204-Yield check (Late)	6007	8	3517		5700	2 #	2650		4175	
3426	25464	2936		2327		4000		2970		3485	
3427	25465	4135		2933		4025		3625		3825	
3429	25466	2370		1705		4375		3160		3768	
3430	25467	6081	6 ...1%	4464	9 *£ ...27%	3875		3625		3750	
3431	Chittimuthyalu			2435		3425		4000		3713	
3432	25468	4501		3593	...2%	3790		3260		3525	
3433	25469	5179		2868		4325		4985		4655	*£ 11%
3434	25470	6890	1 ...15% _9%	4805	8 *£ ...37%	3775		5835	5 *£	4805	*£ 15%
3435	25471	5904	9	3663	...4%	4625		5000		4813	*£ 15%
3436	DRR H-3 (Hybrid Check)	6316	4 ...5%	5249	4 *£ ...49%	5075	6	5440	9 *£	5258	5 *£ 26%
3437	25472	3385		1851		3575		4825		4200	1%
3438	25473	5172		5000	6 *£ ...42%	5175	5	8030	1 *£ #	6603	1 *£ # 58% **26%**
3439	25474	5381		4302	...22%	5075	7	4840		4958	9 *£ 19%
3440	25475	5400		2679		4775	9	5000		4888	*£ 17%
3441	25476	2733		2554		3025		3485		3255	
3442	25477	3563		2679		4815	8	5080		4948	*£ 19%
3443	Kalanamak			2246		3450		4780		4115	
3444	25478	5141		4940	7 *£ ...40%	4150		6580	2 *£ #	5365	4 *£ 29% **2%**
3445	25479	5256		4361	*£ ...24%	4450		5610	8 *£	5030	8 *£ 20%
	Exp Mean	**4651**		**3712**		**4144**		**4670**		**4407**	
	C.D. 5%	926		817		467		624		383	
	C.V.%	9.85		10.89		5.59		6.62		6.18	
	Sowing Date	23-Jun		06-Jun		02-Jul		24-Jun			
	Planting Date	18-Jul		12-Jul		06-Aug		20-Jul			

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 9.21 Contd.: Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	III							Zone III (4) Mean			
		U.P.		U.P.		U.P. (1)						
		MSD	@	GRK		Mean						
3401	25441	4687	2 *£	3509		3509			3802			
3402	25442	3325		1965		1965			3044			
3403	25443	3465		2554		2554			3295			
3404	25444	3964	*£	2718		2718			4075			
3405	25445	3389		2347		2347			3702			
3406	25446	4348	6 *£	2554		2554			3808			
3407	25447	3846	*£	4354		4354			4947	6 *£	19%	
3408	25448	4150	*£	5310	4	5310	4	11% **1%**	5198	3 *£	25%	
3409	25449	4220	9 *£	4139		4139			4239		2%	
3410	25450	2315		2500		2500			3309			
3411	25451	3229		4642		4642			4230		2%	
3412	25452	2730		3628		3628			4404		6%	
3413	25453	3977	*£	4956	8	4956	8	3%	4535	9	9%	
3414	25454	2685		2155		2155			3208			
3415	25455	3900	*£	4231		4231			4214		1%	
3416	25456	3708	*£	4525		4525			4514		8%	
3417	25457	4028	*£	1421		1421			3988			
3418	25458	2142		4576		4576			4562	8	9%	
3419	25459	4220	*£	5402	3	5402	3	13% **3%**	4325		4%	
3420	25460	2046		3737		3737			5158	4 *£	24%	
3421	IR 64 Yield check (Medium)	2890		4513		4513			3844			
3422	25461	2596		3389		3389			3959			
3423	25462	3568		2282		2282			3462			
3424	25463	2685		4889	9	4889	9	2%	4359		5%	
3425	BPT 5204-Yield check (Late)	2398		4801		4801			4167			
3426	25464	3325		4057		4057			3338			
3427	25465	3293		4405		4405			3747			
3429	25466	2909		1959		1959			2800			
3430	25467	1630		4377		4377			4085			
3431	Chittimuthyalu	2062		2361		2361			3055			
3432	25468	3708	*£	5272	5	5272	5	10%	3979			
3433	25469	4572	3 *£	4313		4313			4123			
3434	25470	2091		5446	2	5446	2	13% **3%**	4965	5 *£	19%	
3435	25471	3408		5476	1	5476	1	14% **4%**	4691	7 *£	13%	
3436	DRR H-3 (Hybrid Check)	4508	4 *£	5267	6	5267	6	10%	5258	2 *£	26%	
3437	25472	4009	*£	2424		2424			3169			
3438	25473	4783	1 *£	4674		4674			5720	1 *£	37% **9%**	
3439	25474	3645	*£	2878		2878			4274		3%	
3440	25475	4348	7 *£	5013	7	5013	7	4%	4367		5%	
3441	25476	3005		2972		2972			3009			
3442	25477	3031		2051		2051			3656			
3443	Kalanamak	4252	8 *£	1255		1255			2933			
3444	25478	4412	5 *£	2009		2009			4420		6%	
3445	25479	4028	*£	2896		2896			4329		4%	
	Exp Mean	**3444**		**3641**		**3641**			**4047**			
	C.D. 5%	689		1705		1689			499			
	C.V.%	9.92		23.22		23.00			12.49			
	Sowing Date	01-Jul		01-Jul								
	Planting Date	30-Jul		24-Jul								

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 9.21 Contd.: Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	V				Zone V (2) Means		VI							
		V		MH				MH		MH		MH (2)		GU	
		RPR		SKL				KJT	@	SHR		Mean		NWG	
3401	25441	3982	...15%	5785	9	4883	*£ 16%	3125	8	4458		5121	8%	4697	6
3402	25442	2278		2793		2535		3006		3375		3084		2121	
3403	25443	3093		4189		3641		3095	9	4639	9	4414		3182	
3404	25444	4990	4 *£ ...44%	5519		5254	9 *£ 24%	3274	4	5444	2 *£	5482	6 *£ 16%	5379	1 *£ #
3405	25445	5109	3 *£ ...48%	6117	7 *£	5613	3 *£ 33%	3274	5	4833	6	5475	7 *£ 16%	5076	2 *£ #
3406	25446	4695	8 *£ ...36%	5585		5140	*£ 22%	3720	2 *£ #	4194		4890	4%	2879	
3407	25447	4380	...26%	6250	5 *£	5315	8 *£ 26%	3006		4125		5188	8 10%	4091	
3408	25448	3870	...12%	7181	2 *£ #	5525	4 *£ 31%	2917		4875	5	6028	2 *£ 28% **2%**	3788	
3409	25449	4562	9 *£ ...32%	5851	8	5206	*£ 23%	2917		5250	4 *£	5551	5 *£ 18%	1818	
3410	25450	2640		3590		3115		2619		3931		3760		3333	
3411	25451	3636	...5%	5718		4677	11%	3036		3722		4720		4015	
3412	25452	5112	2 *£ ...48%	4521		4816	*£ 14%	2500		4292		4406		4394	7
3413	25453	4717	7 *£ ...36%			4717	12%	2173		4764	7	4764	1%	3636	
3414	25454	2548		3391		2969		2173		3431		3411		909	
3415	25455	3524	...2%	5718		4621	9%	4048	1 *£ #	4500		5109	8%	3712	
3416	25456	4738	6 *£ ...37%	4721		4729	12%	3065		3569		4145		5076	3 *£ #
3417	25457	2657		5652		4154		2083		3514		4583		2879	
3418	25458	4436	...28%	3989		4212		3214	7	3569		3779		3788	
3419	25459	4295	...24%	6449	3 *£	5372	6 *£ 27%	2917		4681	8	5565	4 *£ 18%	3636	
3420	25460	4004	...16%	7380	1 *£ #	5692	2 *£ 35%	2887		5500	1 *£	6440	1 *£ 36% **9%**	4773	5 *£
3421	IR 64 Yield check (Medium)	1628		5319		3473		2560		4125		4722		3636	
3422	25461	3298		4122		3710		2470		4583		4353		2500	
3423	25462	1737		4787		3262		2143		4306		4546		2424	
3424	25463	4860	5 *£ ...40%	5785		5322	7 *£ 26%	3274	6	4153		4969	5%	5076	4 *£ #
3425	BPT 5204-Yield check (Late)	3463		4987		4225		2500		3819		4403		3485	
3426	25464	2742		4056		3399		2440		4639		4347		2576	
3427	25465	3969	...15%	3790		3879		2381		4611		4201		2348	
3429	25466	2127		2460		2293		2351		3222		2841		1667	
3430	25467	2531		4255		3393		2679		3819		4037		3182	
3431	Chittimuthyalu	1203		2859		2031		2619		3236		3048		2727	
3432	25468	4259	...23%	5718		4988	*£ 18%	2560		4347		5033	7%	3788	
3433	25469	3963	...14%	5652		4807	*£ 14%	2768		4153		4902	4%	3939	
3434	25470	3679	...6%	5585		4632	10%	2798		4167		4876	3%	3864	
3435	25471	3243		5319		4281	1%	3333	3	3958		4639		3864	
3436	DRR H-3 (Hybrid Check)	5186	1 *£ ...50%	6449	4 *£	5817	1 *£ 38%	2500		5403	3 *£	5926	3 *£ 25%	3939	
3437	25472	2022		2726		2374		2470		4500		3613		1894	
3438	25473	4537	*£ ...31%	6250	6 *£	5394	5 *£ 28%	2470		4028		5139	9 9%	4167	9
3439	25474	3981	...15%	5386		4683	11%	2738		3361		4373		2803	
3440	25475	3774	...9%	4521		4147		2560		4278		4400		2121	
3441	25476	1588		3657		2622		2381		3181		3419		1970	
3442	25477	2518		4987		3752		2500		4194		4591		4167	
3443	Kalanamak	2590		4122		3356		2381		3375		3749		2576	
3444	25478	3789	...9%	4920		4355	3%	2381		4611		4766	1%	4091	
3445	25479	1734		5053		3394		2440		3486		4270		4318	8
	Exp Mean	**3493**		**4957**		**4217**		**2744**		**4187**		**4568**		**3416**	
	C.D. 5%	1049		597		517		944		912		527		1103	
	C.V.%	14.90		5.97		8.73		17.05		10.80		8.21		16.01	
	Sowing Date	24-Jun		24-Jun				11-Jul		24-Jun				29-Jun	
	Planting Date	16-Jul		11-Jul				07-Aug		21-May				12-Aug	

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 9.21 Contd.: Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI						VII									
		GU		GU (2)		Zone VI (3) Mean		TEL		TN		TN		TN (1)			
		NVS		Mean				IRR	@	CBT		ADT	@	Mean			
3401	25441	4776		4737	4 *£ 20% **16%**	4644	5 *£ 16% **3%**	390		5310	3	3800	7	5310	3 # 3% **19%**		
3402	25442	2531		2326		2676		3149	4 #	1192		3533		1192			
3403	25443	2809		2995		3543		812		3030		3800	8	3030			
3404	25444	3441		4410	11% **8%**	4755	4 *£ 18% **5%**	2338	9	4498		3667		4498	1%		
3405	25445	3866		4471	9 13% **9%**	4592	6 14% **1%**	1429		4582	9	3867	6	4582	9 **3%**		
3406	25446	3094		2986		3389		2175		1897		4067	5	1897			
3407	25447	4213		4152	5% **2%**	4143	3%	1039		5977	1 #	3800	9	5977	1 # 16% **34%**		
3408	25448	4074		3931		4246	6%	812		4026		2867		4026			
3409	25449	4915	8	3367		3994		2208		2867		2467		2867			
3410	25450	4306		3819		3856		584		2053		2867		2053			
3411	25451	5147	4	4581	6 16% **12%**	4295	7%	1494		3744		2733		3744			
3412	25452	4811		4602	5 16% **13%**	4499	12%	3896	1 *£ #	5380	2	4467	2 *£ #	5380	2 # 4% **21%**		
3413	25453	5347	3 *£ #	4492	8 13% **10%**	4582	7 14% **1%**	1461		4284		2533		4284			
3414	25454	3179		2044		2506		2468	7	870		2800		870			
3415	25455	4487		4100	3%	4233	5%	1688		3193		3533		3193			
3416	25456	4969	7	5022	3 *£ # 27% **23%**	4538	8 13%	1299		4044		2600		4044			
3417	25457	3819		3349		3404		1136		3257		3267		3257			
3418	25458	4861	9	4324	9% **6%**	4073	1%	877		3404		3467		3404			
3419	25459	4414		4025	2%	4243	6%	1721		4658	8	2667		4658	8 **4%**		
3420	25460	4352		4562	7 15% **12%**	4875	2 *£ 21% **8%**	1234		4177		4333	3 *£ #	4177			
3421	IR 64 Yield check (Medium)	4290		3963		4017		974		2669		2467		2669			
3422	25461	4630		3565		3904		2273		1858		4133	4	1858			
3423	25462	4429		3427		3720		2435	8	2496		3600		2496			
3424	25463	5980	2 *£ #	5528	1 *£ # 39% **35%**	5069	1 *£ 26% **12%**	2338		5302	4	2533		5302	4 # 3% **19%**		
3425	BPT 5204-Yield check (Late)	4244		3864		3849		1948		5166	6	2133		5166	6 **16%**		
3426	25464	4340		3458		3852		1071		2165		3000		2165			
3427	25465	5093	5	3721		4017		649		2706		2600		2706			
3429	25466	3858		2762		2916		2922	5 #	2215		2533		2215			
3430	25467	4182		3682		3728		3247	3 #	4097		2267		4097			
3431	Chittimuthyalu	3704		3215		3222		1851		2611		2933		2611			
3432	25468	4159		3973		4098	2%	1299		2711		3333		2711			
3433	25469	3063		3501		3718		812		3046		3667		3046			
3434	25470	3441		3652		3824		1786		3745		3467		3745			
3435	25471	4348		4106	4%	4057	1%	1104		4208		3667		4208			
3436	DRR H-3 (Hybrid Check)	4240		4090	3%	4527	9 13%	974		4463		2533		4463			
3437	25472	5015	6	3455		3803		2273		2072		3400		2072			
3438	25473	4252		4209	6% **3%**	4149	3%	714		5198	5	3333		5198	5 1% **16%**		
3439	25474	4221		3512		3462		2078		3578		2867		3578			
3440	25475	4090		3105		3496		1818		2053		4667	1 *£ #	2053			
3441	25476	4383		3176		3178		3896	2 *£ #	1129		3800		1129			
3442	25477	3962		4064	3%	4108	2%	1883		2381		2133		2381			
3443	Kalanamak	4113		3344		3354		2273		3643		3067		3643			
3444	25478	4190		4140	4% **1%**	4297	7%	2727	6	3821		3667		3821			
3445	25479	6705	1 *£ #	5512	2 *£ # 39% **35%**	4837	3 *£ 20% **7%**	1039		4967	7	3267		4967	7 **11%**		
	Exp Mean	**4280**		**3848**		**3961**		**1741**		**3426**		**3232**		**3426**			
	C.D. 5%	934		769		595		1794		1046		1725		837			
	C.V.%	10.83		14.22		13.15		51.11		15.14		26.46		12.11			
	Sowing Date	01-Jul						24-Jun		24-Jun		26-Jun					
	Planting Date	31-Jul						04-Aug		21-Jul		18-Jul					

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 9.21 Contd.: Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII									
		KE		KE		KE (1)		KA		KA	
		PTB	@	MNC		Mean		MND		BRM	@
3401	25441	5017		4076		4076		1571		2318	*£
3402	25442	4575		1272		1272		3148		2174	
3403	25443	6788	3 #	6837	2	6837	2 26% **13%**	2589		2500	*£ #
3404	25444	6345	5 #	2834		2834		2520		2669	6 *£ #
3405	25445	5460	8	5193	9	5193	9	2309		2161	
3406	25446	5017		4605		4605		4401	5 *£	1927	
3407	25447	6198	6 #	4549		4549		3901	9 *£	2409	*£ #
3408	25448	3394		6588	3	6588	3 22% **9%**	2237		2148	
3409	25449	5017		5602	7	5602	7 4%	2890		2383	*£
3410	25450	5313		2232		2232		2510		2227	
3411	25451	7378	2 #	3526		3526		4617	4 *£ #	2591	8 *£ #
3412	25452	6788	4 #	4551		4551		2008		3034	2 *£ #
3413	25453	4280		4596		4596		3474		2591	9 *£ #
3414	25454	2804		2541		2541		2084		1966	
3415	25455	4132		4291		4291		2661		1745	
3416	25456	2509		3986		3986		2255		1576	
3417	25457	1033		3126		3126		3145		2214	
3418	25458	5608	7	3825		3825		4110	7 *£	3073	1 *£ #
3419	25459	5313		4903		4903		3804	*£	2617	7 *£ #
3420	25460	8854	1 *£ #	7744	1 *£	7744	1 *£ 43% **28%**	3518		2096	
3421	IR 64 Yield check (Medium)	4280		5406	8	5406	8	2982		1771	
3422	25461	3394		4005		4005		4666	3 *£ #	1445	
3423	25462	2361		3188		3188		2768		2227	
3424	25463	5017		4964		4964		3064		1471	
3425	BPT 5204-Yield check (Late)	5017		4330		4330		2643		1706	
3426	25464	3689		2033		2033		5250	1 *£ #	2109	
3427	25465	3099		4272		4272		1622		2591	*£ #
3429	25466	3689		1147		1147		2638		2279	
3430	25467	5017		4613		4613		3510		2148	
3431	Chittimuthyalu	2066		1814		1814		3276		2031	
3432	25468	2804		3591		3591		4242	6 *£	2292	
3433	25469	4427		4196		4196		3023		2318	*£
3434	25470	4132		5866	6	5866	6 9%	4944	2 *£ #	1589	
3435	25471	4722		3898		3898		2087		2240	
3436	DRR H-3 (Hybrid Check)	3542		6063	4	6063	4 12%	4020	8 *£	1849	
3437	25472	2951		1996		1996		3477		2383	*£
3438	25473	5460	9	5013		5013		3531		1771	
3439	25474	5460		4360		4360		3459		2044	
3440	25475	3542		3709		3709		3043		2826	5 *£ #
3441	25476	2804		3973		3973		2515		2943	3 *£ #
3442	25477	4722		3739		3739		2921		1706	
3443	Kalanamak	3247		1238		1238		1872		2161	
3444	25478	4575		4819		4819		1661		2122	
3445	25479	5460		5933	5	5933	5 10%	2740		2839	4 *£ #
	Exp Mean	**4484**		**4115**		**4115**		**3084**		**2211**	
	C.D. 5%	2417		1766		1750		578		543	
	C.V.%	26.73		21.28		21.08		9.30		12.17	
	Sowing Date	29-Jun		09-Jul				05-Aug		24-Jun	
	Planting Date	28-Jul		24-Jul				09-Sep		23-Jul	

Table No. 9.21 Contd.: Grain Yield (kg/ha) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII KA (1) Mean		Zone VII (3) Mean		Overall (13) Mean		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
3401	25441	1571		3653		4258	1%	101	118	275
3402	25442	3148	6%	1871		2509		96	130	230
3403	25443	2589		4152	3%	3629		109	94	284
3404	25444	2520		3284		4229		111	107	257
3405	25445	2309		4028		4399	4%	106	101	287
3406	25446	4401	5 *£ 48% **9%**	3634		3857		94	80	284
3407	25447	3901	9 *£ 31%	4809	4 *£ 19%	4748	7 *£ 13%	105	100	290
3408	25448	2237		4284	9 6%	4832	5 *£ 15%	98	103	280
3409	25449	2890		3786		4379	4%	98	100	266
3410	25450	2510		2265		3133		99	99	282
3411	25451	4617	4 *£ # 55% **15%**	3962		4420	5%	103	98	277
3412	25452	2008		3980		4490	9 6%	106	110	280
3413	25453	3474	17%	4118	2%	4515	8 *£ 7%	93	116	269
3414	25454	2084		1832		2550		87	100	227
3415	25455	2661		3382		4135		92	116	266
3416	25456	2255		3428		4360	3%	106	112	278
3417	25457	3145	5%	3176		3582		99	124	246
3418	25458	4110	7 *£ 38% **2%**	3780		4331	3%	105	96	289
3419	25459	3804	*£ 28%	4455	7 10%	4479	6%	102	98	272
3420	25460	3518	18%	5146	1 *£ 27% **6%**	5210	1 *£ 24% **1%**	105	109	284
3421	IR 64 Yield check (Medium)	2982		3686		3933		91	92	283
3422	25461	4666	3 *£ # 56% **16%**	3510		3767		95	97	256
3423	25462	2768		2817		3223		84	93	281
3424	25463	3064	3%	4443	8 10%	4843	4 *£ 15%	98	107	276
3425	BPT 5204-Yield check (Late)	2643		4046		4216		109	96	275
3426	25464	5250	1 *£ # 76% **31%**	3149		3392		94	118	243
3427	25465	1622		2867		3656		101	105	265
3429	25466	2638		2000		2531		97	107	244
3430	25467	3510	18%	4073	1%	4047		104	99	274
3431	Chittimuthyalu	3276	10%	2567		2804		110	145	269
3432	25468	4242	6 *£ 42% **6%**	3515		4095		93	118	273
3433	25469	3023	1%	3422		4054		95	106	276
3434	25470	4944	2 *£ # 66% **23%**	4852	2 *£ 20%	4772	6 *£ 13%	96	104	263
3435	25471	2087		3398		4276	1%	103	101	265
3436	DRR H-3 (Hybrid Check)	4020	8 *£ 35%	4849	3 *£ 20%	5162	2 *£ 22%	101	109	253
3437	25472	3477	17%	2515		3059		92	93	275
3438	25473	3531	18%	4581	5 13%	5002	3 *£ 19%	103	115	280
3439	25474	3459	16%	3799		4125		105	92	269
3440	25475	3043	2%	2935		3881		91	94	267
3441	25476	2515		2539		2859		89	94	269
3442	25477	2921		3014		3620		101	99	284
3443	Kalanamak	1872		2251		2938		101	129	262
3444	25478	1661		3433		4209		105	105	271
3445	25479	2740		4547	6 12%	4424	5%	106	111	290
	Exp Mean	**3084**		**3542**		**3979**		**100**	**105**	**270**
	C.D. 5%	553		715		287		2		21
	C.V.%	8.90		17.68		13.22		3.74		16.78
	Sowing Date									
	Planting Date									

~* Superior to Late © ~£ Superior to Medium © ~$ Superior to Early © @ not included in means

Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 9.22: Days to 50% flowering of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III							Zone III Mean (4)	V		Zone V Mean (2)
		PUN	OD	W.B	W.B	W.B (2)	U.P.	U.P.	U.P. (1)		CH	MH	
		LDN	CTK	CHN	HTW	Mean	@MSD	GRK	Mean		RPR	SKL	
3401	25441	107	141	100	106	103	116	100	100	112	98	93	95
3402	25442	92	128	88	89	89	105	101	101	101	87	84	85
3403	25443		140	112	102	107	110	109	109	116	121	113	117
3404	25444	124	146	114	102	108	115	99	99	115	108	108	108
3405	25445	120	139	103	107	105	92	110	110	115	101	104	103
3406	25446	107	127	85	92	89	113	95	95	100	89	83	86
3407	25447	123	139	110	102	106	124	104	104	114	101	104	102
3408	25448	105		88	91	89	116	114	114	97	98	93	96
3409	25449	106	132	94	96	95	107	114	114	109	96	87	91
3410	25450	119	134	99	95	97	87	119	119	112	88	86	87
3411	25451	109	137	105	101	103	94	118	118	115	100	92	96
3412	25452	108	140	109	102	105	124	112	112	116	103	100	101
3413	25453	94	126	88	89	88	109	98	98	100	86		86
3414	25454	85	117	83	90	86	119	87	87	94	78	73	75
3415	25455	100		87	92	90	104	99	99	93	77	83	80
3416	25456	115	141	109	102	105	109	119	119	118	102	104	103
3417	25457	108	132	98	97	97	117	111	111	109	102	97	99
3418	25458	108	137	101	102	101	120	121	121	115	100	96	98
3419	25459	116	135	99	98	99	115	121	121	113	99	97	98
3420	25460	115	141	106	99	102	118	120	120	116	107	104	105
3421	IR 64 Yield check (Medium)	92	147	84	87	85	100	97	97	104	83	76	80
3422	25461	99	127	89	96	92	98	108	108	105	92	86	89
3423	25462	83		85	91	88	90	89	89	88	77	74	76
3424	25463	111	134	84	89	87	117	124	124	108	90	92	91
3425	BPT 5204-Yield check (Late)	112	142	108	100	104	121	119	119	117	107	109	108
3426	25464	103	133	87	92	89	116	100	100	103	86	88	87
3427	25465	109	130	102	101	101	112	115	115	112	101	108	105
3429	25466	118	125	94	100	97	100	106	106	106	77	95	86
3430	25467	109	139	103	101	102	117	123	123	116	101	97	99
3431	Chittimuthyalu		142	107	101	104	82	124	124	119	120	119	120
3432	25468	92	127	89	90	89	107	96	96	100	84	81	83
3433	25469	100	127	94	86	90	110	103	103	102	85	84	85
3434	25470	94	127	87	98	93	110	98	98	103	86	83	84
3435	25471	108	135	103	99	101	115	110	110	112	101	99	100
3436	DRR H-3 (Hybrid Check)	107	129	98	100	99	109	116	116	111	98	97	97
3437	25472	98	120	86	89	88	107	100	100	99	87	87	87
3438	25473	110	138	102	97	99	115	121	121	114	101	100	101
3439	25474	114	140	103	98	101	119	124	124	116	101	104	102
3440	25475	98	118	84	87	86	108	101	101	98	83	84	83
3441	25476	85	115	83	84	84	90	90	90	93	77	76	77
3442	25477	116	138	101	103	102	119	120	120	115	92	97	94
3443	Kalanamak		130	105	101	103	114	122	122	114	112	108	110
3444	25478	115	140	106	98	102	110	103	103	112	106	94	100
3445	25479	107	140	104	102	103	84	108	108	113	101	101	101
	Exp Mean	**106**	**134**	**97**	**96**	**97**	**109**	**109**	**109**	**108**	**95**	**94**	**94**
	C.D. 5%	1	0	1	2	1	2	4	2	2	1	1	1
	C.V.%	0.60	0.00	0.33	1.18	0.87	0.84	1.77	0.93	1.65	0.60	0.50	0.52

Table No. 9.22 Contd.: Days to 50% flowering of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	VII	
		MH	MH	MH (3)	GU	GU	GU (2)		TEL	TN
		KJT	SHR	Mean	NWG	NVS	Mean		IIRR	CBT
3401	25441	95	93	93	109	100	105	99	89	117
3402	25442	89	85	86	106	92	99	93	117	120
3403	25443	99	109	107	120	117	118	111	105	112
3404	25444	106	103	105	120	118	119	112	118	118
3405	25445	94	99	99	115	103	109	103	112	110
3406	25446	91	84	86	97	87	92	89	123	95
3407	25447	100	100	101	119	100	109	105	114	100
3408	25448	92	87	91	115	98	107	98	111	95
3409	25449	88	88	87	106	94	100	94	120	91
3410	25450	86	86	86	106	95	100	93	103	105
3411	25451	95	92	93	120	101	111	102	107	114
3412	25452	96	99	98	119	103	111	104	114	106
3413	25453	84	80	82	99	87	93	87	109	94
3414	25454	72	76	73	94	82	88	81	112	99
3415	25455	91	84	86	103	87	95	91	112	104
3416	25456	111	98	104	117	103	110	107	105	94
3417	25457	91	92	93	106	98	102	97	108	101
3418	25458	94	97	95	116	100	108	101	108	116
3419	25459	95	89	93	106	100	103	97	112	107
3420	25460	98	99	100	117	105	111	105	111	101
3421	IR 64 Yield check (Medium)	77	81	78	97	87	92	86	111	98
3422	25461	89	84	86	95	101	98	92	119	91
3423	25462	72	74	73	94	83	88	81	112	86
3424	25463	91	86	89	107	94	101	94	122	96
3425	BPT 5204-Yield check (Late)	96	93	99	121	116	119	107	120	120
3426	25464	80	83	84	100	87	93	87	123	106
3427	25465	94	99	100	106	102	104	100	108	100
3429	25466	90	85	90	103	94	99	93	121	95
3430	25467	94	92	94	120	100	110	101	116	94
3431	Chittimuthyalu	104	110	111	124	116	120	113	109	110
3432	25468	84	111	92	97	88	93	95	107	96
3433	25469	86	112	94	102	89	96	97	102	96
3434	25470	84	114	93	99	95	97	98	110	92
3435	25471	94	97	96	119	102	111	103	101	113
3436	DRR H-3 (Hybrid Check)	95	93	95	114	99	107	100	106	99
3437	25472	91	82	86	96	89	93	89	106	91
3438	25473	95	95	97	110	102	106	101	103	105
3439	25474	100	96	100	117	103	110	104	118	99
3440	25475	84	80	83	92	84	88	85	118	97
3441	25476	85	76	79	112	84	98	89	124	93
3442	25477	91	85	91	102	93	98	93	120	112
3443	Kalanamak	94	109	104	90	58	74	88	120	116
3444	25478	97	102	97	115	101	108	103	119	106
3445	25479	103	102	102	116	103	110	106	110	119
	Exp Mean	**92**	**92**	**93**	**108**	**96**	**102**	**97**	**112**	**103**
	C.D. 5%	3	1	1	0	20	10	5	19	2
	C.V.%	1.42	0.69	0.92	0.00	10.08	6.70	5.05	8.58	1.06

Table No. 9.22 Contd : Days to 50% flowering of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII								Zone VII Mean (7)	Overall Mean (18)
		TN	TN (2)	KE	KE	KE (2)	KA	KA	KA (2)		
		ADT	Mean	PTB	MNC	Mean	MND	BRM	Mean		
3401	25441	98	107	99	85	92	112	85	99	98	101
3402	25442	89	104	92	74	83	120	84	102	99	96
3403	25443	90	101	110	85	97	126	90	108	102	109
3404	25444	105	112	107	85	96	122	90	106	106	111
3405	25445	104	107	106	85	95	112	86	99	102	106
3406	25446	95	95	90	73	81	100	90	95	95	94
3407	25447	84	92	98	85	91	124	85	105	98	105
3408	25448	88	91	91	85	88	113	102	107	98	98
3409	25449	88	90	101	75	88	97	86	91	94	98
3410	25450	102	103	99	84	91	95	90	92	97	99
3411	25451	78	96	104	83	93	109	86	98	97	103
3412	25452	101	103	113	82	98	112	86	99	102	106
3413	25453	88	91	98	72	85	93	90	92	92	93
3414	25454	85	92	90	69	80	84	92	88	90	87
3415	25455	91	97	104	74	89	93	90	92	95	92
3416	25456	101	97	112	91	102	112	83	98	100	106
3417	25457	102	101	100	76	88	86	87	87	94	99
3418	25458	107	111	101	85	93	113	86	99	102	105
3419	25459	95	101	104	79	92	99	90	94	98	102
3420	25460	83	92	111	83	97	98	92	95	97	105
3421	IR 64 Yield check (Medium)	83	90	90	69	79	92	93	92	91	91
3422	25461	97	94	89	65	77	94	93	93	92	95
3423	25462	79	82	85	65	75	84	94	89	86	84
3424	25463	85	90	88	74	81	95	98	96	94	98
3425	BPT 5204-Yield check (Late)	105	112	96	85	90	118	90	104	105	109
3426	25464	80	93	93	72	83	84	90	87	93	94
3427	25465	88	94	92	78	85	92	89	91	92	101
3429	25466	88	92	98	74	86	101	92	97	96	97
3430	25467	93	93	100	85	93	108	98	103	99	104
3431	Chittimuthyalu	104	107	104	93	98	93	93	93	101	110
3432	25468	83	89	94	71	82	89	92	91	90	93
3433	25469	90	93	102	71	86	91	93	92	92	95
3434	25470	91	91	101	72	86	96	98	97	94	96
3435	25471	87	100	106	85	96	105	100	103	100	103
3436	DRR H-3 (Hybrid Check)	89	94	101	83	92	105	92	99	96	101
3437	25472	87	89	91	73	82	94	98	96	91	92
3438	25473	97	101	99	84	91	97	92	94	97	103
3439	25474	88	93	110	84	97	110	86	98	99	105
3440	25475	83	90	90	68	79	95	89	92	91	91
3441	25476	88	90	88	65	76	86	90	88	90	89
3442	25477	98	105	93	79	86	89	93	91	98	101
3443	Kalanamak	102	109	90	78	84	87	98	93	99	101
3444	25478	100	103	107	85	96	107	93	100	102	105
3445	25479	106	112	103	85	94	116	92	104	104	106
	Exp Mean	**92**	**97**	**99**	**78**	**88**	**101**	**91**	**96**	**97**	**100**
	C.D. 5%	11	5	6	1	3	5	0	3	3	2
	C.V.%	5.80	3.95	3.02	0.67	2.37	2.62	0.00	1.89	4.58	3.74

Table No. 9.23: Plant Height (cm) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III							Zone III Mean (4)	V		Zone V Mean (2)	VI						Zone VI Mean(4)
		PUN	OD	W.B	W.B	W.B (2)	U.P.	U.P.	U.P. (1)		V CEN	MH		MH	MH	MH (3)	GU	GU	GU (2)	
		LDN	CTK	CHN	HTW	Mean	@MSD	GRK	Mean		RPR	SKL		KJT	SHR	Mean	NWG	NVS	Mean	
3401	25441	106	115	115	106	111	130	123	123	115	138	137	138	137	135	136	126	141	134	135
3402	25442	130	135	117	110	114	132	108	108	117	151	164	157	157	154	158	140	146	143	149
3403	25443		88	107	106	107	93	75	75	94	96	95	95	109	112	105	91	99	95	103
3404	25444	103	115	115	105	110	100	110	110	111	100	111	106	124	117	117	112	122	117	119
3405	25445	86	110	105	95	100	106	95	95	101	110	109	109	108	103	107	104	122	113	109
3406	25446	67	80	85	85	85	92	81	81	83	88	94	91	85	93	91	88	94	91	90
3407	25447	81	110	130	91	111	93	102	102	108	100	98	99	114	109	107	96	110	103	107
3408	25448	93		100	95	98	120	103	103	99	119	117	118	116	109	114	105	122	114	113
3409	25449	88	115	115	100	108	96	101	101	108	102	98	100	113	109	107	93	107	100	106
3410	25450	92	100	102	97	100	102	111	111	103	108	113	110	112	110	112	97	108	103	107
3411	25451	88	100	102	98	100	98	93	93	98	110	110	110	107	108	109	102	113	108	108
3412	25452	101	118	125	101	113	123	108	108	113	116	118	117	121	117	118	113	121	117	118
3413	25453	115	110	130	110	120	129	126	126	119	136		136	137	125	131	118	128	123	127
3414	25454	100	90	100	97	99	129	95	95	95	109	115	112	116	118	117	77	126	102	109
3415	25455	108		110	101	106	108	126	126	112	125	130	128	139	133	134	125	140	133	134
3416	25456	95	110	130	123	127	97	111	111	118	115	113	114	127	116	119	118	125	122	121
3417	25457	135	120	135	118	127	138	114	114	122	140	134	137	152	129	138	117	141	129	135
3418	25458	88	95	105	102	104	102	94	94	99	103	98	101	113	106	106	88	105	97	103
3419	25459	82	98	106	106	106	100	97	97	102	102	108	105	113	102	108	90	114	102	105
3420	25460	102	118	115	110	113	104	111	111	113	114	121	118	122	117	120	105	128	117	118
3421	IR 64 Yield check (Medium)	94	95	90	97	94	106	102	102	96	105	108	106	102	104	105	83	108	96	99
3422	25461	94	95	100	92	96	101	109	109	99	101	110	105	102	107	107	82	105	94	99
3423	25462	90		75	72	74	108	102	102	83	93	123	108	95	113	110	82	128	105	104
3424	25463	109	115	95	83	89	114	110	110	101	121	125	123	124	113	121	108	131	120	119
3425	BPT 5204-Yield check (Late)	83	95	99	93	96	100	112	112	100	97	92	95	96	127	105	84	128	106	109
3426	25464	111	130	120	105	113	88	128	128	121	130	140	135	130	147	139	108	163	136	137
3427	25465	90	100	105	100	103	135	112	112	104	118	119	118	128	121	123	80	125	103	113
3429	25466	102	97	105	101	103	108	112	112	104	131	131	131	119	125	125	81	148	115	118
3430	25467	89	105	110	108	109	97	96	96	105	102	99	101	108	117	108	88	104	96	104
3431	Chittimuthyalu		170	150	130	140	139	127	127	144	173	169	171	173	180	174	162	151	157	166
3432	25468	112	120	112	113	113	115	124	124	117	139	133	136	137	131	134	115	122	119	126
3433	25469	90	100	105	105	105	115	109	109	105	118	126	122	119	110	118	94	118	106	110
3434	25470	99	115	110	100	105	103	110	110	109	111	121	116	117	115	117	94	106	100	108
3435	25471	90	96	95	99	97	104	96	96	97	102	115	108	120	111	115	88	113	101	108
3436	DRR H-3 (Hybrid Check)	98	115	100	98	99	109	114	114	107	124	123	123	125	121	123	99	131	115	119
3437	25472	84	105	81	80	81	100	124	124	98	105	97	101	108	105	104	76	87	82	94
3438	25473	116	120	120	101	111	115	121	121	116	128	120	124	140	130	130	118	123	121	128
3439	25474	76	99	95	90	93	100	87	87	93	91	94	92	106	97	99	83	99	91	96
3440	25475	78	95	85	85	85	100	99	99	91	104	110	107	98	100	103	89	107	98	98
3441	25476	87	90	100	100	100	93	105	105	99	96	96	96	84	103	95	80	122	101	97
3442	25477	100	100	80	91	86	99	100	100	93	105	112	109	106	112	110	107	114	111	110
3443	Kalanamak		166	120	101	111	137	128	128	129	155	157	156	164	151	157	142	151	147	152
3444	25478	94	115	95	97	96	115	104	104	103	116	113	115	125	100	113	96	119	108	110
3445	25479	113	130	85	101	93	125	116	116	108	130	129	129	140	98	122	110	133	122	120
	Exp Mean	**96**	**110**	**106**	**100**	**103**	**110**	**107**	**107**	**106**	**115**	**117**	**116**	**120**	**117**	**118**	**101**	**122**	**111**	**115**
	C.D. 5%					0			0	8									0	11
	C.V.%					0.00			0.00	0.00									0.00	0.00

Table No. 9.23 Contd.: Plant Height (cm) of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VII										Zone VII Mean (7)	Overall Mean (18)
		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA (2)		
		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	Mean		
3401	25441	82	109	123	116	135	104	119	97	102	99	107	118
3402	25442	83	127	123	125	159	106	133	116	112	114	118	130
3403	25443	81	89	95	92	104	82	93	91	81	86	89	94
3404	25444	90	100	109	104	133	102	117	79	86	82	100	107
3405	25445	93	92	105	99	114	94	104	96	85	90	97	101
3406	25446	95	63	76	69	90	49	69	67	69	68	73	80
3407	25447	94	95	105	100	108	97	102	75	88	82	95	100
3408	25448	80	87	107	97	127	96	112	76	94	85	95	103
3409	25449	96	89	96	92	119	99	109	77	85	81	94	100
3410	25450	97	77	101	89	107	88	97	85	85	85	92	99
3411	25451	84	88	106	97	106	97	102	61	94	78	91	98
3412	25452	98	103	118	111	125	106	115	84	95	90	104	110
3413	25453	112	109	100	104	130	96	113	80	104	92	104	116
3414	25454	90	89	96	93	105	97	101	75	102	88	93	100
3415	25455	90	107	106	106	139	106	122	76	107	91	104	116
3416	25456	80	117	114	116	139	105	122	81	91	86	104	112
3417	25457	86	113	116	115	154	98	126	110	114	112	113	124
3418	25458	85	84	98	91	108	91	100	71	85	78	89	96
3419	25459	89	97	92	94	105	99	102	84	85	85	93	98
3420	25460	81	95	118	106	119	101	110	83	94	89	99	109
3421	IR 64 Yield check (Medium)	79	76	91	84	93	74	83	72	92	82	82	92
3422	25461	91	78	106	92	108	78	93	94	95	95	93	97
3423	25462	93	82	88	85	104	78	91	68	96	82	87	93
3424	25463	77	98	110	104	126	104	115	81	96	88	99	107
3425	BPT 5204-Yield check (Late)	82	77	108	92	104	93	99	75	76	76	88	96
3426	25464	80	115	96	105	124	99	111	83	109	96	101	118
3427	25465	112	91	96	93	140	95	117	68	93	81	99	105
3429	25466	113	95	95	95	118	98	108	71	87	79	97	107
3430	25467	88	82	105	93	126	98	112	69	83	76	93	99
3431	Chittimuthyalu	83	137	166	152	140	141	140	95	121	108	126	145
3432	25468	115	96	111	104	159	99	129	84	98	91	109	118
3433	25469	105	83	100	91	123	97	110	102	96	99	101	106
3434	25470	95	88	104	96	116	99	108	73	94	83	96	104
3435	25471	83	85	118	102	132	95	113	92	89	90	99	101
3436	DRR H-3 (Hybrid Check)	115	95	105	100	132	97	115	82	98	90	103	109
3437	25472	88	74	90	82	128	81	105	71	87	79	88	93
3438	25473	110	109	116	113	126	97	111	70	103	87	105	115
3439	25474	102	80	92	86	123	86	105	76	88	82	92	92
3440	25475	110	69	104	86	111	84	98	80	87	84	92	94
3441	25476	128	87	82	84	97	79	88	63	86	74	89	94
3442	25477	111	80	101	90	113	97	105	54	100	77	94	99
3443	Kalanamak	88	103	143	123	134	108	121	70	117	93	109	129
3444	25478	113	90	105	97	135	100	118	76	97	87	102	105
3445	25479	83	117	123	120	130	104	117	53	109	81	103	111
	Exp Mean	**94**	**94**	**106**	**100**	**122**	**95**	**109**	**79**	**94**	**87**	**98**	**105**
	C.D. 5%										10	16	

Table No. 9.24: Panicles/ M² of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	II	III							Zone III (4) Mean	V		Zone V CEN (2)	VI		
		PUN	OD	W.B	W.B	W.B (2)	U.P.	U.P.	U.P. (1)		V CEN	MH		MH	MH	MH (3)
		LDN	CTK	CHN	HTW	Mean	@MSD	GRK	Mean		RPR	SKL		KJT	SHR	Mean
3401	25441	278	283	289	231	260	294	274	274	269	311	229	270	184	218	210
3402	25442	300	275	292	275	283	289	219	219	265	223	143	183	176	115	144
3403	25443		342	309	199	254	315	312	312	290	239	281	260	160	188	210
3404	25444	307	196	284	260	272	320	342	342	270	273	234	254	180	172	195
3405	25445	294	297	307	315	311	309	265	265	296	291	243	267	181	205	209
3406	25446	317	244	295	222	259	294	245	245	251	282	258	270	170	199	209
3407	25447	367	286	315	288	302	311	262	262	288	294	283	288	179	191	218
3408	25448	324		303	205	254	335	321	321	276	229	239	234	166	210	205
3409	25449	347	229	289	318	303	318	228	228	266	174	264	219	151	171	195
3410	25450	314	269	311	285	298	271	238	238	276	377	276	326	152	228	218
3411	25451	304	264	298	248	273	303	352	352	290	269	293	281	190	173	218
3412	25452	311	275	316	314	315	265	261	261	291	306	245	276	187	153	195
3413	25453	307	218	287	274	280	305	244	244	256	270		270	140	181	160
3414	25454	258	252	323	314	319	238	249	249	285	191	220	205	188	105	171
3415	25455	291		286	293	289	247	248	248	275	201	200	200	170	201	190
3416	25456	271	294	313	247	280	282	286	286	285	266	278	272	147	145	190
3417	25457	291	254	285	271	278	298	258	258	267	143	171	157	136	163	156
3418	25458	274	234	291	276	283	289	317	317	279	270	356	313	220	169	248
3419	25459	304	236	309	292	300	317	278	278	279	263	276	269	186	164	209
3420	25460	287	300	316	252	284	263	320	320	297	277	305	291	166	144	205
3421	IR 64 Yield check (Medium)	333	289	280	269	274	315	232	232	267	249	198	223	180	248	208
3422	25461	248	199	289	332	310	256	248	248	267	184	241	213	183	174	199
3423	25462	287		281	232	256	268	260	260	257	262	234	248	185	214	211
3424	25463	271	245	289	354	322	263	249	249	284	303	235	269	178	122	178
3425	BPT 5204-Yield check (Late)	261	284	311	279	295	303	270	270	286	311	303	307	175	192	223
3426	25464	264	260	286	304	295	314	233	233	271	185	185	185	117	164	155
3427	25465	274	190	295	279	287	253	312	312	269	249	225	237	136	190	184
3429	25466	287	269	308	277	292	268	218	218	268	232	181	207	151	149	160
3430	25467	294	248	301	290	295	271	338	338	294	219	296	257	205	196	232
3431	Chittimuthyalu		241	297	304	300	255	238	238	270	331	246	289	167	182	198
3432	25468	238	249	292	263	277	303	268	268	268	285	264	274	182	157	201
3433	25469	327	193	273	316	294	313	257	257	260	242	233	237	161	231	208
3434	25470	294	269	285	322	303	243	245	245	280	262	188	225	138	121	149
3435	25471	304	213	294	202	248	287	349	349	264	203	255	229	149	169	191
3436	DRR H-3 (Hybrid Check)	271	234	316	252	284	335	225	225	257	271	259	265	135	164	186
3437	25472	310	273	298	324	311	281	240	240	283	301	242	271	178	183	201
3438	25473	314	254	304	275	290	320	325	325	289	299	212	255	158	175	181
3439	25474	277	280	286	334	310	307	304	304	301	262	246	254	159	195	200
3440	25475	327	238	315	267	291	294	256	256	269	236	235	236	130	173	179
3441	25476	357	246	294	308	301	243	246	246	273	334	190	262	136	147	157
3442	25477	324	256	288	309	299	293	254	254	277	309	250	280	145	189	195
3443	Kalanamak		229	301	241	271	310	321	321	273	262	226	244	124	151	167
3444	25478	350	298	311	308	309	284	269	269	296	276	178	227	140	177	165
3445	25479	251	300	292	274	283	328	318	318	296	324	284	304	168	212	221
	Exp Mean	**298**	**256**	**298**	**279**	**288**	**290**	**272**	**272**	**277**	**262**	**242**	**252**	**164**	**176**	**193**
	C.D. 5%	99	64	23	35	21	23	45	34	21	58	25		26	42	18
	C.V.%	16.46	12.36	3.86	6.22	5.08	3.93	8.15	6.10	7.80	11.04	5.19		7.95	11.81	8.22

Table No. 9.24 Contd.: Panicles/ M² of entries in IVT BIOFORTIFICATION Kharif 2015

Entry No.	IET No.	VI			Zone VI (4) Mean	VII										Zone VII (7) Mean	Overall (18)
		GU	GU	GU (2)		TEL	TN	TN	TN (2)	KE	KE	KE (2)	KA	KA	KA (2)		
		NWG	NVS	Mean		IIRR	CBT	ADT	Mean	PTB	MNC	Mean	MND	BRM	Mean		
3401	25441	272	303	288	244	280	375	173	274	283	387	335	340	242	291	297	275
3402	25442	253	202	227	186	225	200	150	175	253	215	234	345	273	309	237	230
3403	25443	262	290	276	225	174	375	203	289	550	387	468	320	238	279	321	284
3404	25444	280	213	246	211	240	313	180	246	233	409	321	255	252	254	269	257
3405	25445	275	305	290	241	311	263	169	216	360	409	384	420	259	340	313	287
3406	25446	259	305	282	233	270	263	175	219	633	387	510	345	252	299	332	284
3407	25447	267	288	277	231	327	413	173	293	300	387	343	340	256	298	313	290
3408	25448	265	265	265	226	293	313	115	214	457	430	443	370	256	313	319	280
3409	25449	252	285	269	215	350	250	131	191	383	409	396	305	252	279	297	266
3410	25450	265	314	289	240	142	263	143	203	683	215	449	340	263	301	292	282
3411	25451	267	318	292	237	251	300	138	219	410	387	399	315	214	264	288	277
3412	25452	271	279	275	222	325	338	204	271	317	387	352	330	221	275	303	280
3413	25453	265	254	259	210	213	313	148	230	487	409	448	340	221	280	304	269
3414	25454	139	213	176	161	234	225	97	161	330	258	294	270	221	245	234	227
3415	25455	265	231	248	216	315	238	205	221	400	387	393	365	224	295	305	266
3416	25456	274	332	303	224	272	300	148	224	447	387	417	370	238	304	309	278
3417	25457	259	227	243	196	301	263	163	213	380	301	340	325	249	287	283	246
3418	25458	265	337	301	248	193	338	161	249	527	387	457	370	221	295	314	289
3419	25459	264	260	262	218	270	300	171	235	333	409	371	345	245	295	296	272
3420	25460	272	306	289	222	228	300	258	279	410	430	420	310	235	272	310	284
3421	IR 64 Yield check (Medium)	263	271	267	240	315	275	176	226	560	387	473	325	238	282	325	283
3422	25461	256	331	293	236	272	313	172	242	357	315	336	260	238	249	275	256
3423	25462	256	258	257	228	310	338	188	263	597	258	427	370	245	308	329	281
3424	25463	274	286	280	215	290	338	158	248	410	387	398	360	214	287	308	276
3425	BPT 5204-Yield check (Late)	261	307	284	234	240	313	171	242	223	409	316	410	228	319	285	275
3426	25464	254	236	245	193	224	250	170	210	387	280	333	335	235	285	269	243
3427	25465	254	289	272	217	260	300	158	229	350	387	368	410	207	308	296	265
3429	25466	245	237	241	195	238	275	185	230	313	258	286	315	259	287	263	244
3430	25467	262	287	274	237	125	388	110	249	463	301	382	375	242	308	286	274
3431	Chittimuthyalu	259	251	255	215	296	325	180	253	343	280	311	390	238	314	293	269
3432	25468	265	230	248	208	278	300	125	213	620	301	460	355	238	297	317	273
3433	25469	267	249	258	227	241	300	187	244	490	409	449	310	280	295	317	276
3434	25470	265	208	236	183	308	300	165	233	433	301	367	325	305	315	305	263
3435	25471	266	228	247	203	280	313	172	242	380	387	383	380	238	309	307	265
3436	DRR H-3 (Hybrid Check)	267	232	249	199	191	238	128	183	407	430	418	290	242	266	275	253
3437	25472	244	320	282	231	290	313	132	222	507	258	382	305	235	270	291	275
3438	25473	268	300	284	225	220	325	134	229	473	387	430	355	263	309	308	280
3439	25474	259	282	270	223	250	263	183	223	267	387	327	360	249	304	280	269
3440	25475	253	242	247	199	279	313	199	256	360	387	373	345	252	299	305	267
3441	25476	253	293	273	207	217	250	175	213	420	344	382	360	273	317	291	269
3442	25477	268	269	268	218	214	350	99	225	583	409	496	350	242	296	321	284
3443	Kalanamak	255	270	262	200	244	388	180	284	543	215	379	270	245	258	298	262
3444	25478	267	292	280	219	286	213	153	183	390	387	388	295	287	291	287	271
3445	25479	270	263	266	228	340	313	176	244	363	387	375	415	277	346	324	290
	Exp Mean	**260**	**272**	**266**	**218**	**259**	**301**	**163**	**232**	**419**	**355**	**387**	**341**	**245**	**293**	**297**	**270**
	C.D. 5%	9	43	23	17	145	105	62	57	270	33	131	88	45	49	49	21
	C.V.%	1.65	7.90	6.07	7.69	27.65	17.37	18.82	17.59	32.00	4.60	24.10	12.88	9.03	11.80	21.93	16.78

Table 9.25: Iron content in ppm for polished rice samples of entries in IVT-Biofortification, kharif 2015

Entry No.	IET No.	PTB	NVS	CTK	ADT	SKL	MNC	LDN	CHN	CBT @
3401	25441	4	4.3	2.2	2.1	3.6	3.3	4.2	4.8	4.5
3402	25442	3	3.9	1.8	2.2	0.9	2.2	2.2	1.9	2.4
3403	25443	5.4	4.8	2.5	3.2	2.5	3.1		3.7	3.4
3404	25444	3.1	3.5	2	3.9	1.9	5.1	4	4	4.8
3405	25445	4	3.1	2.7	1.9	1.6	2.6	3.4	3.1	3.9
3406	25446	3.5	5.9	3.1	1.6	3.4	3.5	3.7	4.5	3.4
3407	25447	3.1	4.8	2.2	2.2	2.9	2.6	5.2	3.2	2.3
3408	25448	2.2	2.7		1.8	1.2	1.6	3.7	2.1	0.6
3409	25449	3	3.7	2.9	2.8	2.4	2.2	3.4	3.5	2.6
3410	25450	4.4	5.4	3	3.6	4	3.2	4.1	3.8	3.8
3411	25451	4.2	6	5.4	2.7	5.7	4.8	4.8	2.4	4.3
3412	25452	3.2	3.7	3.6	2.1	2.6	3.7		3	5.5
3413	25453	2.6	3.1	2.8	3		3.3	2.6	2.5	3.9
3414	25454	2.6	5.7	2.5	1.4	6.1	2.8	4.3	2.3	2.7
3415	25455	2.1	3.1		1.6	3.2	2.9	4.4	2.4	2.6
3416	25456	2.8	3.1	2.7	2.2	2.4	2.8		3.1	3.2
3417	25457	2.2	3.1	1.4	2.8	2.7	2.8	4.9	2.2	3.7
3418	25458	4.5	4.6	4.1	4	5.8	3.4	4.6	3.8	2.5
3419	25459	2.6	3.9	2.7	2.5	2.1	3.5	3.1	2.2	2.3
3420	25460	3	5.7	1.8	3.1	5.4	3	5.4	1.4	3.5
3421	**IR 64 Check**	2.6	3.8	5.2	3.1	2.7	3.5	3.6	3.6	3.1
3422	25461	3.5	4.3	3.3	1.5	2.5	5.3		3.7	3.9
3423	25462	2.6	4		3.4	2.2	2.8	2.9	2.2	2.7
3424	25463	2.6	2.8	3.8	2.8	2.2	3.9	3.9	3.4	2.6
3425	**BPT 5204 Check**	1.8	3.3	2.9	3.1	2.7	3.4	5.7	4	3.2
3426	25464	1.5	3.3	2.3	2.4	2.3	3.2	3.2	2.9	1.3
3427	25465	3.4	4.9	4.3	3.9	3.8	4.9	3.9	3.6	3
3429	25466	2.6	3.8	1.7	2.5		3.7		3	3.6
3430	25467	3.8	3.5	3.2	3.1	2.5	4.2	5	2.8	3.5
3431	**Chittimuthyalu Check**	3.8	3.2	3.3	5.4	3.1	4.4		2.4	2.8
3432	25468	2.9	5.8	2.3	3.2	2	3.2	2.9	2.7	3
3433	25469	1.8	3.1	2.9	2	2.8	3.5	4.4	2.4	2.7
3434	25470	1.8	3.3	2	2.6		2.4	2.1	2.2	2
3435	25471	2.4	6.3	3	3.1	2.7	2.2	3.7	4.4	4.6
3436	**DRR H-3 (HC)**	1	4.5	2.2	1.4	1.6	1.9	2.6	2.9	1.6
3437	25472	3.8	3.9	2	3.1	4.5	2.4	3.3	3.7	3.5
3438	25473	2.6	4.8	2.1	3.4	2.7	1.7	5.9	2.4	2.4
3439	25474	2.9	4.7	2.8	2.2	4	2.1	4.1	2.4	2.8
3440	25475	3.1	6.5	1.7	1.8	2.2	2.6	3.4	1.6	2.8
3441	25476	2.8	3.7	1.8	2.1	2.6	2.2	3.1		2.1
3442	25477	3.9	4.3	1.9	2.5	2	3.4		3.2	3.1
3443	**Kalanamak Check**	1.8	5.5	2.5	4	6	4.4	8	2.2	3.3
3444	25478	2.3	1.7	1.3	1.7	2.4	3.2	3.4	2.9	3.2
3445	25479	3.4	4.4	2.4	5.4	4.1	3	4.9	3.7	3.5
3446	Check							3.6		
3447	Check							2.8		
3448	Check							3.2		
Location mean		**3.0**	**4.2**	**2.7**	**2.7**	**3.0**	**3.2**	**3.9**	**3.0**	**3.1**

Table 9.25 (Contd.) : Iron content in ppm for polished rice samples of entries in IVT-Biofort, kharif 2015

Entry No.	IET No.	SHR	HTW	NWG	KJT	RPR	IIRR	MND	Mean
3401	25441	4.6	5.8	4.7	3.8	2.5	2.5	8.5	4.1
3402	25442	2.7	2.7	1.9	2.8	1	1.6	4.9	2.4
3403	25443	4.3	2	3.3	4.3	3.7	3.1	4.5	3.6
3404	25444	3.5	3.9	4.2	4.6	2.5	2.8	2.7	3.4
3405	25445	4.2	7	3	5.4	3.5	3	5	3.6
3406	25446	4.6	4	2.7	6.5	3	5.1	4.2	4.0
3407	25447	6.2	4.2	2.9	4.4	3.3	2.8	2.5	3.5
3408	25448	3.2	1.7	2.4	2.5	4.1	3.2	3.8	2.6
3409	25449	2.1	3.1	3.6	2.9	3	5.6	3.6	3.2
3410	25450	3.9	4.1	5.7	9	5.5	3.7	2.7	4.4
3411	25451	5.1	5.4	5.3	6.2	6.6	3.2	2.5	4.7
3412	25452	3.9	4	4.7	4.7	4	2.2	2.4	3.4
3413	25453	3.9	3.3	2.4	5.3	2.9	1.9	2.8	3.0
3414	25454	4.2	3.6	2.7	4.9	2.3	2.5	2.1	3.3
3415	25455	5.2	3.8	3.2	5	3.4	3	2.3	3.3
3416	25456	4.4	4.1	3.4	5.9	2.7	2	2.6	3.2
3417	25457	3.3	3.3	2.6	3.7	2.5	2.9	3.1	2.9
3418	25458	5.6	4	3.8	7.3	5.3	3.4	2.5	4.4
3419	25459	4.1	2.4	2.8	5.1	2.9	2.6	2	3.0
3420	25460	3.6	3.7	3.5	4.8	2.9	3	0.9	3.4
3421	**IR 64 Check**	4	4.5	4.5	4.7	2.7	4.3	4.6	3.8
3422	25461	4.9	2.8	3.1	4.5	3.5	2.5	4	3.5
3423	25462	2.8	1.2	2.7	5.6	2.4	0.8	4.4	2.9
3424	25463	3.1	3.5	2.8	4	2.7	2.2	2.7	3.1
3425	**BPT 5204 Check**	4.8	3.5	4.5	3.6	3	3	3.6	3.5
3426	25464	4.2	1.9	2.7	2.8	2.6	3.6	2.5	2.8
3427	25465	5	4.3	5.8	4.6	3.5	3.4	3.6	4.2
3429	25466	5.9	1.7	2.7	3.8	5.7	2	2.5	3.2
3430	25467	5.9	2.8	2.6	3.5	5.8	4.6	3.3	3.8
3431	**Chittimuthyalu Check**	5.9	3.1	5.3	4.6	3.2	3.7	1.3	3.8
3432	25468	4	3.6	4.2	5.2	3.2	2.1	3.1	3.4
3433	25469	4.4	3.5	3.2	5.9	2.7	1.2	3.4	3.1
3434	25470	5.3	2.7	2.8	6.2	3.8	2	2.5	3.0
3435	25471	4.5	3.6	3.3	4.4	2	2.9	3.1	3.4
3436	**DRR H-3 (HC)**	3.6	3.5	2.9	3.5	1.5	2.1	2.7	2.5
3437	25472	4.5	5.6	3.2	5.4	4.1	3.6	3.6	3.8
3438	25473	2.6	2.9	3.7	6.2	2.9	1.7	4.9	3.4
3439	25474	4.6	2.5	3.2	5.2	3.2	3	2	3.3
3440	25475	5.8	2.6	5.3	5.2	3.7	3	2.1	3.4
3441	25476	4.1	2.5	4.1	2.6	3.4	1.9	3.2	2.9
3442	25477	2.6	2.4	4.3	4.3	2.6	2.8	3.6	3.1
3443	**Kalanamak Check**	5.1	2.2	4.7	6.4	2	3.1	3.1	4.1
3444	25478	4.5	3.4	3.6	4.9	3	3	2.8	2.9
3445	25479	5.7	4.5	3.8	5	3.6	2.7	2.5	3.9
3446	Check								3.6
3447	Check								2.8
3448	Check								3.2
Location mean		**4.3**	**3.4**	**3.6**	**4.8**	**3.3**	**2.8**	**3.2**	

Table 9.26 : Zinc content in ppm for polished rice samples of entries in IVT-Biofort, kharif 2015

Entry No.	IET No.	II	III	III	III	Zone III	V	V	Zone V	VI
		LDN	CTK	CHN	HTW	Mean	SKL	RPR	Mean	NVS
3401	25441	26.2	14.8	16.7	18.2	16.6	12.9	13.5	13.2	18.6
3402	25442	28	16.2	20.3	20.8	19.1	14.3	13.5	13.9	18.9
3403	25443		19.2	17.2	18.8	18.4	18	19.4	18.7	25.3
3404	25444	29.4	12.6	12.6	14	13.1	12.8	13.8	13.3	18.4
3405	25445	22.7	12.3	18.3	21.1	17.2	8.7	10.5	9.6	17
3406	25446	31.5	16.7	19.7	19.8	18.7	16.8	17.8	17.3	25.9
3407	25447	27.4	14	12.1	14.3	13.5	11	12.2	11.6	19.1
3408	25448	24.9		13.3	14.4	13.9	11.8	12.2	12	13.9
3409	25449	22.5	13.3	15.4	14.5	14.4	9.8	10.9	10.35	18.3
3410	25450	33.6	21.4	24	23	22.8	23.3	25	24.15	23.1
3411	25451	31.2	19	17.8	19.1	18.6	16.6	19.7	18.15	20.3
3412	25452		15.5	16.3	15.7	15.8	13.4	16.6	15	18.8
3413	25453	23.6	13.3	17.1	16.7	15.7		14.2	14.2	18.3
3414	25454	29.1	16.7	21.1	18.9	18.9	14.9	17	15.95	17.4
3415	25455	24.5		19	18.4	18.7	13	17	15	16.7
3416	25456		15.6	17.2	17.2	16.7	13.6	14.8	14.2	17.8
3417	25457	25.4	15.2	16.3	13.6	15.0	10	12.4	11.2	19.5
3418	25458	28.9	17.4	20.9	21.8	20.0	17.5	21.1	19.3	18.8
3419	25459	21.5	11.3	13	13.1	12.5	10	11	10.5	16
3420	25460	22.9	11.7	11.4	12.1	11.7	11.2	10	10.6	15
3421	**IR 64 Check**	22.9	14	18.2	16.9	16.4	11.4	13.8	12.6	15
3422	25461		18.2	21.1	19.8	19.7	17.9	18.8	18.35	20.1
3423	25462	35.1		19.4	19	19.2	16.5	20.4	18.45	19.5
3424	25463	21	12.7	20	20.2	17.6	10.2	12.4	11.3	16.3
3425	**BPT 5204 Check**	22.1	12	13.3	13.2	12.8	11.4	14.6	13	16
3426	25464	24.4	14.9	16.1	13.1	14.7	13.5	14.9	14.2	16.6
3427	25465	31.4	17.9	18.8	18.4	18.4	15.8	18.9	17.35	18.8
3429	25466		17.8	24.1	22.4	21.4		20.7	20.7	17.9
3430	25467	26.1	18.4	20.2	21.1	19.9	17.2	20.5	18.85	18.4
3431	**Chittimuthyalu Check**		14.9	15.7	13.9	14.8	15.1	14	14.55	16
3432	25468	20.8	13.6	14.9	15.2	14.6	11.4	14.1	12.75	16.8
3433	25469	29.4	17	16.3	17.9	17.1	12.7	16.4	14.55	19.4
3434	25470	24	16.9	12.2	13.3	14.1		17.4	17.4	18.4
3435	25471	25.2	15.1	19.1	18.4	17.5	14.2	14.7	14.45	18.1
3436	**DRR H-3 (HC)**	18	10.9	15	13.3	13.1	10.6	10	10.3	15.2
3437	25472	33.3	25.9	33.3	37.8	32.3	24.8	24.4	24.6	27.7
3438	25473	26.9	13.9	12.9	13.4	13.4	12.2	14.2	13.2	15.4
3439	25474	26.4	19.1	18.5	18.5	18.7	15.4	16.6	16	19.7
3440	25475	29.5	18.5	22.8	22.2	21.2	20.6	20	20.3	25.3
3441	25476	22.9	16.9		19.6	18.3	12.6	17.9	15.25	19.7
3442	25477		22.9	22.8	23.5	23.1	26.2	25.2	25.7	24.4
3443	**Kalanamak Check**	28.9	15.7	15.1	14.5	15.1	14.3	11.8	13.05	15.7
3444	25478	23	12.5	14.6	14.2	13.8	13.8	15.2	14.5	13.8
3445	25479	21.2	12.5	16.6	15.1	14.7	16.9	13.7	15.3	16.1
3446	Check	21.4								
3447	Check	19								
3448	Check	18.2								
Location mean		**25.6**	**15.8**	**17.7**	**17.7**	17.1	**14.5**	**16**	15.25	**18.6**

Table 9.26 : Zinc content in ppm for polished rice samples of entries in IVT-Biofort, kharif 2015

Entry No.	IET No.	KJT	NWG	Zone VI Mean	PTB	ADT	CBT @	MNC	IIRR	MND	Zone VII Mean	Over all Mean
3401	25441	18.1	11.4	17.0	19.2	18.2	6.9	20.2	11	11.8	16.1	**16.7**
3402	25442	20.5	9.5	18.9	26.3	20.1	1.8	26.5	18.7	14.9	21.3	**19.7**
3403	25443	22.6	9.6	21.5	22.7	26.2	5.7	27.8	17.5	12.2	21.3	**20.4**
3404	25444	18	12	16.6	13.3	19.4	9.8	21.9	16.5	13.7	17.0	**16.4**
3405	25445	12.3	6.2	13.0	15.7	15.3	5.2	17.9	13.2	12.5	14.9	**14.7**
3406	25446	19.5	11.6	20.4	25.1	23	6.3	26.5	18.8	21.6	23.0	**21.3**
3407	25447	12.8	7.8	15.8	16.6	18.1	7	23.1	13	16.5	17.5	**16.1**
3408	25448	15.2	6.6	14.3	16.4	15.6	4.8	21.6	13.2	15.1	16.4	**15.4**
3409	25449	15.3	9.5	14.8	16.4	20	6.6	20.3	12.8	13.8	16.7	**15.2**
3410	25450	25.5	19	23.7	25.2	24.2	9.8	27.6	19.6	13.6	22.0	**23.7**
3411	25451	20.4	12.5	19.9	21.1	21.6	6.1	25.7	16.9	20.8	21.2	**20.6**
3412	25452	22.2	12.1	19.1	20.8	20	9.5	22.4	10.1	9.6	16.6	**16.9**
3413	25453	13.3	9.6	14.7	16	19	4.8	20	12.1	14.2	16.3	**16.1**
3414	25454	20	13.3	17.6	27.6	19.4	7.2	25.8	15.3	13.3	20.3	**19.3**
3415	25455	21.2	12.1	17.7	22.4	19.1	8	26.7	13	15.7	19.4	**18.5**
3416	25456	20.7	10.9	18.3	20.5	17.8	6.5	25	11.6	13.3	17.6	**17.1**
3417	25457	21	11.2	17.5	21.2	18.3	3.6	19.3	16.3	14.3	17.9	**16.8**
3418	25458	22.1	14	20.7	24.1	17.5	6.1	25	13.6	17	19.4	**20.5**
3419	25459	13.5	14.4	14.7	15.2	23.4	7.1	18.1	12	20.6	17.9	**15.2**
3420	25460	13.8	11.3	14.5	14	16.7	4.2	18.5	9.1	7.5	13.2	**13.5**
3421	**IR 64 Check**	18.4	19.1	17.6	16.3	19.3	4.7	20	17.4	17.7	18.1	**17.2**
3422	25461	24.7	19.5	23.1	24.8	22.3	6.8	24.1	18.9	11.7	20.4	**20.7**
3423	25462	20.6	22	20.6	30.7	22.1	8.7	28.5	17.6	14.3	22.6	**21.9**
3424	25463	13.2	10.1	14.8	15.6	16.4	4.1	24	11.8	10.7	15.7	**15.6**
3425	**BPT 5204 Check**	14.6	12.7	15.6	14.6	17.6	7.1	19.5	10.8	20.3	16.6	**15.4**
3426	25464	13.3	15.1	16.4	15	20	2.6	20.8	15.6	13.5	17.0	**16.5**
3427	25465	22.7	17.4	20.3	23.2	23.4	7.2	27.7	18.8	11.9	21.0	**20.5**
3429	25466	21	20.7	22.0	23.5	25.2	10	27.8	10.3	13.4	20.0	**21**
3430	25467	19.6	19.5	21.5	24	20.5	6.9	29.4	13.9	17.6	21.1	**21**
3431	**Chittimuthyalu Check**	16.2	16.2	16.5	29.6	25.2	6.9	23.2	16.2	10.9	21.0	**17.5**
3432	25468	14.7	15.7	16.1	22.2	20.1	5	18.4	10.6	16.7	17.6	**16.2**
3433	25469	19.9	18.2	19.3	21.5	20.5	6.7	22.5	14.1	14.3	18.6	**18.7**
3434	25470	19.7	17.7	21.0	19.3	22.5	5.9	23.8	9.4	20.8	19.2	**18.8**
3435	25471	16.3	10.4	17.9	17.8	19	6.3	21.5	13.6	12.8	16.9	**17.5**
3436	**DRR H-3 (HC)**	12	8.9	13.1	15.1	16.6	4	19.3	13.2	16	16.0	**14**
3437	25472	24.3	21.2	28.2	26	27.2	7.3	31	22.6	18	25.0	**27.8**
3438	25473	14.3	14.6	17.0	18.7	18.3	5.5	22.6	11.4	23.9	19.0	**17.1**
3439	25474	21.3	16.1	20.5	24	20.4	7.3	23.3	13.6	12.4	18.7	**19.3**
3440	25475	24.9	23.5	25.1	27.6	28.2	7.7	29.1	23.1	11.6	23.9	**23.6**
3441	25476	16.5	17.7	18.2	21.3	21.9	3.8	21.4	18.3	10.9	18.8	**18.3**
3442	25477	23.6	24.8	24.7	30.4	24.3	5.4	27.2	21.6	18.6	24.4	**24.4**
3443	**Kalanamak Check**	17.5	12.4	15.6	24.3	21.2	8.6	22.2	18.6	10.5	19.4	**17.3**
3444	25478	13	10.9	15.3	22.7	19.3	4.1	23.3	12.4	15.3	18.6	**16.5**
3445	25479	16.3	15.7	16.8	18.9	20.2	8.2	22.1	10.8	19.7	18.3	**17**
3446	Check											**21.4**
3447	Check											**19**
3448	Check											**18.2**
Location mean		**18.3**	**14.2**	18.4	**21.1**	**20.6**	**6.3**	**23.5**	**14.7**	**14.9**	19.0	

Table 9.27: Grain protein content of the entries tested in IVT- Biofort, kharif 2015.

NRRI, Cuttack					
IET No.	**Grain protein content (%)**	**IET No.**	**Grain protein content (%)**	**IET No.**	**Grain protein content (%)**
25441	6.64	25456	7.24	25468	8.64
25442	8.89	25457	7.95	25469	8.35
25443	8.14	25458	7.42	25470	10.25
25444	6.4	25459	10.02	25471	7.55
25445	7.53	25460	9.72	**DRR H-3 (HC)**	4.6
25446	8.44	**IR 64 Check**	8.39	25472	8.58
25447	6.7	25461	7.29	25473	5.83
25448	-	25462	-	25474	7.01
25449	7.75	25463	6.87	25475	7.65
25450	7.77	**BPT 5204 Check**	7.14	25476	10.03
25451	7.79	25464	5.36	25477	5.81
25452	6.92	25465	5.41	**Kalanamak Check**	7.89
25453	8.19	25466	6.66	25478	6.86
25454	10.18	25467	7.65	25479	6.34
25455	-	**Chittimuthyalu Check**	7.76		

Table 9.28: Chemical characteristics of the soil at the experimental sites of Biofort trials.

S. No	NAME	Zn (ppm)	Fe (ppm)	pH	EC
1	coimbatoor initial	9.6	14.2	7.5	0.40
2	MANDYA AVT-1	9.5	63.4	7.9	0.43
3	MANDYA AVT-2	8.0	65.5	8.0	0.42
4	MANDYA IVT	6.3	59.7	7.0	0.43
5	RARS PATTAMBI AVT-1	8.9	454.2	5.6	0.09
6	RARS PATTAMBI AVT-2	6.2	356.2	5.9	0.06
7	RARS PATTAMBI IVT	8.0	406.2	5.6	0.08
8	ZARS SAKOLI AVT-1	3.0	48.1	8.0	0.20
9	ZARS SAKOLI AVT-2	2.5	27.8	8.2	0.14
10	ZARS SAKOLI IVT	2.7	33.4	8.1	0.15
11	IGKV AVT-1 R1	2.6	24.1	8.1	0.90
12	IGKV AVT-1 R2	2.6	24.1	8.1	0.15
13	IGKV AVT-1 R3	2.8	26.7	6.9	0.10
14	IGKV AVT-2 R1	2.4	18.5	8.0	0.16
15	IGKV AVT-2 R2	3.3	26.9	8.2	0.13
16	IGKV AVT-2 R3	3.2	26.6	8.3	0.12
17	IGKV IVT R1	6.8	21.5	8.4	0.32
18	IGKV IVT R2	3.9	31.3	8.2	0.20
19	IGKV IVT R3	2.2	33.1	8.1	0.47
20	ICRISAT AVT-1 R1	4.6	45.5	8.3	0.30
21	ICRISAT AVT-1 R2	8.6	66.0	8.3	0.36
22	ICRISAT AVT-1 R3	8.8	61.5	8.1	0.34
23	ICRISAT AVT-1 R4	23.9	82.4	8.0	0.47

S. No	NAME	Zn (ppm)	Fe (ppm)	pH	EC
24	ICRISAT AVT-1 R5	34.3	93.6	8.1	0.41
25	ICRISAT AVT-2 R1	76.1	60.8	8.2	1.02
26	ICRISAT AVT-2 R2	46.6	51.3	8.3	0.73
27	ICRISAT AVT-2 R3	24.8	40.0	8.3	0.61
28	ICRISAT AVT-2 R4	18.0	34.6	8.2	0.44
29	ICRISAT AVT-2 R5	15.4	34.3	8.4	0.46
30	ICRISAT IVT R1	31.7	71.0	8.2	0.50
31	ICRISAT IVT R2	30.7	52.4	8.4	0.67
32	ICRISAT IVT R3	21.2	36.4	8.4	0.57
33	ICRISAT IVT R4	11.4	34.2	8.5	0.60
34	ICRISAT IVT R5	12.4	35.3	8.0	0.49
35	CUTTACK AVT-1 R2	4.0	291.6	6.2	0.16
36	CUTTACK AVT-1 R3	5.1	326.8	6.6	0.18
37	CUTTACK AVT-1 R4	3.9	437.8	6.6	0.15
38	CUTTACK AVT-2 R1	3.5	452.4	6.2	0.16
39	CUTTACK AVT-2 R2	3.4	433.8	6.1	0.15
40	CUTTACK AVT-2 R3	3.5	547.2	6.1	0.15
41	CUTTACK AVT-2 R4	2.9	556.6	5.1	0.15
42	CUTTACK IVT R1	4.2	448.8	6.7	0.11
43	CUTTACK IVT R2	4.3	471.4	6.4	0.12
44	CUTTACK IVT R3	3.6	489.8	6.4	0.20
45	CUTTACK IVT R4	4.5	464.6	6.2	0.13
46	RAIPUR AVT- 1 R1	1.5	20.7	7.3	0.33
47	RAIPUR AVT- 1 R2	2.4	20.1	7.0	0.44
48	RAIPUR AVT- 2 R1	3.1	27.7	7.2	0.32
49	RAIPUR AVT- 2 R2	2.9	27.5	7.4	0.43
50	RAIPUR IVT R1	2.3	24.1	7.2	0.32
51	RAIPUR IVT R2	3.3	24.1	7.1	0.35
52	MANDYA AVT-1	3.6	56.9	7.5	0.43
53	MANDYA AVT-2	3.3	56.1	7.7	0.42
54	MANDYA IVT	4.5	72.3	7.0	0.58
55	BRAHMAVARA AVT -1 (Bfr trans)	1.4	177.8	6.0	0.14
56	BRAHMAVARA AVT -2(BT)	0.7	76.7	5.8	0.10
57	BRAHMAVARA IVT(BT)	1.7	165.8	5.9	0.10
58	BRAHMAVARA IVT(BT)	1.5	142.6	6.0	0.23
59	BRAHMAVARA AVT-1(AFTR HAR) R1	1.8	189.3	5.8	0.10
60	BRAHMAVARA AVT-1(AFTR HAR) R2	1.9	194.7	5.5	0.14
61	BRAHMAVARA AVT-2(AFTR HAR) R1	1.0	79.2	5.4	0.15
62	BRAHMAVARA AVT-2(AFTR HAR) R2	0.8	76.7	5.9	0.12
63	BRAHMAVARA IVT(AFTR HAR) R1	1.4	125.1	6.0	0.13
64	BRAHMAVARA IVT(AFTR HAR) R2	1.7	149.2	6.1	0.14
65	BRAHMAVARA AVT2BT	1.8	172.1	5.9	0.13
66	BRAHMAVARA AVT1BT	0.8	75.5	6.0	0.14
67	RARS PATTAMBI AVT-1	62.5	194.2	5.6	0.12
68	RARS PATTAMBI AVT-2	86.0	201.0	5.9	0.16
69	RARS PATTAMBI IVT	98.0	238.2	5.6	0.13
70	LUDHYANA AVT-1	8.0	197.0	5.7	0.14
71	LUDHYANA AVT-2	5.1	211.2	5.6	0.11

S. No	NAME	Zn (ppm)	Fe (ppm)	pH	EC
72	LUDHYANA IVT	7.9	204.4	5.3	0.10
73	COIMBATOOR AFTER HAR	29.4	23.9	8.0	0.12
74	HATWAR AVT-1(BT)	0.6	155.0	6.5	0.34
75	HATWAR AVT-2(BT)	1.0	75.9	6.2	0.17
76	HATWAR IVT(BT)	1.5	245.4	6.9	0.24
77	HATWAR AVT-1(AH)	0.9	86.3	6.8	0.10
78	HATWAR AVT-2(AH)	2.7	241.0	6.9	0.12
79	HATWAR IVT(AH)	2.0	140.5	6.9	0.14
80	NAVASRI AVT-2(BT)	1.3	34.0	7.2	0.60
81	NAVASRI AVT-1(BT)	1.6	52.2	7.5	0.50
82	NAVASRI IVT(BT)	1.8	24.6	7.4	0.58
83	NAVASRI AVT-2(AH)	2.1	76.4	7.3	0.60
84	NAVASRI AVT-1(AH)	2.3	82.6	7.7	0.62
85	NAVASRI IVT(AH)	2.9	68.4	8.1	0.89
86	SHIRGAON AVT-2(BT)	2.6	43.6	6.6	0.97
87	SHIRGAON IVT(BT)	1.1	125.5	6.6	0.96
88	SHIRGAON AVT-1 (AH)	2.0	182.3	5.9	0.84
89	SHIRGAON AVT-2 (AH)	2.3	161.1	5.7	0.85
90	SHIRGAON IVT (AH)	1.7	182.6	5.6	0.86

ESSENTIALLY DERIVED VARIETY TRIAL

The abiotic stress like drought, submergence and salinity are the major constraints limiting productivity in nearly half of rice growing areas in the country. Under rainfed conditions the varieties being cultivated are bred for irrigated conditions. The discovery of several abiotic stress tolerance QTLs for drought, submergence and salinity opened the way to improve the mega varieties grown under rainfed conditions. The development of Improved Sambha Mahsuri, Improved Pusa Basmati for BLB resistance, DRR Dhan 42 (IR 64 sub Drt), Sambha Mahsuri Sub1, Swarna Sub1 for drought and submergence tolerance and other essentially derived varieties have proven that the complex trait like drought tolerance can also be improved using Marker Assisted Selection. The yield QTL under drought such as qDty1.1 qDty2.1 qDty2.2, qDty3.1 qDty4.1, qDty9.1 Qdty10.1 and qDty12.1 have shown its effectiveness in several background. Under rainfed ecology submergence and drought are the two different stresses affects crop at different crop growth stage. Hence attempts made to improve some of the mega varieties for both submergence and drought tolerance through MAS with the financial support from by Department of Biotechnology, Ministry of Science and Technology.

ADVANCE VARIETY TRIAL 1 NIL- DROUGHT AND SUBMERGENCE

Locations : 14 **Entries : 26**
Table : 10.1

In this trial six entries viz IET 25663, IET 25664, IET 25665, IET 25666, IET 25667, and IET 25668, with qDty1.1+qDty2.1+qDty3.1 and IET 25672, IET 25673 and IET 25674 with qDty2.1+ qDty 3.1 developed in the back ground of Swarna Sub 1 and nominated by NRRI, IET 25669, IET 25670 and IET 25671 with qDty2.1+qDty3.1 in back ground of Sambha Mahsuri Sub1 nominated by IIRR, IET 25675, IET 25676, IET 24481 and IET 25677 with qSub1 in back ground of CO-43 nominated by TNAU, IET 25678 with qSub1 in back ground of Ranjit and IET 25265 with qSub1 in background of Bahadur nominated by Assam Agricultural University for testing in AICRIP.

The trial was constituted with 18 test entries and their recurrent parents with sensitive check Samba Mahsuri and donor parent of drought QTLs IR 81896-B-B-195. The trial was sent to the locations *viz.*, Cuttack, Pusa, Chinsurah, Titabar, Gerua, and Ghaghraghat to evaluate under submergence and normal conditions. The experiment under submergence reported to be failed at Cuttack, Chinsurah, Titabar and Gerua, but they reported data under normal conditions. Hence submergence data at two locations were analysed. Trial consisting of 12 NILs with yield QTLs under drought along with recurrent parent donor for drought QTL and sensitive check BPT 5204 were evaluated at ICAR-Patna, Varanasi, Rewa and Coimbatore for drought at reproductive stage as well as under controlled condition. The information on submergence and drought at the locations are presented below. The performance of entries were discussed stress wise.

Performance of entries under drought:

Nine NIL entries in back ground of Swarna Sub1 involving 6 entries with qDty1.1+qDty2.2+qDty3.1 and there entries with qDty2.1+qDty3.1 and three NIL entries with qDty2.1+ qDty3.1 in back ground of Sambha Mahsuri sub1, recurrent parents *viz.*, Swarna sub1, Sambha Mahsuri sub1, Sambha Mahsuri as sensitive check and donor parents IR 81896-B-195 having qDty2.1+qDty3.1 included in the trial was sent at location *viz.*, ICAR Patna, Hazaribag, Varanasi, Rewa, Raipur, and Coimbatore. Data was received from all the locations except from Hazaribagh. Since drought was not experienced at Varanasi and Raipur hence data of three location was used for analysis of the performance of entries. Among the recurrent parents Swarna sub1 yielded 2589 kg/ha and Sambha Mahsuri sub1 1844 kg/ha under drought. The donor parent for the qDty2.1+qDty3.1 yielded 2602 kg/ha. The rains during grain filling stage at Rewa reduced the difference between NILs and recurrent parents.

The entry IET 25667 (IR 96322-34-223-B-1-1-1-CR 3955-2) with parentage of IR 81896-B-B-195/2 IR 05 F102// IR 91659-54-35, medium slender grains, 95 days of 50% flowering duration yielded 3146 kg/ha. It showed 21.5% higher yield than Swarna sub1 under drought, it also showed 14.20, 29.45 and 25.03% higher yield than its recurrent parent at Patna, Rewa and Coimbatore, respectively. While under controlled condition it showed similar yield (7289 kg/ha) to Swarna sub1 (7382 kg/ha) with nearly 10 days less 50% flowering duration. It showed 3.0 and 3.67 score of leaf rolling and leaf tip drying indicating drought tolerance. It has high head rice recovery (66.2%), short bold grains, high AC (25.13%) and moderate AC (39 mm) indicating acceptable cooking quality.

The entry IET 25668 (IR 96322-34-127-B-2-1-3-CR 3955-1) from the cross IR 81896-B-B-1952* IR 05 F12 // IR 91659-54-35, medium slender grains and 94 days of 50% flowering duration yielded 3075 ka/ha. It showed 18.77 % higher yield than the recurrent parent Swarna sub1 under drought while under normal condition it yielded 6% lesser yield than the recurrent parent. It showed yield advantage of 24.87% and 40.94% than the recurrent parent at Patna and Rewa, respectively. While at Coimbatore it yielded similar to recurrent parent. It was rated with 5 score for both crop rolling and leaf tip drying. It had high head rice recovery (62.5%), short bold grains, intermediate AC (23.02%) and low GC (25 mm) which is acceptable cooking quality.

Among the NILs with QTLs qDty2.1+qDty3.1, IET 25672 (CR3925-22-7) derived from cross Swarna sub1*4/IR 81896-B-B-195 with short bold grains, 100 days to 50% flowering duration, yielded 5.76 and 5.58% higher yield than the recurrent parent at Patna and Coimbatore, respectively. While at Rewa it showed similar yield to recurrent parent. On overall mean under drought it yielded 2701 kg/ha with 4.33% higher than Swarna sub 1. It had moderate tolerance to drought with leaf rolling score 5.67. It had 68% HRR, 21.99% AC, 4.0 ASV and 38 mm GC indicating acceptable cooking quality.

Among the NILs with qDty2.1+qDty3.1, in back ground of Sambha Mahsuri sub1, IET 25670 (RP 5941-29-2-1-1-B) derived from the cross Sambha Mahsuri sub1*3/ IR 81896-B-B-195 with medium slender grains, 97 days to 50% flowering duration yielded 2655 kg/ha. It showed 43.98% higher yield than the recurrent parent and 67.3% higher to sambha Mahsuri (Senstive Parent) under drought. It yielded 237.21% and 11.43% higher yield than the recurrent parent at Patna and Coimbatore, respectively. While at Rewa where a rain was experienced during grain filling, it showed similar yield to recurrent parent. Under normal condition IET 25670 yielded (6559 kg/ha) similar to the recurrent parent (6629 kg/ha) and 7.68% higher than Samba Mahsuri. It showed tolerance with score 5 for both leaf rolling and leaf tip drying. It had high head rice recovery (67.4%), medium slender grains with intermediate ASV (4), AC (21.47%) and hard GC (22 mm).

The entry IET 25671 (RP 5941-41-16-6-2-1-1-B) derived from the cross Sambha Mahsuri sub1 *3/ IR 81896-B-B-195, with medium slender grains, 100 days to 50% flowering duration, yielded 3631 kg/ha under drought. It showed 96% higher yield than the recurrent parent Sambha Mahsuri sub1 and 128.80% higher than Sambha Mahsuri. It showed 350.41 and 166.54% higher yield than the recurrent parent at Patna and Coimbatore, respectively. It yielded similar (3207 kg/ha) to recurrent parent at Rewa where rain was experienced at grain fillip stage. Under normal condition it yielded 8.66% higher than the recurrent parent and 18.26% higher than Sambha Mahsuri. Its leaf rolling and leaf tip drying score was 5.0 indicating tolerance to drought. It has 68.7% HRR, 21.70% AC and 22 mm GC indicating acceptable cooking quality.

Performance of entries under submergence

At Ghaghraghat submergence was more than 17 days, only few entries *viz.,* IET 25667, IET 25671, IET 25672, IET 25673, IET 25674, IET 25678 and IET 25265 and Swarna sub1 could survive and produced seeds, while the rest died. At Pusa submergence was experienced for 14 days followed by water stagnation hence the yield of entries reduced drastically. The entries IET 25667, IET 25668, IET 25673 and IET 25674 in back ground of Swarna sub1 yielded 50.85, 21.71, 4.7 and 30.03% higher than the recurrent parent, respectively while under normal condition IET 25667 yielded 6.73% higher than Swarna sub 1 and rest were at par to the yield of recurrent parent.

Among the NIL in back ground of Sambha Mahsuri sub1 IET 25670 and IET 25671 yielded 42.80 and 10.69% higher than the recurrent parent, while over Sambha Mahsuri (Sensitive check) the yield superiority was 149.89 and 93.58% respectively. The entry IET 25669 yielded similar to recurrent parent under submergence with 56.20% yield gain over Samba Mahsuri. Under normal condition IET 25669, IET 25670 and IET 25671 yielded 5.26, 7.69 and 1.42% higher than the recurrent parent. While under normal conditions IET 25669, IET 25670 and IET 25671 yielded 23.86, 26.71 and 19.34% higher than Sambha Mahsuri.

Four NILs with of sub1 in background of CO 43 were evaluated for submergence tolerance. IET 25676 yielded 23.54% higher than the recurrent parent with yield of 2456 kg/ha, rest have yielded similar to CO43. Under normal condition IET 25676 yielded 5.84% higher to CO 43 with yield of 4389 kg/ha. The rest were at par to CO43. It has 46.3% HRR, short bold grains, 4 ASV, 21.53% AC and 30 mm GC.

The NILs in background of Ranjit, IET 25678 with 116 days of 50% flowering duration, yielded 1643 kg/ha under submergence, with 82.35% higher than recurrent parent Ranjit. Under normal condition also it showed 2.94% higher than Ranjit with yield of 4792 kg/ha. It has 56.2% HRR, 5 ASV, 22.90% AC and 26 mm GC.

IET 25265 a NIL of sub1 in background of Bahadur with 107 days to 50% flowering duration yielded 1349 kg/ha under submergence. It showed 14.03% higher yield than recurrent parent. While under normal condition it showed 4.32% yield advantage over Bahadur with the yield of 4102 kg/ha. IET 25265 had 51.7% HRR, 4.0 ASV, 23.81% AC and 23 mm GC.

Considering the yield gain under drought, submergence and normal conditions over the recurrent parents the NILS IET 25667, IET 25668 and IET 25673 in background of Swarna sub1 and IET 25670 and IET 25671 in background of Sambha Mahsuri sub1, IET 25676 in background of CO-43, IET 25678 in background of Ranjit and IET 25265 in background of Bahadur were promoted to AVT 2 NIL for further testing.

Drought situation at the locations

Location	Date of sowing	Date of lanting	Drought Situation
Coimbatore	29-09-2015	-	Drought was imposed 45th DAS and life saving Irrigation was given on 65th DAS followed by Drought.
Pusa	30-06-2015	08-17-2015	Drought was experienced at maximum tillering to grain fillip stage.
Cuttack	04-06-2015	12-08-2015	Drought was not experienced
ICAR Patna	03-07-2015	24-07-2015	30 days drought at reproductive stage to grains fillip stage.
Raipur	05-07-2015	23-07-2015	Drought was experienced from 23rd September to 30th November hence drought and reproductive and grain fillip stage
Rewa	12-07-2015	10-08-2015	Drought was experienced at maximum tillering to reproductive stage and one train was experienced at grain fillip after that again drought.

Submergence situation at the locations

Location	Date of sowing	Date of planting	Submergence situation
Pusa	30-06-2015	08-12-2015	Submergence at tillering stage was experienced for 14 days followed by water stagnation.
Cuttack	04-06-2015	12-08-2015	Submergence was experienced for 18 days followed by flash flood hence experiment was damaged
Chinsurah	15-07-2015	20-08-2015	No submergence recorded
Ghaghraghat	04-07-2015	-	Crop was fully submergence for 12 days and partial submergence for proceeding 5 days resulted complete death of several entries.

Performance of NILs entries under drought condition

IET/No	Over all mean yield (kg/ha)	Days to 50% flow.	% Yield superiority gain over		Coimbatore		Raipur Rain out Shelter
			Recurrent Parent	Samba Mahsuri (Sensitive check)	Leaf rolling score (0-9 scale)	Leaf tip drying Score (0-9 scale)	Leaf rolling score (0-9 scale)
25663	2407	90	-	51.67	6.3	7	6
25664	2559	93	-	61.25	5	5.67	7
25665	2233	92	-	40.71	5	5.67	7
25666	2542	100	-	60.18	3.7	5.0	6.3
25667	3146	95	21.51	98.23	3.0	3.67	3.0
25668	3075	94	18.77	93.76	5.0	5.0	3.0
Swarna Sub1 (RP)	2589	103			7.0	5.0	6.7
25669	1826	99		15.06	7.0	5.67	3
25670	2655	97	43.98	67.30	5.7	5.0	3
25671	3631	100	96.90	128.80	4.3	5.0	3
Sambha Mahsuri Sub 1	1844	105			6.3	5.67	7
BPT 5204	1587	96			7.0	4.33	7
IR 81896-B-B-195 (DP)	2602	96			4.7	3.66	3.3
25672	2437	100		53.60	5.0	5	3.3
25673	2701	100	4.33	70.20	5.7	7	2.6
25674	2364	101		40.96	3.0	5	3.3

Performance of entries under controlled condition

IET/No	Over all Mean (kg/ha)	Days to 50% flowering	Yield % Superiority over	
			Recurrent parent	Samba Mahsuri (Sensitive check)
25663	7444	96	-	
25664	6741	98	-	
25665	6187	97	-	
25666	7543	100	2.18	
25667	7289	97	-	
25668	6935	98	-	
Swarna Sub1 (RP)	7382	106		
25669	6406	102	-	5.17
25670	6559	98	-	7.68
25671	7203	99	8.66	18.26
Sambha Mahsuri Sub 1	6629	103		
Samba Mahsuri	6091	99		
IR 81896-B-B-195 (DP)	7176	102	7.34	
25672	7069	101	5.74	
25673	5926	101	-	
25674	6685	101		

Performance of entry under submergence and control condition

Under Submergence

IET/No	Over all Mean (kg/ha)	Days to 50% flowering	Yield % Superiority over	
			Recurrent Parent	Samba Mahsuri (Sensitive check)
25663	1053	104	-	
25664	1345	106	-	
25665	1170	103	-	
25666	1520	116	13.0	62.32
25667	2029	109	50.85	116.77
25668	1637	107	21.71	74.49
Swarna sub1 (RP)	1345	117		
25669	1462	118		56.20
25670	2339	109	42.80	149.89
25671	1812	112	10.69	93.58
Samba Mahsuri Sub 1	1637	113		74.89
BPT 5204 Senstive Check	936	118		
25672	1287	108		
25673	1300	108	4.7	38.87
25674	1615	109	30.03	72.54
Swarna sub1 (RP)	1242	115		
25675	1813	124		
25676	2456	124	23.54	162.39
24481	2047	121		
25677	1170	131		
CO 43 (RP)	1988	124	-	
25768	1643	116	82.35	76.53
Ranjit (RP)	901	117		
25265	1349	107	14.03	44.12
Bahadur	1183	111		

Under normal condition

IET/No	Over all Mean	Days to 50% Flowering	Yield of Superiority	
			Recurrent Parnt	Samba Mahsuri (Sensitive Check)
25663	3403	106	-	
25664	3670	106	-	
25665	3855	109	-	
25666	4741	114	5.68	
25667	4788	112	6.73	
25668	4237	109		
Swarna sub1 (RP)	4486	116		
25669	4381	113	5.26	23.86
25670	4482	112	7.69	26.72
25671	4221	112	1.42	19.34
Samba Mahsuri Sub 1	4162	114		
BPT 5204 Senstive Check	3537	116		
25672	4825	112		
25673	4876	111		
25674	4525	112		
Swarna sub1 (RP)	4803	116		
25675	3948	122		
25676	4389	122	5.84	
24481	4168	121		
25677	2745	126		
CO 43 (RP)	4147	122		
25768	4792	120	2.94	
Ranjit (RP)	4655	121		
25265	4102	109	4.32	
Bahadur	3932	117		

Table 10.1: Composition of entries in Advance Variety Trial 1-Near Isogenic Lines – Submergence and Drought (AVT 1-NIL- SUB & DRT), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
4101	25663	IR 96321-1447-521-B-2-1-2-CR 3954-3	IR 91659-54-35//IR 81896-B-B-195/2*IR 05F102	MS
4102	25664	IR 96321-1447-651-B-1-1-2-CR 3954-2	IR 91659-54-35//IR 81896-B-B-195/2*IR 05F102	MS
4103	25665	IR 96321-558-257-B-4-1-2-CR 3954-4	IR 91659-54-35//IR 81896-B-B-195/2*IR 05F102	MS
4104	**Swarna Sub-1 (Recurrent Parent)**			
4105	25666	IR 96321-558-563-B-2-1-3-CR 3954-1	IR91659-54-35//IR 81896-B-B-195/2*IR05F102	SB
4106	25667	IR 96322-34-223-B-1-1-1-CR 3955-2	IR 81896-B-B-195/2*IR05F102//IR91659-54-35	SB
4107	25668	IR 96322-34-127-B-2-1-3-CR 3955-1	IR81896-13-13-195/2*IR05F102//IR91659-54-35	SB
4108	25669	RP 5941-47-3-2-3-1	Samba Mahsuri Sub-1*3/ IR 81896-B -B-195	MS
4109	25670	RP 5941-29-2-1-1-B	Samba Mahsuri Sub-1*3/ IR 81896-B -B-195	MS
4110	**Samba Mahsuri Sub-1 (RP)**			
4111	25671	RP 5941-16-6-2-1-1-B	Samba Mahsuri Sub-1*3/ IR 81896-B -B-195	MS

Entry No.	IET No.	Designation	Cross Combination	Grain type
4112	25672	CR 3925-22-1	Swarna Sub1*4/ IR 81896-B-B-195	SB
4113	25673	CR 3925-22-7	Swarna Sub1*4/ IR 81896-B-B-195	SB
4114	**Swarna Sub-1 (RP)**			
4115	25674	CR 3925-22-5	Swarna Sub1*4/ IR 81896-B-B-195	SB
4116	**IR 81896-B-B-195 (DP)**			
4117	25675	Co 43 Sub1 13-6	CO 43/ FR13A	MS
4118	25676	Co 43 Sub1 9-2-4	CO 43/ FR13A	MS
4119	**CO 43 (RP)**			
4120	24481 (Repeat)	CO 43 Sub 1	CO 43/ FR13A	SB
4121	25677	Co 43 Sub 1 91-27	CO 43/ FR13A	MS
4122	25678	RANJIT SUB-1	RANJIT/SWARNA SUB-1	MS
4123	**RANJIT (RP)**			
4124	25265	BAHADUR SUB-1	BAHADUR/SWARNA SUB-1	MS
4125	**BAHADUR (RP)**			
4126	**BPT 5204 (RP)**			

Table No. 10.2 Grain Yield (kg/ha) of entries in AVT-1 NIL (Submergence) Kharif 2015

Entry No.	IET No.	III				Zone III Mean (2)		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		BI		U.P.								
		PSA		GGT								
4101	25663	1053				1053		1053		104	76	206
4102	25664	1345				1345		1345		106	81	170
4103	25665	1170				1170		1170		103	73	185
4104	Swarna (Recurrent Parent)	1345				1345		1345		117	70	163
4105	25666	1520				1520		1520		116	79	162
4106	25667	1462		2596	1	2029	4	2029	4	109	74	183
4107	25668	1637	6			1637		1637		107	85	206
4108	25669	1462				1462		1462		118	88	232
4109	25670	2339	2			2339	2	2339	2	109	88	232
4110	Samba Mahsuri Sub-1 (RP)	1637	7			1637		1637		113	72	244
4111	25671	1520		2104	3	1812	8	1812	8	112	75	177
4112	25672	1637	8	938	9	1287		1287		108	74	177
4113	25673	1579		1021	8	1300		1300		108	77	186
4114	Swarna Sub-1 (RP)	1579		904		1242		1242		115	70	168
4115	25674	1637	9	1592	6	1615		1615		109	74	202
4116	IR 81896-B-B-195 (DP)	1462		2417	2	1939	6	1939	6	109	101	193
4117	25675	1813	5			1813	7	1813	7	124	77	223
4118	25676	2456	1			2456	1	2456	1	124	90	189
4119	CO 43 (RP)	1988	4			1988	5	1988	5	124	85	232
4120	24481	2047	3			2047	3	2047	3	121	90	257
4121	25677	1170				1170		1170		131	78	270
4122	25678	1462		1825	4	1643	9	1643	9	116	91	174
4123	RANJIT (RP)	1053		750		901		901		117	90	171
4124	25265	936		1763	5	1349		1349		107	80	173
4125	BAHADUR (RP)	1053		1313	7	1183		1183		111	87	184
4126	BPT 5204 (RP)	936				936		936		118	75	226
	Exp Mean	**1511**		**1566**		**1547**		**1528**		**113**	**81**	**194**
	C.D. 5%	902		355		553		530		2	0	27
	C.V.%	36.38		13.32		31.48		30.15		1.48	0.00	12.30
	Sowing Date	30-Jun		04-Jul								
	Planting Date	12-Aug										
	Local ©											

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.2 contd: Grain Yield (kg/ha) of entries in AVT-1 NIL (Submergence Control) Kharif 2015

Entry No.	IET No.	III								Zone III Mean(4)		IV			
		OD		BI		W.B		U.P.				AS		AS	
		CTK		PSA		CHN		GGT				TTB		GER	
4101	25663	2028		2778		4667		2104		2894				4486	
4102	25664	2714		2778		5056		2208		3189				4038	
4103	25665	832		3148		5389		2625	8	2998		5255		4160	
4104	Swarna (Recurrent Parent)	4797	2	4815	2	5611		2104		4332	1	3850		5162	4
4105	25666	2610		3333		6611	3	3521	4	4019	9	4506		4723	9
4106	25667	2435		2407		7389	1	3396	5	3907		4637		5154	5
4107	25668	2184		2037		5556		3250	6	3257		5779	2	5230	2
4108	25669	3181		4259	8	5167		2333	9	3735		3927		4091	
4109	25670	2772		4815	3	5278		3771	3	4159	2	4059		4199	
4110	Samba Mahsuri Sub-1 (RP)	1939		5000	1	5000		1667		3401		5664	4	4462	
4111	25671	2737		3148		5000		4063	1	3737		4128		3902	
4112	25672	3125		3148		6500	5	2104		3719		5517		4997	7
4113	25673	3345	8	3333		6667	2	2188		3883		5849	1	5419	1
4114	Swarna Sub-1 (RP)	4135	6	3889	9	6611	4	1958		4148	3	5556	9	4755	8
4115	25674	2731		3148		6000	9	2313		3548		5602	7	5222	3
4116	IR 81896-B-B-195 (DP)	2908		2407		5444		3854	2	3654		5625	5	5038	6
4117	25675	3209		4444	5	5444		3063	7	4040	7	5085		2219	
4118	25676	3255	9	4630	4	6333	6	1563		3945		4452		2425	
4119	CO 43 (RP)	4170	5	4444	6	6222	7	1417		4063	6	3958		1937	
4120	24481	4210	4	4444	7	6056	8	1438		4037	8	4213		1962	
4121	25677	2885		1852		5056		1792		2896		4375		638	
4122	25678	4686	3	3704		5722		2167		4070	4	5586	8	4122	
4123	RANJIT (RP)	5579	1	3704		5611		1375		4067	5	5610	6	3654	
4124	25265	2985		2778		5222		1771		3189		5748	3	4478	
4125	BAHADUR (RP)	3715	7	2963		5056		1354		3272		5147		4106	
4126	BPT 5204 (RP)	2324		2593		4667		1938		2880		3819		3119	
	Exp Mean	**3134**		**3462**		**5667**		**2359**		**3655**		**4914**		**3988**	
	C.D. 5%	626		1576		459		655		460		482		979	
	C.V.%	12.17		27.77		4.94		16.92		15.63		5.97		14.97	
	Sowing Date	04-Jun		30-Jun		15-Jul		20-Jul				11-Jul		06-Jul	
	Planting Date	12-Aug		18-Aug		20-Aug						12-Aug		12-Aug	
	Local ©														

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.2 Contd.: Grain Yield (kg/ha) of entries in AVT-1 NIL (Submergence Control) Kharif 2015

Entry No.	IET No.	IV AS (2) Mean		Zone IV Mean (2)		VII KE MNC		Overall Mean (7)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
4101	25663	4486		4486		4356		3403		106	92	233
4102	25664	4038		4038		5225		3670		106	89	235
4103	25665	4707		4707		5574		3855		109	86	258
4104	Swarna (Recurrent Parent)	4506		4506		5059		4486		116	85	265
4105	25666	4615		4615		7883	5	4741	7	114	90	272
4106	25667	4896	9	4896	9	8099	3	4788	5	112	93	262
4107	25668	5505	2	5505	2	5624		4237		109	89	281
4108	25669	4009		4009		7709	6	4381		113	92	269
4109	25670	4129		4129		6479		4482		112	95	249
4110	Samba Mahsuri Sub-1 (RP)	5063	8	5063	8	5399		4162		114	89	245
4111	25671	4015		4015		6571		4221		112	95	264
4112	25672	5257	5	5257	5	8382	1	4825	2	112	90	271
4113	25673	5634	1	5634	1	7335	8	4876	1	111	91	271
4114	Swarna Sub-1 (RP)	5155	6	5155	6	6720		4803	3	116	85	264
4115	25674	5412	3	5412	3	6662		4525	9	112	88	271
4116	IR 81896-B-B-195 (DP)	5331	4	5331	4	8224	2	4786	6	107	112	270
4117	25675	3652		3652		4170		3948		122	101	251
4118	25676	3439		3439		8066	4	4389		122	104	252
4119	CO 43 (RP)	2948		2948		6878		4147		122	104	260
4120	24481	3087		3087		6853		4168		121	99	255
4121	25677	2507		2507		2617		2745		126	93	226
4122	25678	4854		4854		7559	7	4792	4	120	105	268
4123	RANJIT (RP)	4632		4632		7052	9	4655	8	121	109	279
4124	25265	5113	7	5113	7	5732		4102		109	105	262
4125	BAHADUR (RP)	4626		4626		5183		3932		117	101	249
4126	BPT 5204 (RP)	3469		3469		6297		3537		116	89	262
	Exp Mean	**4426**		**4433**		**6373**		**4264**		**115**	**95**	**260**
	C.D. 5%	554		555		1162		348		1	0	12
	C.V.%	10.90		10.93		11.12		13.44		1.25	0.00	7.16
	Sowing Date					14-Jul						
	Planting Date					03-Aug						
	Local ©											

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.2 contd.:Grain Yield (kg/ha) of entries in AVT-1 NIL (Drought) Kharif 2015

Entry No.	IET No.	III BI PTN-ICAR		III U.P. @VRN		Zone III Mean (1)		V M.P. REW		VII TN CBT		Overall Mean (3)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
4101	25663	2229		8267	8	2229		2925	4	2067		2407		90	72	315
4102	25664	3267	9	8467	5	3267	9	2287		2123	9	2559	8	93	66	292
4103	25665	3571	5	7800		3571	5	2083		1046		2233		92	61	267
4104	Swarna (Recurrent Parent)	3317	8	9033	3	3317	8	1888		2564	7	2589	7	103	68	331
4105	25666	2688		9133	2	2688		2917	5	2020		2542	9	100	65	282
4106	25667	3788	3	8133		3788	3	2444	9	3206	2	3146	2	95	68	311
4107	25668	4142	2	8267	9	4142	2	2661	8	2423	8	3075	3	94	71	307
4108	25669	1588		7333		1588		2804	6	1085		1826		99	68	324
4109	25670	3625	4	8133		3625	4	3151	3	1189		2655	5	97	70	291
4110	Samba Mahsuri Sub-1 (RP)	1075		8200		1075		3390	1	1067		1844		105	60	290
4111	25671	4842	1	7720		4842	1	3207	2	2844	5	3631	1	100	71	326
4112	25672	2854		8467	6	2854		1502		2955	4	2437		100	67	304
4113	25673	3508	6	8467	7	3508	6	1888		2707	6	2701	4	100	65	276
4114	Swarna Sub-1 (RP)	963		9400	1	963		1927		2109		1666		106	58	319
4115	25674	2192		8533	4	2192		1745		3155	3	2364		101	65	311
4116	IR 81896-B-B-195 (DP)	3321	7	8200		3321	7	1124		3362	1	2602	6	96	90	263
4126	BPT 5204	1358		8200		1358		2708	7	694		1587		96	59	281
	Exp Mean	**2843**		**8338**		**2843**		**2391**		**2154**		**2463**		**98**	**67**	**299**
	C.D. 5%	963		1111		853		664		1374		576		4		54
	C.V.%	20.37		8.01		18.07		16.71		38.35		25.00		4.79		19.26
	Sowing Date	15-Jul		02-Jul				12-Jul		29-Sep						
	Planting Date	07-Aug		25-Jul				10-Aug								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.2 contd.: Grain Yield (kg/ha) of entries in AVT-1 NIL (Drought Control) Kharif 2015

Entry No.	IET No.	III				Zone III Mean (2)		V		VII		Overall Mean (3)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		BI		U.P.				CG		TN						
		PTN-ICAR		VRN				RPR		@BT						
4101	25663	9113	3	7800	5	8457	4	5419	3	2982	8	7444	3	96	90	300
4102	25664	7857		7333		7595		5031	5	2223		6741		98	90	269
4103	25665	8113		6533		7323		3915		1841		6187		97	79	264
4104	Swarna (Recurrent Parent)	8929	6	7533	8	8231	8	5683	2	2154		7382	4	106	84	336
4105	25666	8554	9	9200	1	8877	1	4876	7	2058		7543	2	100	86	287
4106	25667	8952	4	7733	6	8343	5	5182	4	1673		7289	5	97	85	296
4107	25668	9458	1	7133		8296	6	4212		2217		6935	9	98	82	293
4108	25669	8940	5	6867		7904		3411		2508		6406		102	89	273
4109	25670	8708	8	7200		7954		3770		3228	7	6559		98	92	269
4110	Samba Mahsuri Sub-1 (RP)	9345	2	6867		8106	9	3676		2614	9	6629		103	85	275
4111	25671	8857	7	8067	4	8462	3	4684	9	3556	6	7203	6	99	93	269
4112	25672	8012		8533	3	8273	7	4984	6	3721	5	7176	7	102	89	301
4113	25673	8119		9200	2	8660	2	3888		3814	4	7069	8	101	89	290
4114	Swarna Sub-1 (RP)	7714		7533	9	7624		4806	8	3989	3	6685		105	96	304
4115	25674	6929		7400		7164		3449		4347	2	5926		101	87	302
4116	IR 81896-B-B-195 (DP)	8280		7667	7	7973		6799	1	5135	1	7582	1	98	117	264
4126	BPT 5204	7607		7267		7437		3400		1410		6091		99	86	304
	Exp Mean	**8440**		**7639**		**8040**		**4540**		**2910**		**6873**		**100**	**89**	**288**
	C.D. 5%	1531		1114		1053		1402		2309		624		1	6	26
	C.V.%	10.91		8.77		11.36		18.56		47.72		9.70		1.70	0.00	11.28
	Sowing Date	03-Jul		02-Jul				05-Jul		29-Sep						
	Planting Date	24-Jul		26-Jul				23-Jul								
	Local ©															

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.3: Days to 50% flowering of entries in AVT-1 NIL (Submergence) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (2)	Overall Mean (2)
		BI	U.P.		
		PSA	GGT		
4101	25663	104		104	104
4102	25664	106		106	106
4103	25665	103		103	103
4104	Swarna (Recurrent Parent)	117		117	117
4105	25666	116		116	116
4106	25667	110	107	109	109
4107	25668	107		107	107
4108	25669	118		118	118
4109	25670	109		109	109
4110	Samba Mahsuri Sub-1 (RP)	113		113	113
4111	25671	119	105	112	112
4112	25672	109	106	108	108
4113	25673	108	107	108	108
4114	Swarna Sub-1 (RP)	117	113	115	115
4115	25674	109	109	109	109
4116	IR 81896-B-B-195 (DP)	109	109	109	109
4117	25675	124		124	124
4118	25676	124		124	124
4119	CO 43 (RP)	124		124	124
4120	24481	121		121	121
4121	25677	131		131	131
4122	25678	120	113	116	116
4123	RANJIT (RP)	121	113	117	117
4124	25265	104	110	107	107
4125	BAHADUR (RP)	110	112	111	111
4126	BPT 5204 (RP)	118		118	118
	Exp Mean	**114**	**109**	**114**	**113**
	C.D. 5%	3	3	2	2
	C.V.%	1.37	1.78	1.50	1.48

Table No. 10.3 contd.: Days to 50% Flowering of entries in AVT-1 NIL (Submergence Control) Kharif 2015

Entry No.	IET No.	III				Zone III Mean (4)	IV			Zone IV Mean (2)	VII	Overall Mean (7)
		OD	BI	W.B	U.P.		AS	AS	AS (2)		KE	
		CTK	PSA	CHN	GGT		TTB	GER	Mean		MNC	
4101	25663	114	112	101	92	105		121	121	121	93	106
4102	25664	116	113	98	96	106		124	124	124	92	106
4103	25665	116	113	104	93	107	118	126	122	122	92	109
4104	Swarna (Recurrent Parent)	129	126	96	106	114	127	131	129	129	97	116
4105	25666	120	124	101	102	112	122	132	127	127	95	114
4106	25667	118	125	106	94	111	119	126	123	123	94	112
4107	25668	115	120	101	93	107	115	129	122	122	92	109
4108	25669	119	122	106	101	112	118	131	124	124	93	113
4109	25670	116	118	107	100	110	117	129	123	123	98	112
4110	Samba Mahsuri Sub-1 (RP)	130	126	107	110	118	117	129	123	123	79	114
4111	25671	116	120	102	101	110	116	129	123	123	99	112
4112	25672	117	125	99	101	111	117	129	123	123	94	112
4113	25673	115	126	101	101	111	118	124	121	121	92	111
4114	Swarna Sub-1 (RP)	127	128	98	110	116	123	129	126	126	93	116
4115	25674	116	121	109	100	112	117	126	122	122	92	112
4116	IR 81896-B-B-195 (DP)	114	108	102	93	104	114	129	121	121	92	107
4117	25675	132	126	99	109	116	128	147	138	138	111	122
4118	25676	132	128	102	114	119	131	147	139	139	104	122
4119	CO 43 (RP)	131	128	98	113	117	132	147	139	139	106	122
4120	24481	131	127	96	113	117	130	147	138	138	101	121
4121	25677	132	150	99	114	124	129	147	138	138	113	126
4122	25678	130	126	102	113	118	125	134	129	129	108	120
4123	RANJIT (RP)	130	132	99	114	118	126	134	130	130	112	121
4124	25265	117	115	99	100	108	118	121	119	119	94	109
4125	BAHADUR (RP)	130	125	102	112	117	124	134	129	129	92	117
4126	BPT 5204 (RP)	128	120	101	107	114	122	129	125	125	106	116
	Exp Mean	**123**	**123**	**101**	**104**	**113**	**122**	**132**	**127**	**127**	**97**	**115**
	C.D. 5%	2	2	2	3	1	1	4	2	2	0	1
	C.V.%	1.00	0.99	1.28	1.90	1.30	0.51	1.69	1.33	1.32	0.31	1.25

Table No. 10.3: Days to 50% Flowering of entries in AVT-1 NIL (Drought) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (1)	V	VII	Overall Mean (3)
		BI	U.P.		M.P.	TN	
		PTN-ICAR	@VRN		REW	CBT	
4101	25663	93	107	93	95	81	90
4102	25664	95	105	95	100	83	93
4103	25665	93	103	93	99	85	92
4104	Swarna (Recurrent Parent)	103	103	103	105	100	103
4105	25666	108	106	108	103	89	100
4106	25667	99	101	99	101	85	95
4107	25668	96	102	96	97	90	94
4108	25669	106	106	106	100	93	99
4109	25670	98	102	98	104	90	97
4110	Samba Mahsuri Sub-1 (RP)	113	107	113	106	96	105
4111	25671	103	98	103	105	92	100
4112	25672	98	100	98	106	94	100
4113	25673	100	108	100	106	94	100
4114	Swarna Sub-1 (RP)	104	107	104	109	104	106
4115	25674	101	109	101	106	96	101
4116	IR 81896-B-B-195 (DP)	99	104	99	107	82	96
4126	BPT 5204	101	100	101	104	85	96
	Exp Mean	**101**	**104**	**101**	**103**	**90**	**98**
	C.D. 5%	10	0	10	8	4	4
	C.V.%	6.04	0.13	6.05	4.86	2.43	4.79

Table No. 10.3: Days to 50% Flowering of entries in AVT-1 NIL (Drought Control) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (2)	V	VII	Overall Mean (4)
		BI	U.P.		CG	TN	
		PTN-ICAR	VRN		RPR	CBT	
4101	25663	97	107	102	95	85	96
4102	25664	104	103	104	96	87	98
4103	25665	104	103	104	97	85	97
4104	Swarna (Recurrent Parent)	109	102	106	106	105	106
4105	25666	110	106	108	97	89	100
4106	25667	98	101	100	97	92	97
4107	25668	109	101	105	94	87	98
4108	25669	99	105	102	100	103	102
4109	25670	97	102	100	98	94	98
4110	Samba Mahsuri Sub-1 (RP)	104	105	105	102	101	103
4111	25671	104	98	101	100	93	99
4112	25672	108	100	104	99	102	102
4113	25673	104	106	105	99	94	101
4114	Swarna Sub-1 (RP)	104	107	106	106	102	105
4115	25674	104	109	107	99	93	101
4116	IR 81896-B-B-195 (DP)	104	104	104	97	88	98
4126	BPT 5204	106	100	103	103	89	99
	Exp Mean	**104**	**103**	**104**	**99**	**93**	**100**
	C.D. 5%	0	0	0	2	5	1
	C.V.%	0.18	0.14	0.17	1.43	3.25	1.70

Table No. 10.4: Plant Height (cm) of entries in AVT-1 NIL (Drought) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (1)	V	VII	Overall Mean (3)
		BI	U.P.		M.P.	TN	
		PTN-ICAR	@VRN		REW	CBT	
4101	25663	75	91	75	73	68	72
4102	25664	70	92	70	68	59	66
4103	25665	69	79	69	60	54	61
4104	Swarna (Recurrent Parent)	75	76	75	68	60	68
4105	25666	64	92	64	71	60	65
4106	25667	69	93	69	75	61	68
4107	25668	70	92	70	77	65	71
4108	25669	69	96	69	74	60	68
4109	25670	73	98	73	79	56	70
4110	Samba Mahsuri Sub-1 (RP)	60	89	60	68	52	60
4111	25671	71	103	71	76	66	71
4112	25672	67	96	67	73	60	67
4113	25673	67	97	67	70	59	65
4114	Swarna Sub-1 (RP)	62	86	62	55	57	58
4115	25674	64	96	64	72	58	65
4116	IR 81896-B-B-195 (DP)	81	118	81	96	94	90
4126	BPT 5204	55	84	55	67	54	59
	Exp Mean	**68**	**93**	**68**	**72**	**61**	**67**

Table No. 10.4: Plant Height (cm) of entries in AVT-1 NIL (Drought Control) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (2)	V	VII	Overall Mean (4)
		BI	U.P.		CG	TN	
		PTN-ICAR	VRN		RPR	CBT	
4101	25663	105	91	98	97	68	90
4102	25664	107	90	98	97	68	90
4103	25665	97	82	89	75	60	79
4104	Swarna (Recurrent Parent)	99	85	92	87	66	84
4105	25666	106	89	98	89	61	86
4106	25667	105	91	98	79	67	85
4107	25668	99	89	94	78	60	82
4108	25669	101	96	99	95	65	89
4109	25670	105	102	104	95	66	92
4110	Samba Mahsuri Sub-1 (RP)	107	74	91	96	63	85
4111	25671	97	100	98	105	71	93
4112	25672	105	94	99	97	61	89
4113	25673	100	99	100	95	62	89
4114	Swarna Sub-1 (RP)	137	92	115	94	62	96
4115	25674	97	94	95	96	63	87
4116	IR 81896-B-B-195 (DP)	137	122	129	115	96	117
4126	BPT 5204	100	86	93	97	63	86
	Exp Mean	**106**	**93**	**99**	**93**	**66**	**89**
	C.D. 5%			4			6

Table No. 10.4: Plant Height (cm) of entries in AVT-1 NIL (Submergence) Kharif 2015

Entry No.	IET No.	III	E	Zone III Mean (2)	Overall Mean (2)
		BI	U.P.		
		PSA	GGT		
4101	25663	76		76	76
4102	25664	81		81	81
4103	25665	73		73	73
4104	Swarna (Recurrent Parent)	70		70	70
4105	25666	79		79	79
4106	25667	80	68	74	74
4107	25668	85		85	85
4108	25669	88		88	88
4109	25670	88		88	88
4110	Samba Mahsuri Sub-1 (RP)	72		72	72
4111	25671	75	75	75	75
4112	25672	72	75	74	74
4113	25673	77	77	77	77
4114	Swarna Sub-1 (RP)	65	75	70	70
4115	25674	75	73	74	74
4116	IR 81896-B-B-195 (DP)	100	101	101	101
4117	25675	77		77	77
4118	25676	90		90	90
4119	CO 43 (RP)	85		85	85
4120	24481	90		90	90
4121	25677	78		78	78
4122	25678	90	91	91	91
4123	RANJIT (RP)	87	93	90	90
4124	25265	78	82	80	80
4125	BAHADUR (RP)	90	84	87	87
4126	BPT 5204 (RP)	75		75	75
	Exp Mean	**81**	**81**	**81**	**81**

Table No. 10.5:Panicles/ M² of entries in AVT-1 NIL (Submergence) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (2)	Overall Mean (2)
		BI	U.P.		
		PSA	GGT		
4101	25663	206		206	206
4102	25664	170		170	170
4103	25665	185		185	185
4104	Swarna (Recurrent Parent)	163		163	163
4105	25666	162		162	162
4106	25667	154	211	183	183
4107	25668	206		206	206
4108	25669	232		232	232
4109	25670	232		232	232
4110	Samba Mahsuri Sub-1 (RP)	244		244	244
4111	25671	170	184	177	177
4112	25672	205	149	177	177
4113	25673	221	151	186	186
4114	Swarna Sub-1 (RP)	213	122	168	168
4115	25674	241	162	202	202
4116	IR 81896-B-B-195 (DP)	232	154	193	193
4117	25675	223		223	223
4118	25676	189		189	189
4119	CO 43 (RP)	232		232	232
4120	24481	257		257	257
4121	25677	270		270	270
4122	25678	207	140	174	174
4123	RANJIT (RP)	196	146	171	171
4124	25265	194	151	173	173
4125	BAHADUR (RP)	232	135	184	184
4126	BPT 5204 (RP)	226		226	226
	Exp Mean	**210**	**155**	**199**	**194**
	C.D. 5%	45	25	28	27
	C.V.%	12.95	9.41	12.41	12.30

Table No. 10.4 contd.: Plant Height (cm) of entries in AVT-1 NIL (Submergence Control) Kharif 2015

Entry No.	IET No.	III				Zone III Mean (4)	IV			Zone IV Mean (2)	VII	Overall Mean (7)
		OD	BI	W.B	U.P.		AS	AS	AS (2)		KE	
		CTK	PSA	CHN	GGT		TTB	GER	Mean		MNC	
4101	25663	92	80	110	75	89		101	101	101	94	92
4102	25664	90	64	115	71	85		97	97	97	96	89
4103	25665	90	73	118	72	88	68	89	79	79	93	86
4104	Swarna (Recurrent Parent)	97	57	120	62	84	70	95	83	83	93	85
4105	25666	93	76	127	61	89	76	91	84	84	103	90
4106	25667	101	69	130	72	93	72	98	85	85	106	93
4107	25668	96	68	128	62	89	81	94	88	88	95	89
4108	25669	95	70	120	78	91	78	100	89	89	105	92
4109	25670	102	59	125	88	94	91	97	94	94	103	95
4110	Samba Mahsuri Sub-1 (RP)	90	64	128	72	89	75	93	84	84	99	89
4111	25671	95	70	122	88	94	83	104	94	94	102	95
4112	25672	90	69	115	73	87	78	97	88	88	110	90
4113	25673	100	63	120	76	90	84	97	91	91	96	91
4114	Swarna Sub-1 (RP)	96	65	115	62	85	64	92	78	78	101	85
4115	25674	97	73	120	65	89	64	95	80	80	99	88
4116	IR 81896-B-B-195 (DP)	102	93	127	102	106	100	127	114	114	130	112
4117	25675	98	79	130	81	97	102	97	100	100	123	101
4118	25676	118	81	134	76	102	92	104	98	98	123	104
4119	CO 43 (RP)	117	82	132	81	103	97	100	99	99	119	104
4120	24481	105	80	130	86	100	88	103	96	96	103	99
4121	25677	103	66	125	70	91	92	93	93	93	103	93
4122	25678	120	85	127	79	103	84	120	102	102	121	105
4123	RANJIT (RP)	122	85	128	81	104	98	114	106	106	133	109
4124	25265	110	85	115	72	96	107	126	117	117	122	105
4125	BAHADUR (RP)	110	91	119	70	98	100	116	108	108	103	101
4126	BPT 5204 (RP)	100	67	120	63	88	80	92	86	86	103	89
	Exp Mean	**101**	**74**	**123**	**75**	**93**	**84**	**101**	**93**	**93**	**107**	**95**

Table No. 10.5 contd.:Panicles/ M² of entries in AVT-1 NIL (Submergence Control) Kharif 2015

Entry No.	IET No.	III			Zone III Mean (3)	IV			Zone IV Mean (2)	VII	Overall Mean (6)
		OD	BI	U.P.		AS	AS	AS (2)		KE	
		CTK	PSA	GGT		TTB	GER	Mean		MNC	
4101	25663	217	184	171	191		294	294	294	301	233
4102	25664	230	164	161	185		276	276	276	344	235
4103	25665	200	189	119	169	347	285	316	316	409	258
4104	Swarna (Recurrent Parent)	231	177	180	196	292	322	307	307	387	265
4105	25666	232	211	197	213	326	276	301	301	387	272
4106	25667	199	208	156	188	299	279	289	289	430	262
4107	25668	231	222	186	213	349	310	330	330	387	281
4108	25669	198	233	163	198	296	291	294	294	430	269
4109	25670	197	186	144	176	287	296	291	291	387	249
4110	Samba Mahsuri Sub-1 (RP)	165	178	129	157	347	308	328	328	344	245
4111	25671	199	213	187	200	314	281	298	298	387	264
4112	25672	249	194	140	195	343	267	305	305	430	271
4113	25673	245	196	135	192	366	277	322	322	409	271
4114	Swarna Sub-1 (RP)	249	192	108	183	336	293	315	315	409	264
4115	25674	291	197	129	206	327	273	300	300	409	271
4116	IR 81896-B-B-195 (DP)	208	177	197	194	351	258	305	305	430	270
4117	25675	211	190	223	208	321	259	290	290	301	251
4118	25676	230	193	117	180	283	261	272	272	430	252
4119	CO 43 (RP)	263	203	123	196	303	260	281	281	409	260
4120	24481	230	216	137	194	291	268	280	280	387	255
4121	25677	232	215	131	193	316	248	282	282	215	226
4122	25678	260	214	120	198	344	261	303	303	409	268
4123	RANJIT (RP)	279	231	141	217	333	280	307	307	409	279
4124	25265	198	231	140	190	354	262	308	308	387	262
4125	BAHADUR (RP)	232	219	116	189	323	261	292	292	344	249
4126	BPT 5204 (RP)	220	206	159	195	299	301	300	300	387	262
	Exp Mean	**227**	**201**	**150**	**193**	**323**	**279**	**299**	**300**	**383**	**260**
	C.D. 5%	14	26	24	12	24	48	28	27	30	12
	C.V.%	3.70	7.82	9.73	6.91	4.60	10.53	8.01	8.00	4.85	7.16

Table No. 10.5 contd.: Panicles/ M² of entries in AVT-1 NIL (Drought) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (1)	V	VII	Overall Mean (3)
		BI	U.P.		M.P.	TN	
		PTN-ICAR	@VRN		REW	CBT	
4101	25663	306	303	306	275	363	315
4102	25664	278	309	278	245	352	292
4103	25665	280	298	280	224	297	267
4104	Swarna (Recurrent Parent)	333	332	333	258	402	331
4105	25666	298	352	298	248	300	282
4106	25667	308	367	308	310	315	311
4107	25668	320	313	320	287	315	307
4108	25669	347	346	347	287	337	324
4109	25670	274	335	274	276	323	291
4110	Samba Mahsuri Sub-1 (RP)	296	335	296	232	343	290
4111	25671	354	331	354	275	348	326
4112	25672	336	308	336	254	322	304
4113	25673	309	352	309	204	315	276
4114	Swarna Sub-1 (RP)	336	361	336	264	358	319
4115	25674	327	340	327	213	392	311
4116	IR 81896-B-B-195 (DP)	277	324	277	217	295	263
4126	BPT 5204	281	402	281	250	310	281
	Exp Mean	**310**	**336**	**310**	**254**	**335**	**299**
	C.D. 5%	70	34	69	75	109	54
	C.V.%	13.69	6.01	13.42	17.72	19.55	19.26

Table No. 10.5 contd.: Panicles/ M² of entries in AVT-1 NIL (Drought Control) Kharif 2015

Entry No.	IET No.	III		Zone III Mean (2)	V	VII	Overall Mean (4)
		BI	U.P.		CG	TN	
		PTN-ICAR	VRN		RPR	CBT	
4101	25663	280	344	312	198	377	300
4102	25664	269	292	280	212	305	269
4103	25665	272	293	282	196	297	264
4104	Swarna (Recurrent Parent)	343	393	368	207	400	336
4105	25666	270	357	314	207	313	287
4106	25667	283	391	337	190	320	296
4107	25668	343	301	322	192	337	293
4108	25669	229	350	289	201	312	273
4109	25670	280	306	293	198	293	269
4110	Samba Mahsuri Sub-1 (RP)	269	287	278	230	315	275
4111	25671	272	316	294	191	295	269
4112	25672	294	339	317	219	353	301
4113	25673	302	320	311	203	333	290
4114	Swarna Sub-1 (RP)	255	329	292	219	415	304
4115	25674	272	338	305	199	400	302
4116	IR 81896-B-B-195 (DP)	255	307	281	206	290	264
4126	BPT 5204	338	336	337	224	317	304
	Exp Mean	**284**	**329**	**307**	**205**	**334**	**288**
	C.D. 5%	22	37	21	23	93	26
	C.V.%	4.68	6.84	5.95	6.84	16.80	11.28

Table 10.6: Grain quality characteristics of entries in AVT 1-NIL (Submergence and Drought), kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
4101	25663	78.9	70.6	66.4	5.63	2.17	2.59	MS	VOC	4.0	24.25	44
4102	25664	79	70.4	64.9	5.46	2.17	2.51	MS	VOC	4.0	23.76	24
4103	25665	77.6	66.5	56.4	5.33	2.1	2.53	MS	VOC	4.0	25.72	45
4104	SWARNA SUB-1(RP)	77.5	66.1	55.1	4.79	2.1	2.28	SB	A	4.0	24.25	34
4105	25666	77.9	70.9	67.3	5.38	2.21	2.43	SB	VOC	4.0	23.37	25
4106	25667	79.6	69.9	66.2	5.15	2.22	2.31	SB	VOC	4.0	25.13	39
4107	25668	78.2	69.1	62.5	5.46	2.22	2.45	SB	VOC	4.0	23.02	25
4108	25669	79.2	70.4	67.1	5.11	1.83	2.79	MS	A	4.0	22.08	22
4109	25670	78.2	70.1	67.4	5.01	1.83	2.73	MS	A	4.0	21.47	22
4110	SAMBA MAHSURI Sub 1	79.9	72.1	70	4.9	1.85	2.64	MS	A	4.0	20.65	22
4111	25671	78.9	71.4	68.7	4.87	1.81	2.69	MS	A	4.0	21.70	22
4112	25672	80.4	71.1	68	5.24	2.22	2.36	SB	VOC	4.0	21.99	38
4113	25673	79.6	70.4	66.5	5.12	2.22	2.3	SB	VOC	4.0	25.1	40
4114	SWARNA SUB-1(RP)	79.2	70.7	68.6	5.16	2.14	2.41	SB	A	4.0	23.78	37
4115	25674	79.3	70.5	66.5	4.96	2.1	2.36	SB	A	4.0	24.2	36
4116	IR 81896-B-B-195(DP)	78.7	70.7	68.7	5.59	2.2	2.54	MS	VOC	4.0	24.28	25
4117	25675	77.5	68.0	63.8	5.04	1.76	2.86	MS	A	4.0	23.55	22
4118	25676	80.3	69.4	46.3	4.94	2.21	2.23	SB	VOC	4.0	21.53	30
4119	CO 43 (RP)	79.7	66.3	46.5	4.88	2.22	2.19	SB	VOC	4.0	25.93	45
4120	24481	78.3	65.3	42.3	4.94	2.15	2.29	SB	VOC	4.0	25.75	44
4121	25677	78.6	64.6	39.8	4.75	2.27	2.09	SB	VOC	4.0	26.48	44
4122	25678	76.8	66.8	56.2	5.00	1.88	2.65	MS	A	5.0	22.90	26
4123	Ranjit (RP)	76.7	68.9	60.1	5.1	1.93	2.64	MS	A	5.0	22.00	25
4124	25265	78.3	63.4	51.7	4.96	2.24	2.21	SB	A	4.0	23.81	23
4125	Bahadur (RP)	77.8	68.3	51.9	5.16	2.25	2.29	SB	A	4.0	24.37	24
4126	BPT 5204 (RP)	77.1	68.6	46.4	4.81	1.73	2.78	MS	A	4.0	24.08	23

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally present; A: Absent;

ADVANCED VARIETY TRIAL 1-NEAR ISOGENIC LINES (BLAST) – AVT 1-NIL (BL)

Locations:	**16**	**Entries: 14**
Recurrent Parents:	**Samba Mahsuri, Improved Samba Mahsuri and Swarna**	**Tables: 10.7**
Donor Parents:	**DH MASQ 164-2B, C 101 LAC, Tetep and C 101 A 51**	

AVT 1-NIL (Blast Trial) consisted of fourteen entries of which seven were NILs. Two NILs were from the cross of Samba Mahsuri/DH MASQ 164-2B, one NIL (Repeat) from Samba Mahsuri/C 101 LAC, three NILs from Improved Samba Mahsuri/Tetep and one NIL from Swarna/C 101 A 51. The trial was sent to seventeen locations of which five locations *viz*., Modipuram, Chinsurah, Masodha, Bapatla and Coimbatore have not sent the data. CV of the experiments ranged from 4.54 % at IARI to 14.53 % at Ludhiana. Experimental mean varied from 1881 kg/ha at Nawagam to 6367 kg/ha at Varanasi. Overall mean yield of the entries varied from 2855 kg/ha (C 101 LAC) to 5382 kg/ha (Swarna and Samba Mahsuri). Days to 50% flowering varied from 76 days (C 101 LAC) to 110 days (Swarna). Plant height ranged from 86 cm (IET 25483, IET 24232 and Swarna) to 136 cm (Tetep). Panicles per square meter varied from 246 (C 101 LAC) to 324 (Samba Mahsuri). One NIL is in the second year of testing and remaining six NILs are in the first year of testing. Data from three locations *viz*., Nawagam, Maruteru and Mandya was not considered in the evaluation of entries as experimental mean yield at these locations was lower than 3 tons/ha.

Criteria for NIL promotion:

1. Disease reaction- Resistance reaction of the NIL should be better than the recurrent parent under high disease pressure.
2. Yield advantage- NIL should have yield superiority over the recurrent parent or on par yield as that of recurrent parent on overall basis or in the zone in which recurrent parent was released or being cultivated.
3. Trait similarity- Days to 50% flowering, plant height, grain type and quality parameters of the NIL should be similar to the recurrent parent.

Performance of NILs in the background of Samba Mahsuri

IET 25480 (Pusa 1850-27)

IET 25480 (Pusa 1850-27) derived from the cross of BPT 5204/DHMASQ 164-2b//BT 5204*3 with three genes *Pi 54, Pi 1* and Pi^{ta} for blast resistance was found to be resistant/moderately resistant to blast at eleven out of sixteen locations. It was inferior to recurrent parent by -12% on overall mean yield basis. However, it showed on par yield with yield advantage of 0.85% over the recurrent parent in **Eastern** zone. It possessed similar days to 50% flowering and quality parameters as that of recurrent parent Samba Mahsuri. Considering its blast resistance, yield and other phenotypic similarities to recurrent parent, it is promoted for second year of testing.

IET 25481 (Pusa 1850-33)

IET 25481 (Pusa 1850-33) developed from the cross of BPT 5204/DHMASQ 164-2b//BT 5204*3 with three genes *Pi 54, Pi 1* and Pi^{ta} for blast resistance was found to be resistant/moderately resistant to blast at nine out of sixteen locations. It was inferior to recurrent parent by -16% on overall mean yield basis. It recorded yield inferiority in the range of -6 to -40% in different zones and hence, it is dropped.

Yield performance of the entries in AVT1-NIL (Blast), Kharif 2015

S.No	IET No./ Designation / Cross combination	Overall		Zone II		Zone III		Zone V		Zone VII	
		Yield	% over RP	Yield	% over RP	Yield	% over RP	Yield	% over RP	Yield	% over RP
Samba Mahsuri as Recurrent Parent											
1	IET 25480 (Pusa1850-27) BPT5204/ DHMASQ164-2b//BPT 5204*3	4745	-11.84	3849	-9.73	6176	0.85	4933	-5.43	5276	-38.16
2	IET 25481 (Pusa 1850-33) BPT5204/DHMSQ164-2b//BPT5204*3	4534	-15.75	4001	-6.16	5336	-12.86	4431	-15.04	5162	-39.49
3	IET 24164 (Repeat) (RP5862-Patho-1-2-15) BPT5204*2/C101LAC	4742	-11.89	4526	6.14	5488	-10.38	4224	-19.01	4637	-45.65
	Samba Mahsuri (RP)	5382		4264		6124		5216		8532	
Improved Samba Mahsuri as Recurrent Parent											
1	IET 25482 (RP 5864 Bio 2-5-5-3) ISM*3/Tetep	3880	-22.2	3838	-22.29	4432	-15.07	2943	-31.12	_	
2	IET 25483 (RP 5961 Bio patho 2-18-5) ISM*2/Tetep	4685	-6.1	4395	-11.01	4694	-10.05	4042	-5.40	6468	19.07
3	IET 24232 (RP 5864 Bio patho-2-5-9) (Repeat) ISM/Tetep	4113	-17.53	3950	-20.02	4762	-8.75	3466	-18.88	-	
	Improved Samba Mahsuri	4987		4939		5219		4273		5432	
Swarna as Recurrent Parent											
1	IET 25484 (RP 5960 patho 7-5-9) Swarna*2/C101 A51	5141	-4.48	4034	-1.41	7287	-5.84	4690	-15.97	5726	1.66
2	Swarna (RP)	5382		4092		7739		5582		5632	

IET 24164 (RP 5862-Patho-1-2-15)

IET 24164 (RP 5862-Patho-1-2-15) developed from the cross of BPT 5204*2/C 101 LAC with one gene *Pi 1* for blast resistance is a repeat entry and is in the second year of testing. It was found to be resistant/moderately resistant to blast at seven out of sixteen locations. It was inferior to recurrent parent by -12% on overall mean yield basis. Moreover, it has shown yield inferiority in the range of -10 to -46 % over the recurrent parent in the zones where recurrent parent was released or being cultivated. Hence, it is discontinued from further testing.

Performance of NILs in the background of Improved Samba Mahsuri

IET 25482 (RP 5864 Bio 2-5-5-3)

IET 25482 (RP 5864 Bio 2-5-5-3) developed from the cross of Improved Samba Mahsuri*3/Tetep with two genes (*Xa 21* and *Xa 13*) for bacterial leaf blight resistance and one gene

(*Pi54*) for blast resistance showed resistance/moderate resistance to both bacterial leaf blight (eight out of sixteen locations) and blast (ten out of seventeen locations). It was inferior to recurrent parent by -22 % on overall yield basis. It recorded yield inferiority in the range of -15 to -31 % in different zones and hence, it is dropped.

IET 25483 (RP 5961 Bio Patho 2-18-5)

IET 25483 (RP 5961 Bio Patho 2-18-5) developed from the cross of Improved Samba Mahsuri*2/Tetep with one gene (*Xa 21*) for bacterial leaf blight resistance and one gene (*Pikh*) for blast resistance showed moderate resistance to both bacterial leaf blight (six out of sixteen locations) and blast (eleven out of seventeen locations). It was found to be inferior to recurrent parent by -6.1% on overall yield basis, however it showed 19.07% yield advantage over the recurrent parent in **Southern** zone where its recurrent parent was released. It possessed days to 50% flowering, plant height and quality traits similar to recurrent parent. Hence, it is considered for promotion for testing in second year testing.

IET 24232 (RP 5864 Bio-Patho-2-5-9)

IET 24232 (RP 5864 Bio-Patho-2-5-9) developed from the cross of Improved Samba Mahsuri/Tetep with one gene (*Xa 21*) for bacterial leaf blight resistance and one gene (*Pikh*) for blast resistance is a repeat entry. It showed resistance/moderate resistance to both bacterial leaf blight (seven out of sixteen locations) and blast (ten out of seventeen locations). It was found to be inferior to recurrent parent by -6.1% on overall yield basis and recorded yield inferiority in the range of -9 to -20 % in different zones. Hence, it is dropped.

Performance of NILs in the background of Swarna

IET 25484 (RP 5960 Patho 7-5-9)

IET 25484 (RP 5960 Patho 7-5-9) derived from the cross of Swarna*2/C 101 A 51 with *Pi-2* gene for resistance to blast was found to be resistant/moderately resistant to blast at nine out of sixteen locations. It recorded yield inferiority of -4.48% over the recurrent parent on overall mean yield basis. However, it recorded yield advantage of 1.66% over the recurrent parent in **Southern** zone. It is similar to recurrent parent in terms of days to 50% flowering, plant height and quality characteristics. Hence, it is considered for further testing in second year

Based on disease reaction better than recurrent parent, yield superiority or on par performance as that of recurrent parent on overall basis or zones in which RP was released earlier or being cultivated and trait similarity with recurrent parent, three entries are promoted to AVT 2-NIL (BLAST) as follows:

IET 25480 (Pusa 1850-27)-Eastern zone,
IET 25483 (RP 5961 Bio Patho 2-18-5)-Southern zone and
IET 25484 (RP 5960 Patho 7-5-9)-Southern zone

Trait comparisons of NILs with recurrent parent in AVT 1-NIL (Blast), Kharif 2015

S. No	IET No./Designation/ Cross combination	FD	PH	HRR	ASV	AC	GC	GT	L/B
1	IET 25480 (Pusa1850-27) BPT5204/DHMASQ164- 2b//BPT 5204*3	106	90	69.8	5.0	21.47	22	SS	3.12
2	IET 25481 (Pusa 1850-33) BPT5204/DHMSQ164-2b//BPT5204*3	108	92	68.1	4.0	22.93	22	SS	3.17
3	IET 24164 (Repeat) (RP5862-Patho-1-2-15) BPT 5204*2/C101LAC	99	87	67.0	4.0	22.70	22	MS	2.56
	Samba Mahsuri (RP)	104	98	69.2	4.0	23.67	22	MS	2.59
1	IET 25482 (RP 5864 Bio 2-5-5-3) ISM*3/Tetep	86	89	41	4.0	24.02	22	MS	2.41
2	IET 25483 (RP 5961 Bio patho 2-18-5) ISM*2/Tetep	89	86	49.8	4.0	21.06	23	MS	2.35
3	IET 24232 (RP 5864 Bio patho-2-5-9) (Repeat) ISM/Tetep	90	86	32	4.0	24.64	22	MS	2.49
	Improved Samba Mahsuri	102	90	62.4	4.0	22.64	22	MS	2.84
1	IET 25484 (RP 5960 patho 7-5-9) Swarna*2/C101 A51	106	91	53	4.0	26.92	63	SB	2.42
	Swarna (RP)	110	86	63.2	4.0	23.76	30	SB	2.29

Blast disease score (0-9 scale) Kharif, 2015 (Samba Mahsuri as Recurrent Parent)

IET No	ALM	GGT	HZB	IIRR	JDP	KJT	LNV	MLN	MND	NDL	NLR	NVS	PNP	UMM	USG	WBL	SI	GDL@	GNV@	JGL@	KRK@	MGD@	PTB@	REW@	TRR@
IET 25480	3	5	0	3	6	8	4	3	4	1	7	3	8	0	6	4	**4.1**	3	3	-	3	0	2	5	0
DHMASQ 164-2B (DP)	3	7	0	2	7	8	5	1	5	3	5	3	9	1	7	4	**4.4**	3	3	-	0	4	2	3	0
IET 25481	5	7	6	3	9	9	8	7	6	1	3	1	8	1	8	4	**5.4**	3	3	-	0	3	3	3	0
Samba Mahsuri (RP)	5	7	7	6	9	9	9	8	6	7	5	5	9	7	8	5	**7.0**	3	3	-	0	4	4	2	3
IET 24164	5	7	4	2	9	9	9	5	6	1	6	1	9	6	6	5	**5.6**	7	3	-	2	7	4	3	0
C101 LAC (DP)	3	7	5	1	8	9	5	4	6	3	7	3	9	1	6	5	**5.1**	3	2	-	0	2	3	4	1

Blast disease score (0-9 scale) Kharif, 2015 (Improved Samba Mahsuri as Recurrent Parent)

IET No	ALM	GDL	GGT	HZB	IIRR	JDP	JGL	KJT	LNV	MLN	MND	NLR	PNP	REW	UMM	USG	WBL	SI	GNV@	KRK@	MGD@	NDL@	NVS@	PTB@	TRR@
IET 25482	5	3	7	6	1	9	5	8	7	3	6	5	9	2	4	5	5	**5.3**	2	2	3	1	2	2	0
IET 25483	5	3	7	6	1	9	-	8	5	4	6	4	9	3	5	5	4	**5.3**	2	0	2	1	3	2	0
Improved Samba Mahsuri (RP)	5	7	7	6	6	8	7	9	9	7	6	6	9	5	6	9	5	**6.9**	3	0	4	1	3	4	0
IET 24232	5	3	7	-	1	8	-	9	5	4	6	7	9	4	5	6	5	**5.6**	1	2	1	1	5	4	0
Tetep (DP)	5	3	7	-	2	7	-	8	3	1	6	5	8	2	1	8	5	**4.7**	2	0	3	1	3	2	1

Blast disease score (0-9 scale) Kharif, 2015 (Swarna as Recurrent Parent)

IET No	ALM	GDL	GGT	HZB	IIRR	JDP	KJT	LNV	MLN	MND	NDL	PNP	UMM	USG	WBL	SI	GNV@	JGL@	KRK@	MGD@	NLR@	NVS@	PTB@	REW@	TRR@
IET 25484	5	3	6	0	1	9	8	7	1	5	3	9	1	7	5	**4.7**	2	-	2	6	5	1	2	3	0
Swarna (RP)	5	9	5	8	6	9	7	9	8	5	7	9	6	6	5	**6.9**	2	-	0	2	4	3	4	4	0
C 101 A 51 (DP)	5	3	5	6	3	8	8	9	7	5	3	9	5	6	5	**5.8**	2	-	5	1	8	5	5	2	0

Bacterial Leaf Blight score (0-9 scale), Kharif, 2015 (Improved Samba Mahsuri as Recurret Parent)

IET No	CBT	CHP	CTK	GER	GNV	IIRR	LDN	MSD	MTU	NLR	NVS	NWG	PNT	POB	PTB	RPR	SI	CHN@	CHT@	JGL@	KJT@	KRK@	KUL@	MNC@	PTN@	TTB@	USG@
Samba Mahsuri	5	7	7	5	7	7	7	5	7	7	5	7	9	9	7	7	**6.8**	3	3	1	1	3	-	1	0	3	-
25482	7	7	7	7	5	5	3	5	7	5	5	3	7	7	5	7	**5.8**	3	5	-	3	3	7	3	3	7	3
25483	7	9	5	7	9	7	3	5	7	7	7	3	1	7	7	3	**5.9**	1	3	-	3	3	3	0	9	5	6
Improved Samba Mahsuri (RP)	7	7	7	7	5	5	3	3	7	7	5	1	3	3	5	5	**5.0**	3	3	-	1	3	-	1	9	5	-
24232	7	9	3	7	9	7	3	5	9	7	7	3	3	5	7	3	**5.9**	3	3	-	1	5	5	1	6	3	-
Tetep (DP)	3	7	7	7	5	7	7	3	7	5	7	3	9	7	7	9	**6.3**	1	1	1	5	1	7	1	5	3	-

Table 10.7: Composition of entries in Advance Variety Trial 2-Near Isogenic Lines-Blast (AVT 1-NIL- Blast), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing:				
3501	25480	Pusa 1850-27	BPT 5204/DHMASQ164-2b// BPT5204*3	SS
3502	**DHMASQ 164-2B (DP)**			LS
3503	25481	Pusa 1850-33	BPT 5204/DHMASQ164-2b// BPT5204*3	SS
3504	**Samba Mahsuri (RP)**			
2nd year of testing:				
3505	24164 (Repeat)	RP 5862- Patho-1-2-15	BPT 5204*2/C101LAC	MS
3506	**C101 LAC (DP)**			SB
1st year of testing:				
3507	25482	RP 5864 Bio 2-5-5-3	Improved Samba Mahsuri*3/ Tetep	SB
3508	25483	RP 5961 Bio Patho 2-18-5	Improved Samba Mahsuri*2/ Tetep	SB
3509	**Improved Samba Mahsuri (RP)**			
3510	24232 (Repeat)	RP 5864 Bio-Patho-2-5-9	Improved Samba Mahsuri/Tetep	SB
3511	**Tetep (DP)**			SB
3512	25484	RP 5960 Patho 7-5-9	Swarna *2/C 101A51	SB
3513	**Swarna (RP)**			
3514	**C 101 A 51 (DP)**			SB

Table No. 10.8: Grain Yield (kg/ha) of entries in AVT 1-NIL (BLAST) Kharif 2015

Entry No.	IET No.	II								Zone II (4)		III				Zone III (2)		V	
		ND		PUN		UT		HAR				OD		U.P.				CG	
		IAR		LDN		PNT		KUL		Mean		CTK		VRN		Mean		RPR	
3501	25480	4610	1	2640		4097	9	4050	4	3849		6219	2	6133	8	6176	3	4933	3
3502	DHMASQ 164-2B (DP)	740		3391		5533	2	2200		2966		1763		5267		3515		4928	4
3503	25481	4340	2	4017		3545		4100	3	4001	7	4206	5	6467	7	5336	6	4431	6
3504	Samba Mahsuri (RP)	4307	3	4782	7	3219		4750	2	4264	4	5381	4	6867	4	6124	4	5216	2
3505	24164 (Repeat)	3797	6	5570	3	4686	6	4050	5	4526	2	3977	6	7000	3	5488	5	4224	8
3506	C101 LAC (DP)	773		3516		3836		2150		2569		1872		5200		3536		2637	
3507	25482	2910	8	5233	6	4410	7	2800		3838		3264		5600		4432		2943	
3508	25483	2903	9	5371	5	5707	1	3600	7	4395	3	3721	8	5667		4694		4042	9
3509	Improved Samba Mahsuri (RP)	3963	4	5705	1	5137	4	4950	1	4939	1	3838	7	6600	5	5219	7	4273	7
3510	24232 (Repeat)	2733		4770	8	5198	3	3100	9	3950	8	3657	9	5867	9	4762	9	3466	
3511	Tetep (DP)	1233		3652		2689		2100		2418		2249		5400		3825		3682	
3512	25484	3533	7	5576	2	3727		3300	8	4034	6	6174	3	8400	1	7287	2	4690	5
3513	Swarna (RP)	3843	5	4549	9	4276	8	3700	6	4092	5	7411	1	8067	2	7739	1	5582	1
3514	C 101 A 51 (DP)	2587		5393	4	4945	5	2750		3919	9	3407		6600	6	5004	8	3945	
	Exp Mean	**3020**		**4583**		**4357**		**3400**		**3840**		**4081**		**6367**		**5224**		**4214**	
	C.D. 5%	230		1118		719		479		389		851		1085		590		792	
	C.V.%	4.54		14.53		9.84		8.39		12.53		12.43		10.16		9.76		11.20	
	Sowing Date	28-Aug		02-Jul		03-Jul		30-Jun				27-Jun		02-Jul				06-Jul	
	Planting Date	16-Sep		23-Jul		22-Jul		29-Jul				07-Aug		24-Jul				27-Jul	

Table No. 10. 8 : Grain Yield (kg/ha) of entries in AVT 1-NIL (BLAST) Kharif 2015

Entry No.	IET No.	VI		VII						Zone VII (1)		Overall Mean (8)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		GU		A.P.		TEL		KA		Mean						
		NWG	@	MTU	@	WGL		MND	@							
3501	25480	2030	6	2773	4	5276	6	2083		5276	6	4745	5	106	90	287
3502	DHMASQ 164-2B (DP)	694		1910				2973	6			3403		82	120	267
3503	25481	2030	7	2374	7	5162	7	2056		5162	7	4534	8	108	92	316
3504	Samba Mahsuri (RP)	2564	4	2129		8532	1	3438	1	8532	1	5382	2	104	98	324
3505	24164 (Repeat)	962		2023		4637	8	2900	7	4637	8	4742	6	99	87	280
3506	C101 LAC (DP)	1175		926				2425				2855		76	122	246
3507	25482	1229	9	2339	8			2619				3880		86	89	283
3508	25483	374		2902	3	6468	2	2877	8	6468	2	4685	7	89	86	295
3509	Improved Samba Mahsuri (RP)	4167	1	3596	2	5432	5	2700	9	5432	5	4987	4	102	90	306
3510	24232 (Repeat)	321		2477	5			2431				4113		90	86	302
3511	Tetep (DP)	1496	8	2429	6			3283	4			3001		91	136	296
3512	25484	3739	2	2192		5726	3	3417	2	5726	3	5141	3	106	91	304
3513	Swarna (RP)	3098	3	3755	1	5632	4	3275	5	5632	4	5382	1	110	86	306
3514	C 101 A 51 (DP)	2457	5	2301	9			3319	3			4232	9	79	88	310
	Exp Mean	**1881**		**2438**		**5858**		**2843**		**5858**		**4407**		**95**	**97**	**295**
	C.D. 5%	382		445		940		677				286		1	5	14
	C.V.%	12.09		10.87		9.16		14.20				11.42		1.34	0.00	9.66
	Sowing Date	07-Jul		30-Jun		22-Jul		03-Aug								
	Planting Date	04-Aug		06-Aug		27-Aug		08-Sep								

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 10.9 : Days to 50% Flowering of entries in AVT 1-NIL (BLAST) Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III		Zone III Mean (2)	V	VI	VII			Zone VII Mean (3)	Overall Mean (11)
		ND	PUN	UT	HAR		OD	U.P.		CG	GU	A.P.	TEL	KA		
		IAR	LDN	PNT	KUL		CTK	VRN		RPR	NWG	MTU	WGL	MND		
3501	25480	99	118	102	114	108	110	110	110	107	103	106	82	110	99	106
3502	DHMASQ 164-2B (DP)	78	79	102	83	85	79	81	80	84	74	81		82	82	82
3503	25481	105	117	100	114	109	110	111	111	107	114	108	88	114	103	108
3504	Samba Mahsuri (RP)	110	118	84	105	104	112	102	107	102	110	108	91	104	101	104
3505	24164 (Repeat)	93	103	100	98	99	91	100	96	99	103	103	96	101	100	99
3506	C101 LAC (DP)	73	77	78	72	75	77	76	76	77	68	72		88	80	76
3507	25482	74	94	85	86	85	91	86	89	84	83	87		94	91	86
3508	25483	76	96	85	92	87	91	89	90	88	85	92	95	91	92	89
3509	Improved Samba Mahsuri (RP)	110	103	100	106	105	103	98	101	100	99	105	97	101	101	102
3510	24232 (Repeat)	76	96	85	91	87	91	89	90	89	86	93		109	101	90
3511	Tetep (DP)	92	93	85	89	90	92	79	86	88	85	88		116	102	91
3512	25484	98	106	101	112	104	109	102	105	107	103	102	122	103	109	106
3513	Swarna (RP)	112	123	101	113	112	112	78	95	107	108	113	126	114	118	110
3514	C 101 A 51 (DP)	75	79	74	78	77	83	71	77	81	79	79		88	84	79
	Exp Mean	**91**	**100**	**91**	**97**	**95**	**96**	**91**	**94**	**94**	**93**	**95**	**99**	**101**	**99**	**95**
	C.D. 5%	2	2	4	0	1	1	0		1	0	2	2	4	2	1
	C.V.%	1.34	0.93	2.41	0.20	1.48	0.60	0.30		0.66	0.00	1.12	1.20	2.32	1.63	1.34

Table No. 10.10 : Plant Height (cm) of entries in AVT 1-NIL (BLAST) Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III		Zone III Mean (2)	V	VI	VII			Zone VII Mean (3)	Overall Mean (11)
		ND	PUN	UT	HAR		OD	U.P.		CG	GU	A.P.	TEL	KA		
		IAR	LDN	PNT	KUL		CTK	VRN		RPR	NWG	MTU	WGL	MND		
3501	25480	93	76	91	78	85	102	88	95	98	106	108	75	78	87	90
3502	DHMASQ 164-2B (DP)	127	111	91	120	112	128	122	125	131	140	143		89	116	120
3503	25481	97	81	98	79	89	103	89	96	96	107	110	73	74	86	92
3504	Samba Mahsuri (RP)	99	85	140	86	103	102	95	98	104	108	112	72	74	86	98
3505	24164 (Repeat)	93	83	91	79	87	92	89	91	95	99	106	61	69	79	87
3506	C101 LAC (DP)	85	95	96	88	91	84	91	88	102	96	405		74	240	122
3507	25482	87	90	87	81	86	87	83	85	96	105	102		68	85	89
3508	25483	83	87	87	81	84	92	86	89	85	87	102	87	73	87	86
3509	Improved Samba Mahsuri (RP)	94	84	90	76	86	98	86	92	101	106	109	73	71	84	90
3510	24232 (Repeat)	85	85	88	71	82	95	85	90	90	87	102		70	86	86
3511	Tetep (DP)	140	147	145	127	140	129	128	129	151	152	139		105	122	136
3512	25484	95	87	91	67	85	104	97	101	92	111	113	75	71	86	91
3513	Swarna (RP)	96	74	72	75	79	93	90	92	89	105	106	76	67	83	86
3514	C 101 A 51 (DP)	82	83	93	81	85	92	92	92	91	105	92		70	81	88
	Exp Mean	**97**	**91**	**97**	**85**	**92**	**100**	**94**	**97**	**101**	**108**	**132**	**74**	**75**	**97**	**97**
	C.D. 5%					3			0						3	5

Table No. 10.11: Panicles/ M² of entries in AVT 1-NIL (BLAST) Kharif 2015

Entry No.	IET No.	II				Zone II Mean (4)	III		Zone III Mean (2)	V	VI	VII			Zone VII Mean (3)	Overall Mean (11)
		ND	PUN	UT	HAR		OD	U.P.		CG	GU	A.P.	TEL	KA		
		IAR	LDN	PNT	KUL		CTK	VRN		RPR	NWG	MTU	WGL	MND		
3501	25480	386	356	234	385	340	146	287	216	195	238	323	281	330	311	287
3502	DHMASQ 164-2B (DP)	329	275	267	298	292	105	274	190	279	163	315		363	339	267
3503	25481	446	394	333	313	371	147	405	276	197	243	401	248	350	333	316
3504	Samba Mahsuri (RP)	389	418	248	389	361	194	403	299	210	252	405	297	357	353	324
3505	24164 (Repeat)	378	319	252	386	334	143	336	239	199	147	328	248	343	306	280
3506	C101 LAC (DP)	333	288	254	252	282	154	275	214	184	178	218		320	269	246
3507	25482	347	369	271	286	318	194	321	258	193	173	339		340	339	283
3508	25483	389	365	256	378	347	223	324	274	194	107	350	281	380	337	295
3509	Improved Samba Mahsuri (RP)	315	378	301	372	342	225	336	281	207	255	365	264	350	326	306
3510	24232 (Repeat)	354	356	271	317	324	224	360	292	196	103	445		393	419	302
3511	Tetep (DP)	352	499	230	310	348	153	317	235	205	181	337		380	358	296
3512	25484	382	290	272	327	318	210	369	289	198	258	405	281	357	347	304
3513	Swarna (RP)	386	359	293	358	349	201	352	276	203	255	356	231	377	321	306
3514	C 101 A 51 (DP)	411	352	270	377	353	203	353	278	172	251	372		340	356	310
	Exp Mean	**371**	**359**	**268**	**339**	**334**	**180**	**337**	**258**	**202**	**200**	**354**	**266**	**356**	**335**	**295**
	C.D. 5%	28	95	25	10	25	16	65	32	27	30	59	36	62	30	14
	C.V.%	4.43	15.83	5.62	1.80	9.18	5.36	11.57	10.74	7.94	9.06	9.96	7.73	10.37	9.68	9.66

Table 10.12: Grain quality characteristics of entries in AVT 1- NIL (Blast), kharif 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	GT	Grain Chalk	ASV	AC	GC
3501	25480	80.5	72.1	69.8	5.54	1.77	3.12	SS	A	5.0	21.47	22
3502	DHMASQ-164-2V	79.5	70.0	62.3	6.57	2.00	3.28	LS	A	4.0	24.66	22
3503	25481	80.1	72.0	68.1	5.66	1.78	3.17	SS	A	4.0	22.93	22
3504	Samba Mahsuri	79.4	70.9	69.2	5.18	2.00	2.59	MS	A	4.0	23.67	22
3505	24164 (Rept)	77.6	69.5	67.0	5.30	2.07	2.56	MS	A	4.0	22.70	22
3506	C 101-Lac (DP)	76.7	65.9	36.9	5.04	2.51	2.00	SB	VOC	5.0	24.52	22
3507	25482	73.8	63.3	41.0	4.68	1.94	2.41	SB	VOC	4.0	24.02	22
3508	25483	76.3	67.2	49.8	4.40	1.87	2.35	SB	A	4.0	21.06	23
3509	Imp. S. Mahsuri	74.0	65.0	62.4	4.87	1.71	2.84	MS	A	4.0	22.64	22
3510	24232 (Rept)	78.4	65.6	32.0	4.81	1.93	2.49	SB	VOC	4.0	24.64	22
3511	Tetep (Dep)	77.9	64.9	58.5	5.09	2.08	2.40	SB	VOC	4.0	26.22	50
3512	25484	79.5	70.7	53.0	5.06	2.17	2.42	SB	VOC	4.0	26.92	63
3513	Swarna (RP)	76.9	67.6	63.2	4.96	2.16	2.29	SB	A	4.0	23.76	30
3514	C101 A51 (BP)	77.0	66.8	57.6	3.95	2.57	1.53	SB	VOC	4.0	22.88	22

Hull: Hulling (%) Mill: Milling (%); HRR: Head rice recovery (%); KL: Kernel length (mm); KB: Kernel breadth (mm); L/B: Length and breadth ratio; Grain Chalk: Grain chalkiness; ASV: Alkali spreading value; AC: Amylose content (%); GC: Gel consistency; LB: Long bold; SB: Short bold; LS: Long slender; MS: Medium slender VOC: Very occasionally

INITIAL VARIETY TRIAL-MEDIUM SLENDER (IVT-MS)

Locations: **33** **Entries: 49**

Checks: **NC 1: WGL-14, NC 2: BPT 5204; ZC: Improved Samba Mahsuri-Eastern & Central zones, Ketakijoha-North Eastern zone, Karjat 6- Western zone, and ADT 49-Southern zone and Local** **Tables: 11.1**

IVT-MS trial was constituted for the first time during the 50th ARGM 2015 to identify short and medium slender grain type culture to replace the existing super fine and good quality varieties. The trial consisted of 49 entries including four checks, BPT-5204 and WGL-14 as National checks, Zonal checks *viz*., Improved Samba Mahsuri for Eastern and Central zones, Ketakizoha for North eastern zone, Karjat-6 for Western zone and ADT-49 for Southern zone and local check. The trial was conducted at thirty three locations but failed at Mugad and data was not received from Sabour, Ranchi, Titabar and Jagitial.

The CV % of the experiments ranged from 3.84 at Sindewahi to 24.85 % at Pusa. Experimental mean yield varied from 2188 kg/ha at Pusa to 6630 kg/ha at Ragolu. Overall mean yield of the entries ranged from 3503 kg/ha (Zonal check) to 5576 kg/ha (IET 25495). Days to 50% flowering ranged from 96 days (IET 25500) to 126 (IET 25486). Plant height varied from 77 cm (IET 25490) to 115 cm (IET 25489). Panicles per square metre ranged from 260 (IET 25489) to 325 (IET 25514). Data from Pusa centre was not considered in the evaluation of the entries as the experimental yield was low. Of the 45 test entries, five entries *viz*., IETs 25494, 25504, 25509, 25513 and 25527 were not assessed for yield superiority as they did not qualify for short to medium slender grain type. On overall yield basis, three entries (IETs 25495, 25512, 25492) recorded yield advantage of more than 5% over the best check. In addition, fourteen entries (IETs 25485, 25488, 25489, 25493, 25505, 25508, 25515, 25517, 25519, 25520, 25521, 25523, 25487 and 25501 showed yield superiority of more than 5% over the best check in different zones. The performance of entries showed yield superiority over best check on overall mean are discussed below:

IET 25495 (MTU 1190) derived from the cross of MTU 1081/Swarna Sub 1 with a mean yield of 5576 kg/ha and 112 days to 50% flowering recorded yield advantage of 19.27, 29.46, 59.18 and 17.34 % over the NC 1, NC 2, ZC and LC, respectively. It ranked first in six states *viz*., Odisha with 24%, Chattisgarh with 50%, Maharashtra with 25%, Andhra Pradesh with 20% and Tamil Nadu with 27% yield gain over the best check. It ranked second in Telangana with 17% and sixth in Karnataka with 5% yield advantage over the best check. It ranked first in Eastern, Central and Southern zones with 7, 37 and 28 % yield superiority over the best check, respectively.

IET 25512 (RGL 7011) developed from the cross of RGL 11414/Ganjam Local with a mean yield of 5027 kg/ha and 120 days to 50% flowering recorded yield advantage of 7.53, 16.72, 43.51 and 5.79 % over the NC 1, NC 2, ZC and LC, respectively. It ranked first in Karnataka with 35 %, second in Andhra Pradesh with 12% and eighth in Tamil Nadu with 9% yield gain over the best check. It showed 9% yield superiority over the best check in Maharashtra. It ranked second in Southern zone with 26% yield gain over the best check. In Central zone, it recorded 8% yield superiority over the best check.

Overall performance of the entries in IVT-MS, Kharif 2015

Rank	IET No/ Designation/ Cross Combination	GY/ FD/ GT	Yield adv (%) over NC/ZC/LC	Zone	
				Rank/Yield	% BC
1	IET 25495 (MTU-1190) MTU-1081/Swarna sub 1	5576 112	29.46 19.27 59.18 ***17.34***	Z III-1 Z V -1 Z VII-1	7 37 28
2	IET 25512 (RGL-7011) RGL-11414/Ganjam Local	5027 120	16.72 7.53 43.51 ***5.79***	Z V --- Z VII-2	8 26
3	IET 25492 (RGL 7012) RGL 2537/RGL 3218	4975 119 MS	15.51 6.42 42.02 ***5.0***	Z VII-3	23
	National Check (BPT 5204) (NC 2)	4307			
	National Check (WGL-14) (NC 1)	4675			
	Zonal Check (RC)	3503			
	Local Check (LC)	***4752***			

IET 25492 (RGL 7012) derived from the cross between RGL 2537 and RGL 3218 with a mean yield of 4975 kg/ha and 119 days to 50% flowering recorded yield advantage of 15.51, 6.42, 42.02 and 5 % over the NC 1, NC 2, ZC and LC, respectively. It ranked first in Telangana with 19%, fifth in Maharashtra with 16% and sixth in Tamil Nadu with 10% yield advantage over the best check. It ranked third in Andhra Pradesh and Karnataka with 7% and 17% yield advantage over the best check, respectively. It ranked third in Souhtern zone with 23% yield advantage over the best check (Tables. 11.2, 11.3, 11.4, 11.5).

On the basis of overall/zonal mean yield of more than 5% over the best check and quality criteria of short to medium slender grain type, a total of seventeen entries were promoted to AVT1-MS.

<u>On overall basis</u>: Three entries

IET 25495 (MTU 1190), IET 25512 (RGL 7011) and IET 25492 (RGL 7012)

<u>North and Central zone</u>: One entry

IET 25508 (NP-9359-9)

<u>Central zone</u>: Nine entries

IET 25485 (GNV-14-25), IET 25488 (GNV-14-96-1), IET 25489 (CR 3511-3-2-2-5-1-1), IET 25505 (CB MAS 14-065), IET 25517 (NLR 3350), IET 25519 (WGL 810), IET 25520 (RP 5950-24-6-2-1-1-B), IET 25521 (AD 13121), and IET 25523 (CR 3505-7-1-1-1-2-1)

<u>Central and Southern zones</u>: Two entries

IET 25515 (BPT 2644), IET 25493 (RTN 28-1-5-3-2)

<u>Southern zone</u>: Two entries

IET 25487 (CB 09 123) and IET 25501 (NLR 3337)

Table No. 11.1: Composition of entries in Initial Variety Trial- Medium Slender (IVT-MS), Kharif 2015

Entry No.	IET No.	Designation	Cross Combination	Grain type
1st year of testing:				
3701	25485	GNV-14-25	BPT 5204/IET 19228	MS
3702	25486	BPT 2595	Mutant of BPT 2270(24379)	MS
3703	25487	CB 09 123	BPT 5204/CO 50	MS
3704	25488	GNV-14-96-1	BPT 5204/Nerica line	MS
3705	25489	CR 3511-3-2-2-5-1-1	IR 36/ Surendra	MS
3706	25490	PUSA 1701-10-5-8	PUSA 44/ISM//PUSA 44	SS
3707	25491	NP -3003	NP 91/NP 85	MS
3708	25492	RGL 7012	RGL 2537/RGL 3218	MS
3709	25493	RTN 28-1-5-3-2	IR-64/KJT-182	MS
3710	25494	WGL-821	NLR 34449/Shatabdi	MS
3711	25495	MTU 1190 (MTU 2142-9-2-1)	MTU 1081/Swarna Sub1	MS
3712	25496	RP 5947-123-6-2-1-1-B	BPT 5204/IC 115366	MS
3713	**WGL-14 (NC-1)**			
3714	25497	NP -9917-54	IET 22238/IET 21519	MS
3715	25498	BPT 2673	BPT 5204/RP 4677-16-6-1-12-1-2	MS
3716	25499	AD 12079	ASD19/WGL-32100	MS
3717	25500	NVSR-6127	GR-103/GR-11	MS
3718	25501	NLR 3337	BPT5204/NLR145//NLR33654/BPT5204	MS
3719	25502	RP 4926-352-99-76-23-18-1	Swarna/RAU 3041	MS
3720	**Improved Samba Mahsuri (Eastern & Central), Ketekijoha- (North Eastern), Karjat -6 (Western), ADT 49 (Southern)-- Zonal Check**			
3721	25503	BPT 2743	MTU7029/NLR34449	MS
3722	25504	AD 12074	ADT (R) 47 x PR106-23-1	MS
3723	25505	CB MAS 14 065	Improved White Ponni /APO	SS
3724	25506	PUSA 1850-16	BPT 5204/DHMASQ 164-2B/// BPT 5204*3	MS
3725	25507	NLR 3313	NLR2017/NLR34449	MS
3726	25508	NP-9359-9	PRN-5031/PRN-9361	MS
3727	25509	UBKVR-59	SATABDI/BR 28	MS
3728	25510	RP 5949-122-2-5-1-1	BPT 5204*3/O.rufipogon	MS
3729	25511	R 1130-80-1-52-1-R-1	Mahsuri / R296-260	MS
3730	25512	RGL 7011	RGL 11414/Ganjam Local	MS
3731	25513	AD 12182	Improve White Ponni/Kalajoha	MS
3732	25514	BPT 2644	BPT2270/NLR145	MS
3733	25515	CB 12 186	CO 43/CB 05 501	MS
3734	25516	PUSA 1850-20-11-22	BPT5204/DHMASQ164-2B/// BPT 5204*3	MS
3735	25517	NLR 3350	NLR34449/BPT5204	MS
3736	25518	NP 5682-2	IET 18299/ IET 19810	MS
3737	25519	WGL-810	NLR 34449/BPT5204	MS
3738	**BPT 5204 (NC 2)**			
3739	25520	RP 5950-24-6-2-1-1-B	Sona/Mandya Vijaya// B95-1	MS
3740	25521	AD 13121	CR 1009 / ADT 49	MS
3741	25522	BPT 2675	MTU7029/Deepthi//MTU7029	MS
3742	25523	CR 3505-7-1-1-1-2-1	IR 36/Vijetha	MS
3743	25524	RTN 14-1-1-1-1	HMT Sona/IET-7575	MS
3744	25525	R 1502-HR-Heera sel.1	Selection from farmers variety Heera.	SS
3745	25526	CR 3861-37-6-3	Samba Mahsuri X Phalguna	MS
3746	25527	WGL-401	BPT 5204/Bhadrakali	MS
3747	25528	RP 5951-121-15-6-1-1-B	BPT 5204//Sona/Mahsuri	MS
3748	**Local Check**			
3749	25529	RTN 65-1-2-2-2	IR-64/Paras Sona	MS

Table No. 11.2: Grain Yield (kg/ha) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	II		III													
		U.P.		OD		OD		OD (2)		BI		BI		BI		BI (2)	
		KNP		CTK		BBN		Mean		@PSA		PTN-ICAR		PTN		Mean	
3701	25485	3632		4188		3401		3794		1042		5438		3350		4394	
3702	25486	708		4063		4252		4157		1667		2652		3100		2876	
3703	25487	5636	7	5073	9	3741		4407		1563		7357		3700		5529	9
3704	25488	4188		4063		2381		3222		1771		7786	7	3100		5443	
3705	25489	3108		4896		3231		4064		2396		7866	6	3100		5483	
3706	25490	1996		3385		2551		2968		1250		5848		3100		4474	
3707	25491	4637		5000		3571		4286		2396		6464		4100	8	5282	
3708	25492	4466		2708		5442	3*	4075		2604	9	5857		4050		4954	
3709	25493	3913				4592	7	4592		2083		6759		3900		5329	
3710	25494	6833	2* ...16%	4635		4422		4529		4063	1*	7777	8	3750		5763	6
3711	25495	2538		6302	1	5612	2*	5957	1* 24%	2500		6929		5350	1	6139	4
3712	25496	1967		4063		3231		3647		2188		4509		4500	3	4504	
3713	WGL-14 (NC-1)	2250		4875		4762	5	4818	8	2396		5804		4600	2	5202	
3714	25497	1733		4719		3912		4315		1667		5580		3600		4590	
3715	25498	2849		4573		3741		4157		1667		4777		3850		4313	
3716	25499	3029		4583		3741		4162		1354		6402		4350	4	5376	
3717	25500	3826		4375		3571		3973		1875		6277		3100		4688	
3718	25501	1888		4948		4762	6	4855	7 1%	2708	7	5955		3600		4778	
3719	25502	2620		4927		4422		4674	9	1042		5196		3350		4273	
3720	Zonal Check	2670		5385	4	3401		4393		1667		5875		3100		4488	
3721	25503	1860		3896		3231		3564		1458		4366		3100		3733	
3722	25504	3842				4592	8	4592		2604		4098		3350		3724	
3723	25505	1692		6250	2	4252		5251	4 9%	2083		6196		3100		4648	
3724	25506	2671		3802		3912		3857		2604		5723		3100		4412	
3725	25507	2325		5990	3	4592	9	5291	3 10%	2396		6759		3100		4929	
3726	25508	6673	3* ...14%	4427		3061		3744		1250		7688		3100		5394	
3727	25509	5667	6	3083		2381		2732		1042		4080		3350		3715	
3728	25510	5188	9	3490		4082		3786		1771		6491		3350		4921	
3729	25511	2167		3958		3231		3595		2500		4554		3100		3827	
3730	25512	1613		4073		5952	1*	5013	5 4%	2500				4350	5	4350	
3731	25513	2475		4323		3912		4117		2083		5018		4250	7	4634	
3732	25514	1083		5365	5	4422		4893	6 2%	1875		5554		4350	6	4952	
3733	25515	2181		4583		4422		4503		3125	5	6643		4100	9	5371	
3734	25516	2424		4635		4252		4444		1979		6482		3350		4916	
3735	25517	4250		4219		4252		4235		3750	2*	9732	1	3600		6666	1 9%
3736	25518	4334		3375		3571		3473		1354		2643		3350		2996	
3737	25519	2119		5000		3231		4116		3542	3	8375	3	4050		6213	2 1%
3738	BPT 5204 (NC 2)	1968		4323		3401		3862		2604		8688	2	3600		6144	3
3739	25520	2801		4531		3741		4136		2396		8241	5	3500		5871	5
3740	25521	5000		4188		4592		4390		2188		7554		3850		5702	7
3741	25522	1058		3125		4252		3688		2708	8	7000		3200		5100	
3742	25523	5792	5	4948		4252		4600		3542	4	5563		3350		4456	
3743	25524	1400		3073		2721		2897		1875		5589		3300		4445	
3744	25525	6930	1* ...18%	4479		2721		3600		2500		6313		3100		4706	
3745	25526	5624	8	5156	7	2891		4024		2396		8268	4	3100		5684	8
3746	25527	2968		5313	6	5272	4	5292	2 10%	2917	6	5929		3600		4764	
3747	25528	4209		4865		3571		4218		2188		7759	9	3250		5504	
3748	Local Check	5875	4	5083	8	2891		3987		2292		7036		3100		5068	
3749	25529	2750		4896		3231		4064		1771		5750		3100		4425	
	Exp Mean	**3335**		**4494**		**3870**		**4175**		**2188**		**6233**		**3566**		**4886**	
	C.D. 5%	571		1348		661		752		1093		1875		868		961	
	C.V.%	8.52		14.90		8.49		12.83		24.85		14.96		12.10		14.01	
	Sowing Date	02-Jul		03-Jun		13-Jul				29-Jun		10-Jul		04-Jul			
	Planting Date	01-Aug		05-Jul		14-Aug				12-Aug		04-Aug		17-Aug			
	Local ©	Sambha Mahsuri		Pooja		Manaswini				Rajendra Sweta		Rajendra Bhagwati		Rajendra Sweta			

Table No. 11.2 Contd.: Grain Yield (kg/ha) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	W.B		U.P.		U.P.		U.P. (2)		Zonal III (7) Mean		V						Zonal V (3) Mean	
		CHN		MSD		VRN		Mean				CG		MH		MH			
												RPR		SND		SKL			
3701	25485	4025		4955	5 *	7540		6247		4699		3969	...1%	5078		4595		4547	* 10%
3702	25486	5325	4							3878		1472		2628		2230		2110	
3703	25487	4950		4540		6052		5296		5059		4353	8 ...11%	4084		3514		3983	
3704	25488	4875		4885	7 *	7937	5	6411		5004		4003	...2%	5753	6 *	5068	6	4941	7 * 19%
3705	25489	5175		4444		6647		5545		5051		3714		5611	8 *	4189		4505	* 9%
3706	25490	5400	3			6944		6944	8	4538		3972	...2%	3445		4324		3914	
3707	25491	4375		6055	1 *	6647		6351		5173		3942	...1%	3977		4865	9	4261	3%
3708	25492	4375								4487		2884		5256	*	4527		4222	2%
3709	25493	4025		3325		7044		5184		4941		4213	...8%	5646	7 *	4662		4840	* 17%
3710	25494	4925		5179	4 *	8036	3	6607		5532	2 5%	4162	...6%	6143	2 *	5743	2 *	5349	3 * 29%
3711	25495	3050		4668	8 *	7639		6153		5650	1 7%	5861	1 * ...50%	6499	1 *	4662		5674	1 * 37%
3712	25496	4370		4284		7837		6061		4685		3569		4403		2838		3603	
3713	WGL-14 (NC-1)	5900	1	3370		7143		5256		5208		3911		4048		4459		4139	
3714	25497	5100				7937	6	7937	2 * 11%	5141		4336	9 ...11%	4616		3311		4088	
3715	25498	5300	6			6647		6647		4815		2459		3693		4054		3402	
3716	25499	5000				6944		6944	9	5170		4598	6 ...18%	3587		3784		3989	
3717	25500	4050				6250		6250		4604		2995		4013		2973		3327	
3718	25501	3975				8234	2	8234	1 * 15%	5246	9	2344		5291	*	3311		3649	
3719	25502	4000				6448		6448		4724		2622		5930	5 *	2703		3752	
3720	Zonal Check	4975				7143		7143	6	4980		2558		4830		3851		3746	
3721	25503	3600				7937	7	7937	3 * 11%	4355		2384		3409		2770		2854	
3722	25504	5175				6448		6448		4733		4496	7 ...15%	4510		5878	1 *	4961	5 * 20%
3723	25505	4050		4402		6548		5475		4971		3712		5220	*	5338	4	4757	* 15%
3724	25506	5000		2941		7837		5389		4616		3861		4226		3986		4024	
3725	25507	5325	5			6052		6052		5303	6 1%	3703		3906		3716		3775	
3726	25508	3980		3708		7242		5475		4744		4843	3 * ...24%	4865		3581		4430	7%
3727	25509	5050		3453		6548		5000		3992		2939		3480		3581		3333	
3728	25510	5875	2	2417		6548		4482		4607		2850		4759		4122		3910	
3729	25511	4750		4380		6448		5414		4346		3880		4901		3986		4256	3%
3730	25512	5225	8							4900		4077	...4%	5362	*	3919		4453	8%
3731	25513	4325				6746		6746		4762		3950	...1%	4261		3581		3931	
3732	25514	5150				7837		7837	5 10%	5446	3 4%	4000	...2%	4794		4054		4283	3%
3733	25515	4075		3772		7937	8	5854		5076		5296	2 * ...35%	6108	4 *	4932	7	5445	2 * 32%
3734	25516	4875				6845		6845		5073		2785		4688		4932	8	4135	
3735	25517	4125		4297		6548		5422		5253	8	3645		4830		4730		4402	6%
3736	25518	3750		3312		6548		4930		3793		3060		4759		4730		4183	1%
3737	25519	3075		5390	3 *	8730	1 *	7060	7	5407	5 3%	4041	...3%	6143	3 *	5541	3 *	5242	4 * 27%
3738	BPT 5204 (NC 2)	5100				6448		6448		5260	7	3873		4688		3581		4047	
3739	25520	5275	7	3293		6052		4672		4948		3484		5256	*	4797		4512	* 9%
3740	25521	4875		3101		7143		5122		5043		4802	4 * ...23%	4936				4869	9 * 18%
3741	25522	4125		4508				4508		4368		2690		3977		3378		3348	
3742	25523	5125		4923	6 *	8036	4	6479		5171		4785	5 * ...22%	5185		4865		4945	6 * 19%
3743	25524	4125		3465		6548		5007		4117		3089		4616		3986		3897	
3744	25525	4175				6647		6647		4572		3525		3374		2703		3201	
3745	25526	5225	9			7937	9	7937	4 * 11%	5429	4 3%	3525		4972		4054		4184	1%
3746	25527	3200		5678	2 *	7639		6658		5233		3841		5469	9 *	5338	5	4883	8 * 18%
3747	25528	3550		4655	9 *	6052		5353		4814		3968	...1%	4474		3919		4121	
3748	Local Check	4800		4309		6151		5230		4767		3367		2450		4865		3561	
3749	25529	3600		3660		5952		4806		4313		3013		5043		4662		4239	2%
	Exp Mean	**4566**		**4185**		**7033**		**5917**		**4862**		**3662**		**4677**		**4150**		**4163**	
	C.D. 5%	736		339		1281		710		419		855		361		588		344	
	C.V.%	8.02		3.96		9.04		8.51		11.59		11.62		3.84		7.04		7.24	
	Sowing Date	14-Jul		01-Jul		02-Jul						07-Jun		30-Jun		25-Jun			
	Planting Date	20-Aug		30-Jul		23-Jul						26-Jul		27-Jul		15-Jul			
	Local ©	Satabdi		Sambha Sub-1								Indira Sugandhit dhan 1		SYE 1		PDKV Kisan			

Table No. 11.2 Contd.: Grain Yield (kg/ha) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VI												Zonal VI (4) Mean		VII			
		MH		MH		MH (4)		GU		GU		GU (2)				A.P.		A.P.	
		KJT		SHR		Mean		NWG		DNT		Mean				MTU		NLR	
3701	25485	3833		4202		4427	6%	3864		4205		4034		4026		3451		4374	
3702	25486	4485		4798	8	3535		2424		983		1704		3172		2038		6646	
3703	25487	2674		3929		3550		3864		4081		3972		3637		3682		7152	6
3704	25488	4212		4024		4764	7 * 14%	3030		4158		3594		3856		3820		4465	
3705	25489	4705	7	4000		4626	* 11%	3030		3641		3336		3844		3703		7293	5
3706	25490	4568	9	4190		4132		1667		4252		2959		3669		2073		2202	
3707	25491	3439		3917		4050		2424		3590		3007		3343		3106		5798	
3708	25492	6061	1 *	3643		4872	5 * 16%	3485		744		2114		3483		5030	2 *	5768	
3709	25493	5121	5	4810	7	5060	2 * 21%	2348		3829		3089		4027		4588	5 *	6071	
3710	25494	2735		4071		4673	* 12%	3636		4962	4	4299		3851		5023	3 *	4303	
3711	25495	4636	8	5083	2	5220	1 * 25%	3636		4038		3837		4349	8	4591	4 *	8323	1 *
3712	25496	3788		4560		3897		3333		4286		3810		3992		2013		6899	9
3713	WGL-14 (NC-1)	4091		3857		4114		3939		4940	5	4440		4207		2848		5101	
3714	25497	3765		4012		3926		2727		2842		2785		3337		2720		3808	
3715	25498	2705		3905		3589		2652		500		1576		2440		2163		5697	
3716	25499			4536		3969		2955		5030	3	3992		4173		3303		5131	
3717	25500	2576		3476		3259		2500		5235	2	3868		3447		678		7909	3
3718	25501	5530	2	4964	4	4774	6 * 14%	2879		786		1833		3540		3307		6434	
3719	25502	4083		3274		3998		4091		4154		4122		3900		2968		2869	
3720	Zonal Check	3068		3274		3756		1515		3440		2478		2824		800		6222	
3721	25503	3727		3810		3429		3182		791		1986		2877		2905		6475	
3722	25504	4477		3607		4618	* 10%	4394		1321		2857		3450		4443	7 *	3929	
3723	25505	3939		4131		4657	* 11%	5303	7	4303		4803	6	4419	6	3921		5727	
3724	25506	4432		3810		4113		2879		4342		3610		3866		2871		6889	
3725	25507	3697		4857	6	4044		3106		1778		2442		3359		2958		3798	
3726	25508			3548		3998		4545		4927	6	4736	7	4340		3193		3566	
3727	25509	2856		4226		3536		2045		3902		2974		3257		1169		5030	
3728	25510	4076		4155		4278	2%	5909	5	4444		5177	5	4646	4	2162		3232	
3729	25511	5523	3	5119	1	4882	4 * 17%	6212	3	4167		5189	4	5255	2	4448	6 *	6929	8
3730	25512	5167	4	3750		4549	9%	3636		842		2239		3349		5777	1 *	7121	7
3731	25513	3167		3845		3714		6212	4	4248		5230	3	4368	7	3371		7303	4
3732	25514	3432		3714		3999		4394		782		2588		3081		2811		8000	2 *
3733	25515	3121		3679		4460	7%	4091		3876		3983		3692		3016		3434	
3734	25516	4076		3643		4335	4%	3977		4697	9	4337		4098		2611		5626	
3735	25517	4053		4298		4477	7%	6364	2	4645		5504	2	4840	3	2680		3030	
3736	25518	4045		4155		4422	6%	4773	9	4419		4596	9	4348	9	2591		3404	
3737	25519	3295		3905		4721	8 * 13%	5455	6	3791		4623	8	4111		2372		5535	
3738	BPT 5204 (NC 2)	3333		3857		3865		2348		4090		3219		3407		2426		3535	
3739	25520	3424		3726		4301	3%	3182		4205		3693		3634		3792		6354	
3740	25521	4167		4929	5	4677	9 * 12%	2917		2218		2567		3557		3288		6485	
3741	25522	4083		3774		3803				829		829		2895		2758		5414	
3742	25523	4500		4155		4676	* 12%	4848	8	4291		4570		4448	5	3925	9	5444	
3743	25524	2962		3893		3864		1970		4440		3205		3316		3002		2303	
3744	25525	2803		5083	3	3491		3409		1940		2675		3309		2906		3899	
3745	25526	3447		3881		4088		2803		4919	7	3861		3762		4377	8	4899	
3746	25527			4167		4991	3 * 19%	4015		4799	8	4407		4327		3909		3838	
3747	25528	4008		4667	9	4267	2%	3561		4585		4073		4205		3141		2495	
3748	Local Check	4894	6	4524		4183		6439	1	5312	1	5876	1	5292	1	3731		3071	
3749	25529	3318		3845		4217	1%	1667		2226		1947		2764		2435			
	Exp Mean	**3915**		**4108**		**4217**		**3617**		**3486**		**3551**		**3780**		**3161**		**5192**	
	C.D. 5%	910		945		383		867		777		330		444		682		1759	
	C.V.%	11.54		11.44		9.21		11.91		11.08		6.63		11.91		10.73		16.84	
	Sowing Date	27-Jun		24-Jun				29-Jun		27-Jun						30-Jun		04-Aug	
	Planting Date	23-Jul		20-Jul				12-Aug		01-Aug						06-Aug		08-Sep	
	Local ©	Karjat 9		KJT-6				GAR-13		GNR-2						BPT 5204			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 11.2 Contd.: Grain Yield (kg/ha) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VII																					
		A.P.		A.P.		A.P. (4)			TEL		TEL			TEL (2)			TN		TN			TN (2)		
		RGL		BPT		Mean			WGL		RNR			Mean			CBT		ADT			Mean		
3701	25485	7448		6224		5374			2931		3998			3465			4577		4083			4330		
3702	25486	8038	7	6936	4	5915	8		3091		461			1776			4663		3458			4061		
3703	25487	5278		7013	3	5781			4363	5	3175			3769			5955	5	3000			4477		
3704	25488	6944		4826		5014			3532		4286			3909			4616		3958			4287		
3705	25489	6510		5365		5718			3226		4301			3763			4655		2708			3682		
3706	25490	4722		4350		3337			3590		3805			3697			2329		2167			2248		
3707	25491	6094		6307		5326			5960	1 *	3586			4773	4	11%	4408		3250			3829		
3708	25492	8767	2	5733		6325	3	7%	5272	2	4980			5126	1 *	19%	5310		5250	7		5280	6	10%
3709	25493	7830		5196		5921	7		3072		5908	2		4490	7	4%	5533		5375	3		5454	5	13%
3710	25494	7413		6614		5838			4238	8	3963			4101			5268		3625			4446		
3711	25495	8759	3	6721		7098	1 *	20%	4389	4	5665	4		5027	2 *	17%	6554	2	5708	2		6131	1 *	27%
3712	25496	5538		3983		4608			4303	7	3413			3858			4163		3750			3957		
3713	WGL-14 (NC-1)	9080	1	6607		5909	9		3160		5382	8		4271			5487		2583			4035		
3714	25497	7899	8	4836		4816			3328		4435			3881			4732		3667			4199		
3715	25498	7257		7033	2	5537			3072		2356			2714			4778		3917			4347		
3716	25499	5313		6806	9	5138			3084		3894			3489			4288		4208			4248		
3717	25500	6806		5219		5153			3199		4097			3648			2373		2667			2520		
3718	25501	8542	5	6597		6220	4	5%	3049		4633			3841			6967	1	4333			5650	3	17%
3719	25502	7014		5022		4468			3676		5987	1		4832	3	12%	5854	7	5333	5		5594	4	16%
3720	Zonal Check	2535		2016		2893			3688		4936			4312			2060		2250			2155		
3721	25503	8594	4	6849	7	6206	5	5%	3153		2049			2601			4695		5250	8		4972	9	3%
3722	25504	8333	6	5835		5635			2922		5883	3		4403	9	2%	5405		5125	9		5265	7	9%
3723	25505	5191		5519		5090			2538		5655	5		4096			4925		3583			4254		
3724	25506	7517		5018		5574			2655		4365			3510			4205		3833			4019		
3725	25507	7292		5658		4926			3706		5556	6		4631	6	7%	5210		4500			4855		1%
3726	25508	6910		6707		5094			3574		3264			3419			5715	9	3417			4566		
3727	25509	4635		3436		3568			3414		4595			4004			4103		4083			4093		
3728	25510	6128		5260		4196			2968		4008			3488			4585		3167			3876		
3729	25511	4375		4868		5155			3026		4306			3666			3852		3042			3447		
3730	25512	6771		6849	8	6629	2	12%	4320	6	3403			3861			6203	4	4292			5247	8	9%
3731	25513	5938		4922		5383			2931		5030			3980			4449		4667			4558		
3732	25514	5938		7062	1	5952	6	1%	3257		2267			2762			5136		4708			4922		2%
3733	25515	5347		6503		4575			3929		2862			3395			4684		3083			3884		
3734	25516	6215		6909	6	5340			2891		2832			2861			5447		4250			4848		1%
3735	25517	6701		4524		4234			4784	3	3874			4329			4707		2917			3812		
3736	25518	5521		4782		4074			3453		3408			3431			4272		2667			3469		
3737	25519	6337		3422		4417			4222	9	3036			3629			5167		3250			4208		
3738	BPT 5204 (NC 2)	6892		4585		4360			3351		4172			3761			4267		5375	4		4821		
3739	25520	7899	9	4193		5560			3776		5203	9		4490	8	4%	4757		3667			4212		
3740	25521	7049		5974		5699			3068		3666			3367			5388		4083			4736		
3741	25522	7170		6928	5	5568			3153		967			2060			5457		5958	1		5708	2	18%
3742	25523	6372		4468		5052			4063		5481	7		4772	5	11%	6462	3	2667			4564		
3743	25524	5538		6061		4226			3079		3294			3187			4290		3458			3874		
3744	25525	3767		4600		3793			2832		4157			3494			4427		2500			3463		
3745	25526	7014		5824		5528			3666		4067			3867			4256		3292			3774		
3746	25527	7465		5216		5107			4101		4286			4193			5767	8	3250			4509		
3747	25528	7830		1982		3862			2662		3433			3047			3917		5333	6		4625		
3748	Local Check	6962		5304		4767			4183		2733			3458			5888	6	3667			4777		
3749	25529	5382		5164		4327			2912		4306			3609			3156		3000			3078		
	Exp Mean	**6630**		**5466**		**5112**			**3527**		**3988**			**3757**			**4803**		**3824**			**4314**		
	C.D. 5%	2036		1183		730			1292		892			688			1107		1212			888		
	C.V.%	15.27		10.76		14.48			18.22		11.12			13.05			11.47		15.77			14.66		
	Sowing Date	07-Jul		21-Aug					08-Jul		29-Jun						07-Jul		08-Aug					
	Planting Date	08-Aug		24-Sep					22-Aug		30-Jul						01-Aug		03-Sep					
	Local ©	RGL 2538		BPT 5204					WGL-32100		RNR 15048						CO 49		ADT(R) 46					

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 11.2 Contd.: Grain Yield (kg/ha) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VII								ZoneVII (11) Mean		Overall Mean (26)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		KA MND		KA GNV		KA SRS		KA (3) Mean								
3701	25485	4063		8744		4480		5762	9 2%	4943	1%	4640		107	91	291
3702	25486	1904		4936		4156		3665		4212		3560		126	100	289
3703	25487	4490		9744	4 *	3894		6043	5 7%	5249	7 8%	4819	7 1%	108	105	320
3704	25488	4359		6859		3889		5036		4687		4654		98	99	275
3705	25489	3392		7423		3948		4921		4775		4611		102	115	260
3706	25490	2870		5603		2391		3621		3282		3670		100	77	321
3707	25491	3865		7994		3444		5101		4892		4647		110	108	305
3708	25492	5078	4	10353	2 *	4349		6593	3 * 17%	5990	3 * 23%	4975	4 * 5%	119	107	306
3709	25493	4848	7	8122		3405		5458		5450	5 * 12%	4965	5 4%	106	102	298
3710	25494	4198		7769		4314		5427		5157	8 6%	5144	2 * 8%	108	97	301
3711	25495	3429		9282	6 *	5063	4	5925	6 5%	6226	1 * 28%	5576	1 * 17%	112	107	300
3712	25496	2985		7526		2163		4224		4249		4164		109	100	304
3713	WGL-14 (NC-1)	2866		7167		3331		4454		4874		4675		108	108	287
3714	25497	2356		8712		4633		5234		4648		4373		108	89	303
3715	25498	2410		6173		3417		4000		4388		3999		121	104	301
3716	25499	2887		8263		5037	7	5395		4747		4615		115	91	313
3717	25500	2595		5635		3586		3938		4069		3999		96	95	285
3718	25501	4231		7942		4305		5493		5486	4 * 13%	4752		122	110	303
3719	25502	2784		8821	7 *	2778		4794		4828		4437		105	95	284
3720	Zonal Check	3540		2949		1505		2665		2955		3503		100	87	296
3721	25503	1986		5891		3650		3842		4681		3982		127	96	296
3722	25504	2854		8705		4638		5399		5279	6 * 8%	4761		118	100	303
3723	25505	4757	8	7077		4648		5494		4867		4691		107	95	302
3724	25506	2887		7865		3318		4690		4675		4383		112	86	297
3725	25507	3372		8769	8 *	4583		5574		5036	3%	4572		119	101	292
3726	25508	4457		8436		3220		5371		4769		4746		106	110	294
3727	25509	4560	9	5859		3913		4777		4073		3902		97	95	276
3728	25510	3129		5590		4640		4453		4079		4332		104	108	278
3729	25511	2373		7436		3930		4579		4417		4422		105	91	294
3730	25512	6369	1 *	10532	1 *	6008	2	7637	1 * 35%	6149	2 * 26%	5027	3 * 6%	120	113	315
3731	25513	3499		9423	5 *	4765		5896	7 5%	5118	9 5%	4664		109	99	302
3732	25514	3273		7897		5327	3	5499		5061	4%	4584		121	106	325
3733	25515	4992	5	9859	3 *	6894	1 *	7248	2 * 29%	4964	2%	4747		108	111	302
3734	25516	2641		8154		4434		5076		4728		4547		104	87	322
3735	25517	5436	2	7769		5047	6	6084	4 8%	4679		4810	8 1%	103	97	291
3736	25518	4359		8096		3819		5425		4216		4123		101	96	287
3737	25519	5234	3	5949		4286		5156		4437		4652		105	103	284
3738	BPT 5204 (NC 2)	2792		7462		3532		4595		4399		4307		109	90	297
3739	25520	3988		7628		3979		5199		5022	3%	4644		107	104	282
3740	25521	3294		8538		4013		5282		4986	2%	4765		115	108	310
3741	25522	2364		5885		3611		3953		4515		3986		122	97	279
3742	25523	4190		5231		3900		4440		4746		4878	6 3%	104	116	306
3743	25524	3873		7340		3382		4865		4147		3877		100	99	278
3744	25525	2492		6032		3432		3985		3731		3930		107	103	316
3745	25526	3314		6051		3016		4127		4525		4623		104	95	305
3746	25527	3289		7244		4648		5060		4819		4810	9 1%	105	104	290
3747	25528	3544		8769	9 *	5055	5	5790	8 3%	4378		4433		102	103	276
3748	Local Check	4922	6	7103		4889	9	5638		4768		4752		103	98	305
3749	25529	4034		6006		5021	8	5020		4142		3925		101	94	266
	Exp Mean	**3621**		**7482**		**4075**		**5059**		**4705**		**4484**		**109**	**100**	**296**
	C.D. 5%	947		1297		1145		646		384		215		1		12
	C.V.%	13.00		8.62		13.97		11.19		13.77		12.49		2.50		10.13
	Sowing Date	22-Aug		15-Jul		26-Jun										
	Planting Date	16-Sep		12-Aug		24-Jul										
	Local ©	Thanu		BPT-5204		SIRI-1253										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 11.3 : Days to 50% Flowering of entries in IVT-MS Kharif 2015

Entry No.	IET No.	II	III											Zone III (8) Mean	V			Zone V (3) Mean	VI		
		U.P.	OD	OD	OD (2)	BI	BI	BI	BI (3)	W.B	U.P.	U.P.	U.P. (2)		CG	MH	MH		MH	MH	MH (4)
		KNP	CTK	BBN	Mean	PSA	PTN-ICAR	PTN	Mean	CHN	MSD	VRN	Mean		RPR	SND	SKL		KJT	SHR	Mean
3701	25485	109	139	101	120	124	126	115	121	91	94	101	98	111	106	102	98	102	93	99	98
3702	25486	112	128	134	131	149	133	146	143	90				130	131	132	135	132	128	89	121
3703	25487	107	138	105	121	123	108	114	115	87	100	107	104	110	106	110	107	107	96	98	103
3704	25488	100	130	92	111	111	95	104	103	95	113	88	101	103	95	33	94	74	90	88	76
3705	25489	100	134	96	115	119	102	110	110	100	116	97	107	109	97	92	99	96	95	96	95
3706	25490	102	135	97	116	106	97	104	102	90		90	90	103	95	95	93	94	88	92	92
3707	25491	108	138	110	124	123	105	116	114	95	119	110	114	114	107	108	103	106	99	98	102
3708	25492	104	159	116	137	140	123	129	130	97				127	118	124	127	123	121	116	122
3709	25493	110		104	104	111	104	113	109	111	119	106	113	110	103	100	101	101	102	98	100
3710	25494	104	140	104	122	114	106	112	111	90	120	112	116	112	105	105	104	104	105	98	103
3711	25495	109	148	108	128	124	105	116	115	105	123	110	117	117	106	108	111	108	106	102	106
3712	25496	112	141	104	122	106	102	117	108	90	118	108	113	111	105	103	102	103	100	97	100
3713	WGL-14 (NC-1)	107	141	103	122	108	103	112	108	105	116	108	112	112	107	103	101	103	102	98	101
3714	25497	101	141	103	122	110	104	112	109	98		108	108	111	107	103	102	104	104	97	101
3715	25498	111	156	123	139	136	122	130	129	110		131	131	129	119	122	118	120	102	112	113
3716	25499	106	154	119	136	123	103	123	116	110		116	116	121	112	114	112	112		105	110
3717	25500	101	127	88	107	105	94	101	100	90		88	88	99	89	85	88	87	87	90	87
3718	25501	111	162	125	143	142	101	112	118	101		131	131	125	126	126	124	125	123	120	123
3719	25502	103	139	104	121	113	102	113	109	97		106	106	110	106	101	100	102	104	71	94
3720	Zonal Check	110	145	102	123	115	103	113	110	105		110	110	113	108	103	103	104	90	86	95
3721	25503	109	162	134	148	143	119	142	135	101		136	136	134	128	130	126	128	119	122	124
3722	25504	112		124	124	139	117	135	130	115		118	118	125	118	119	117	118	117	108	115
3723	25505	112	143	104	123	115	102	125	114	85	116	108	112	112	107	102	103	104	105	71	95
3724	25506	109	145	106	125	116	105	114	111	115	111	106	108	114	108	105	110	108	106	111	108
3725	25507	104	159	122	140	133	110	134	126	111		122	122	127	117	122	117	119	117	102	115
3726	25508	101	141	100	120	121	97	112	110	100	117	102	110	111	97	101	102	100		93	98
3727	25509	102	133	91	112	104	84	103	97	103	107	84	96	101	89	88	82	86	85	86	85
3728	25510	99	141	102	121	106	97	61	88	105	119	109	114	105	102	100	100	100	93	96	97
3729	25511	110	139	100	119	110	101	108	106	105	120	101	111	110	97	95	101	97	102	92	97
3730	25512	112		121	121	140		129	134	111				125	123	123	126	124	123	126	124
3731	25513	101	144	107	125	125	105	124	118	85		109	109	114	108	103	99	103	99	99	100
3732	25514	109	153	119	136	133	121	129	128	95		124	124	125	113	120	115	116	119	117	118
3733	25515	107	138	105	121	121	103	125	116	95	117	109	113	114	100	103	98	100	94	93	97
3734	25516	104	136	100	118	113	104	109	109	91		99	99	107	99	101	101	100	88	98	97
3735	25517	102	133	97	115	114	100	113	109	95	115	104	109	109	100	80	97	92	94	87	89
3736	25518	102	133	96	114	107	92	106	102	100	113	94	104	105	95	93	97	95	91	92	93
3737	25519	104	138	94	116	119	103	114	112	105	114	102	108	111	97	97	99	97	91	93	95
3738	BPT 5204 (NC 2)	107	147	108	127	120	105	114	113	105		108	108	115	108	106	103	105	94	88	97
3739	25520	105	138	103	120	117	102	113	110	103	112	106	109	112	105	102	102	103	102	98	101
3740	25521	106	159	120	139	123	111	92	109	91	121	116	119	117	113	118		115	119	110	116
3741	25522	110	136	133	134	143	105	143	130	95	107		107	123	128	129	126	127	120	107	120
3742	25523	107	140	98	119	111	100	113	108	116	115	99	107	111	99	93	96	96	94	88	93
3743	25524	108	134	92	113	109	91	106	102	95	111	89	100	103	94	90	89	91	85	88	88
3744	25525	95	144	98	121	112	107	116	112	98		114	114	113	107	111	108	108	107	105	108
3745	25526	109	142	102	122	112	98	113	108	95		108	108	110	100	102	99	100	92	90	96
3746	25527	103	140	102	121	107	101	110	106	105	112	108	110	110	99	102	99	100		99	100
3747	25528	104	136	99	117	104	96	107	102	115	114	97	105	108	95	94	93	94	90	95	93
3748	Local Check	104	136	89	112	107	84	108	100	108	109	107	108	106	98	82	104	94	93	108	97
3749	25529	106	129	93	111	104	90	108	101	98	109	96	103	103	94	91	90	92	89	86	89
	Exp Mean	**106**	**141**	**106**	**123**	**119**	**104**	**115**	**113**	**100**	**114**	**107**	**109**	**113**	**105**	**103**	**104**	**104**	**101**	**98**	**102**
	C.D. 5%	6	0	3	2	4	4	20	7	1	2	0	1	3	1	1	1		3	2	1
	C.V.%	2.70	0.00	1.21	1.42	1.48	1.95	8.68	5.34	0.34	0.86	0.00	0.50	3.47	0.70	0.42	0.43		1.24	0.97	0.78

Table No. 11.3 Contd.: Days to 50% Flowering of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VI			Zonal VI (4) Mean	VII															Zone VII Mean (11)	Overall Mean (27)
		GU	GU	GU (2)		A.P.	A.P.	A.P.	A.P.	A.P. (4)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		NWG	DNT	Mean		MTU	NLR	RGL	BPT	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	GNV	SRS	Mean		
3701	25485	109	117	113	104	106	100	99	96	100	115	111	113	105	105	105	102	105	118	108	105	107
3702	25486	122	146	134	121	140	105	142	110	124	141	126	133	133	108	120	116	121	142	126	126	126
3703	25487	106	119	112	105	117	89	110	97	103	124	120	122	105	104	104	107	106	117	110	108	108
3704	25488	104	108	106	97	103	105	97	95	100	113	104	108	97	87	92	94	102	106	101	100	98
3705	25489	107	110	108	102	95	101	95	89	95	112	109	111	99	85	92	94	101	109	101	99	102
3706	25490	106	107	107	98	94	102	92	97	96	98	107	103	105	96	100	104	100	110	105	100	100
3707	25491	115	115	115	107	115	104	107	95	105	127	122	125	105	110	107	102	103	112	105	109	110
3708	25492	122	144	133	126	128	122	116	97	116	117	112	114	110	91	100	96	121	125	114	112	119
3709	25493	115	109	112	106	109	103	102	100	104	116	107	111	107	99	103	101	100	114	105	105	106
3710	25494	112	112	112	106	112	115	106	92	106	116	110	113	101	103	102	103	103	113	106	107	108
3711	25495	119	123	121	112	118	116	111	95	110	124	117	121	104	107	105	104	107	114	108	111	112
3712	25496	120	113	117	107	112	124	106	93	109	115	117	116	113	101	107	106	106	114	109	110	109
3713	WGL-14 (NC-1)	118	114	116	108	110	111	102	109	108	114	111	112	110	95	102	107	102	113	107	107	108
3714	25497	115	111	113	107	112	123	106	96	109	113	112	112	110	98	104	103	102	112	106	108	108
3715	25498	121	108	114	110	131	122	120	105	119	141	119	130	123	105	114	117	120	129	122	121	121
3716	25499	127	122	125	118	124	98	113	94	107	131	119	125	118	98	108	110	114	127	117	113	115
3717	25500	97	103	100	94	94	121	87	95	99	109	102	105	96	82	89	89	100	104	97	98	96
3718	25501	121	144	132	127	132	111	131	104	119	144	115	129	126	112	119	86	124	130	113	119	122
3719	25502	114	110	112	100	108	116	101	95	105	104	108	106	107	106	106	96	102	106	101	104	105
3720	Zonal Check	94	117	105	97	82	122	83	90	94	103	89	96	82	79	80	81	91	89	87	90	100
3721	25503	120	145	133	127	142	104	134	105	121	142	107	125	131	120	125	122	121	131	124	123	127
3722	25504	130	110	120	116	127	105	119	104	114	130	116	123	119	107	113	116	120	124	120	117	118
3723	25505	122	109	115	102	111	104	102	96	103	116	116	116	108	94	101	106	107	111	108	106	107
3724	25506	120	119	120	114	112	114	136	94	114	114	119	116	112	101	106	110	107	113	110	112	112
3725	25507	121	128	125	117	126	103	120	88	109	134	120	127	122	104	113	117	120	127	121	116	119
3726	25508	119	107	113	106	109	92	102	95	99	114	110	112	112	96	104	110	103	109	107	105	106
3727	25509	103	97	100	93	95	102	88	90	94	107	119	113	98	85	91	93	93	103	96	97	97
3728	25510	116	108	112	103	108	106	102	93	102	115	111	113	105	104	104	102	108	109	106	105	104
3729	25511	115	105	110	103	107	106	97	93	101	110	110	110	103	101	102	103	101	112	105	104	105
3730	25512	131	147	139	132	130	113	120	99	116	123	109	116	116	103	109	95	121	124	113	114	120
3731	25513	119	119	119	109	117	116	104	98	109	122	115	119	106	105	105	98	105	113	105	109	109
3732	25514	130	145	137	128	130	116	123	105	118	134	122	128	118	94	106	111	121	129	120	118	121
3733	25515	119	111	115	104	111	100	102	98	103	123	113	118	107	103	105	105	107	112	108	107	108
3734	25516	115	108	111	102	106	103	99	89	99	112	115	114	107	104	105	106	102	112	107	105	104
3735	25517	117	116	117	104	104	94	99	97	98	115	109	112	100	104	102	100	104	110	104	103	103
3736	25518	112	110	111	101	99	90	92	95	94	110	107	108	99	97	98	102	101	110	104	100	101
3737	25519	119	109	114	103	111	114	102	105	108	114	106	110	97	94	95	96	101	103	100	104	105
3738	BPT 5204 (NC 2)	122	119	121	106	117	106	104	97	106	116	113	114	112	98	105	110	106	114	110	108	109
3739	25520	119	113	116	108	106	117	102	95	105	114	108	111	101	105	103	97	104	112	104	105	107
3740	25521	122	125	124	119	130	98	126	98	113	113	108	110	121	105	113	106	122	127	118	114	115
3741	25522		145	145	124	140	102	132	105	120	146	105	125	128	106	117	120	121	133	124	121	122
3742	25523	114	105	110	100	105	107	99	96	102	114	104	109	99	103	101	90	94	103	96	101	104
3743	25524	105	105	105	96	95	92	95	95	94	114	104	109	105	103	104	104	100	110	105	101	100
3744	25525	113	106	109	108	103	106	106	93	102	113	112	113	106	88	97	102	103	114	106	104	107
3745	25526	116	105	110	100	114	118	102	93	107	113	104	108	100	94	97	91	97	102	97	102	104
3746	25527	115	111	113	108	107	99	99	93	99	112	111	111	99	85	92	95	102	110	102	101	105
3747	25528	117	105	111	102	104	88	99	93	96	106	104	105	102	95	98	98	102	110	103	100	102
3748	Local Check	104	99	102	101	118	87	104	109	104	111	100	105	105	102	103	97	110	113	106	105	103
3749	25529	115	116	115	101	100		94	94	96	115	100	107	97	101	99	102	102	106	103	101	101
	Exp Mean	**116**	**116**	**116**	**108**	**113**	**107**	**107**	**97**	**106**	**118**	**111**	**114**	**107**	**99**	**103**	**102**	**107**	**114**	**108**	**107**	**109**
	C.D. 5%	0	3	2	1	3	0	13	4	3	3	2	1	2	4	2	5	4	2	2	1	1
	C.V.%	0.00	1.39	0.99	1.04	1.26	0.00	5.84	2.08	3.18	1.20	1.11	0.61	0.74	2.00	1.44	2.63	2.08	1.08	2.01	2.31	2.50

Table No. 11.4: Plant Height (cm) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	II	III											Zone III Mean (8)	V			Zonal V Mean (3)
		U.P.	OD	OD	OD (2)	BI	BI	BI	BI (3)	W.B	U.P.	U.P.	U.P. (2)		CG	MH	MH	
		KNP	CTK	BBN	Mean	PSA	PTN-ICAR	PTN	Mean	CHN	MSD	VRN	Mean		RPR	SND	SKL	
3701	25485	72	96	90	93	60	76	81	72	116	100	94	97	89	100	105	99	101
3702	25486	84	116	93	104	63	85	99	82	99				92	101	105	98	101
3703	25487	78	113	98	105	73	110	101	95	101	105	104	105	101	108	102	117	109
3704	25488	66	121	80	101	73	110	89	91	117	107	103	105	100	124	108	111	114
3705	25489	105	125	105	115	83	125	105	104	119	110	121	116	112	117	127	136	127
3706	25490	55	92	75	84	59	75	55	63	102		75	75	76	92	93	76	87
3707	25491	85	116	104	110	89	99	99	96	101	105	106	106	102	115	131	128	124
3708	25492	67	118	100	109	75	85	105	88	116				100	107	126	122	118
3709	25493	78		98	98	84	105	98	96	93	106	101	104	98	107	127	97	110
3710	25494	71	113	93	103	80	114	97	97	80	95	99	97	96	106	104	114	108
3711	25495	77	115	100	108	84	102	96	94	115	123	110	116	106	114	126	115	118
3712	25496	56	120	90	105	88	96	96	93	96	105	111	108	100	114	120	101	111
3713	WGL-14 (NC-1)	96	122	102	112	78	96	105	93	119	115	111	113	106	124	125	122	124
3714	25497	67	105	88	97	63	90	80	78	101		85	85	88	107	97	92	99
3715	25498	84	116	100	108	64	85	97	82	115		94	94	96	118	123	119	120
3716	25499	73	107	88	98	60	92	55	69	99		84	84	84	107	109	99	105
3717	25500	96	108	85	97	68	107	99	91	97		102	102	95	99	96	94	96
3718	25501	78	124	115	120	80	100	104	95	94		98	98	102	106	124	120	116
3719	25502	67	120	105	113	70	100	84	85	103		106	106	98	108	102	94	101
3720	Zonal Check	78	109	88	99	74	79	80	78	102		87	87	88	106	100	84	97
3721	25503	63	110	90	100	64	71	100	78	88		86	86	87	105	110	102	105
3722	25504	88		95	95	68	77	92	79	107		90	90	88	118	125	98	113
3723	25505	61	109	100	104	64	94	87	82	103	95	101	98	94	106	108	106	107
3724	25506	57	108	85	97	62	80	75	72	106	90	89	90	87	97	95	90	94
3725	25507	66	105	102	104	85	96	87	89	116		90	90	97	99	118	108	108
3726	25508	107	118	104	111	80	136	94	103	99	115	112	113	107	115	126	127	123
3727	25509	77	117	90	103	75	100	91	89	99	92	94	93	95	107	108	110	108
3728	25510	95	125	115	120	86	115	100	100	114	105	106	106	108	110	110	123	114
3729	25511	67	114	100	107	73	78	89	80	99	90	95	93	92	96	100	96	97
3730	25512	94	121	105	113	91		115	103	100				106	114	133	126	124
3731	25513	73	105	102	104	73	85	95	84	99		97	97	94	116	114	99	110
3732	25514	58	120	105	113	71	93	98	87	116		96	96	100	114	126	119	120
3733	25515	95	126	115	121	80	89	111	93	94	100	108	104	103	116	126	129	124
3734	25516	54	100	80	90	63	92	73	76	84		86	86	83	105	93	92	96
3735	25517	77	99	98	99	82	113	87	94	94	95	98	97	96	106	115	112	111
3736	25518	88	124	95	110	86	94	91	90	87	90	100	95	96	116	99	97	104
3737	25519	76	123	100	112	93	101	107	100	92	112	111	112	105	95	122	113	110
3738	BPT 5204 (NC 2)	78	122	80	101	77	88	87	84	99		90	90	92	98	94	94	95
3739	25520	71	120	95	108	87	112	91	97	114	95	105	100	102	111	125	115	117
3740	25521	89	118	92	105	90	116	99	102	102	105	101	103	103	112	123		118
3741	25522	62	104	85	95	60	82	89	77	115	115		115	93	97	116	99	104
3742	25523	113	138	115	127	98	120	112	110	94	110	119	115	113	135	118	121	124
3743	25524	76	118	96	107	81	109	87	92	90	95	100	97	97	108	125	117	117
3744	25525	72	116	100	108	85	111	97	98	86		99	99	99	124	120	123	122
3745	25526	97	100	88	94	80	108	87	92	99		91	91	93	100	107	113	107
3746	25527	77	126	108	117	91	103	100	98	94	110	105	108	105	122	111	116	116
3747	25528	93	115	111	113	82	109	99	97	93	115	99	107	103	108	120	123	117
3748	Local Check	68	118	104	111	65	106	85	85	90	102	84	93	94	115	104	117	112
3749	25529	84	105	95	100	67	103	91	87	90	98	92	95	93	105	120	110	112
	Exp Mean	**78**	**114**	**97**	**105**	**76**	**98**	**93**	**89**	**101**	**103**	**99**	**100**	**97**	**109**	**113**	**109**	**110**
	C.D. 5%				0								8	0				0

Table No. 11.4 Contd.: Plant Height (cm) of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VI						Zone VI Mean (4)	VII																Zone VII Mean (11)	Overall Mean (27)
		MH	MH	MH (4)	GU	GU	GU (2)		A.P.	A.P.	A.P.	A.P.	A.P. (4)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (3)		
		KJT	SHR	Mean	NWG	DNT	Mean		MTU	NLR	RGL	BPT	Mean	WGL	RNR	Mean	CBT	ADT	Mean	MND	GNV	SRS	Mean		
3701	25485	99	101	101	93	81	87	94	96	88	111	96	98	89	87	88	91	93	92	74	100	83	86	92	91
3702	25486	117	142	115	85	106	96	113	118	100	118	99	109	95	84	89	103	104	103	78	115	90	94	100	100
3703	25487	108	119	111	106	106	106	110	123	97	136	95	113	105	103	104	112	111	111	89	121	90	100	107	105
3704	25488	105	120	111	102	105	104	108	102	72	123	86	96	93	95	94	91	94	93	82	99	92	91	94	99
3705	25489	117	127	127	116	128	122	122	127	99	140	101	117	118	100	109	113	125	119	94	111	99	101	111	115
3706	25490	85	90	86	64	92	78	83	85	66	94	84	82	65	70	68	73	83	78	65	81	52	66	74	77
3707	25491	118	124	125	106	150	128	124	121	103	132	100	114	109	100	104	97	103	100	88	110	82	93	104	108
3708	25492	121	121	123	110	132	121	121	122	91	140	97	113	109	99	104	107	109	108	88	118	86	97	106	107
3709	25493	113	106	111	113	127	120	115	111	89	133	90	106	87	96	91	103	108	105	84	109	81	91	99	102
3710	25494	97	114	107	104	109	106	106	109	81	134	90	103	98	92	95	89	94	91	69	95	85	83	94	97
3711	25495	114	121	119	100	120	110	114	121	103	128	100	113	102	98	100	114	109	111	85	106	92	95	105	107
3712	25496	105	117	111	92	120	106	108	109	91	122	95	104	98	94	96	96	108	102	77	112	84	91	99	100
3713	WGL-14 (NC-1)	122	124	123	106	117	111	117	111	98	130	101	110	100	96	98	107	112	109	92	111	86	97	104	108
3714	25497	96	101	96	86	103	95	96	92	75	112	80	89	84	83	83	90	91	91	72	93	73	79	86	89
3715	25498	129	122	123	102	104	103	114	113	101	120	87	105	98	88	93	113	120	117	93	115	91	99	104	104
3716	25499		110	106	87	100	93	99	101	84	117	91	98	85	85	85	97	105	101	75	98	77	83	92	91
3717	25500	109	113	103	99	102	100	106	78	110	110	98	99	82	86	84	83	93	88	83	96	83	87	91	95
3718	25501	128	132	126	107	107	107	118	116	89	141	109	114	128	97	112	130	125	128	93	125	91	103	113	110
3719	25502	105	108	102	93	127	110	108	102	64	116	85	92	83	94	89	94	103	98	74	100	76	84	90	95
3720	Zone Check	89	109	95	82	96	89	94	93	91	95	72	88	77	93	85	92	65	78	77	77	59	71	81	87
3721	25503	119	124	114	78	105	91	106	116	103	111	98	107	92	92	92	94	110	102	71	115	87	91	99	96
3722	25504	111	112	112	89	108	99	105	117	83	130	97	107	95	87	91	111	111	111	83	118	85	95	102	100
3723	25505	102	115	108	74	115	94	101	105	82	110	88	96	90	90	90	102	101	101	76	97	80	84	93	95
3724	25506	96	98	95	69	92	81	89	98	92	113	83	97	83	79	81	86	95	91	60	92	61	71	86	86
3725	25507	126	125	119	76	116	96	111	113	107	122	96	110	93	87	90	107	110	109	75	104	84	87	100	101
3726	25508		124	126	107	137	122	123	119	74	129	72	99	110	102	106	123	111	117	93	118	95	102	104	110
3727	25509	101	114	108	77	118	98	103	86	77	115	91	92	77	94	86	95	87	91	85	100	87	90	90	95
3728	25510	113	125	117	96	118	107	113	109	84	138	110	110	114	99	106	117	110	113	93	112	86	97	106	108
3729	25511	89	105	97	81	105	93	95	99	97	117	87	100	84	80	82	87	94	91	69	96	74	80	89	91
3730	25512	139	137	134	109	119	114	126	135	90	130	94	112	106	84	95	119	121	120	91	129	101	107	109	113
3731	25513	102	111	106	85	132	109	107	112	107	125	94	109	95	88	92	96	107	101	72	104	83	86	98	99
3732	25514	129	122	124	92	110	101	113	117	114	128	98	114	103	94	98	125	119	122	85	109	93	96	108	106
3733	25515	102	127	121	90	142	116	115	131	69	143	110	113	111	101	106	116	121	119	98	135	106	113	113	111
3734	25516	90	104	95	88	103	95	96	93	93	94	84	91	81	103	92	90	91	91	66	90	77	78	87	87
3735	25517	97	111	109	81	104	93	98	102	77	126	95	100	95	78	87	104	95	99	88	106	81	92	95	97
3736	25518	101	112	102	84	113	98	103	83	83	110	89	91	87	91	89	100	113	107	83	102	82	89	93	96
3737	25519	106	119	115	86	109	98	105	111	86	125	97	105	101	93	97	98	112	105	92	106	82	93	100	103
3738	BPT 5204 (NC 2)	93	103	96	73	101	87	93	97	92	110	77	94	88	84	86	89	111	100	63	86	70	73	88	90
3739	25520	113	123	119	89	120	105	111	116	106	126	92	110	99	94	96	103	120	111	76	100	81	86	101	104
3740	25521	115	120	119	97	113	105	111	124	95	130	111	115	117	102	110	119	118	118	94	119	87	100	111	108
3741	25522	110	120	111		111	111	114	121	100	63	101	96	90	109	99	106	106	106	70	115	87	90	97	97
3742	25523	118	120	119	119	141	130	125	137	91	155	106	122	118	105	111	120	109	114	96	117	85	99	113	116
3743	25524	107	113	115	86	111	99	104	106	78	124	91	100	94	94	94	102	103	103	86	107	81	91	97	99
3744	25525	129	129	125	99	121	110	119	111	80	127	89	102	95	90	93	105	105	105	78	110	78	89	97	103
3745	25526	90	109	105	89	101	95	97	108	79	113	76	94	92	85	89	92	109	100	70	101	78	83	91	95
3746	25527		120	116	90	129	109	113	114	86	128	94	105	100	96	98	103	104	103	81	105	86	90	100	104
3747	25528	114	118	119	90	122	106	111	118	69	124	98	102	98	98	98	98	107	103	80	110	83	91	99	103
3748	Local Check	107	109	109	81	99	90	99	104		118	88	103	84	103	94	93	124	108	106	94	81	94	99	98
3749	25529	93	110	108	67	99	83	92	100		110	92	101	86	90	88	85	112	98	80	94	75	83	92	94
	Exp Mean	**108**	**116**	**112**	**92**	**113**	**102**	**107**	**109**	**89**	**121**	**93**	**103**	**96**	**92**	**94**	**102**	**106**	**104**	**81**	**106**	**83**	**90**	**98**	**100**
	C.D. 5%			8									8			6								10	

Table No. 11.5: Panicles/ M² of entries in IVT-MS Kharif 2015

Entry No.	IET No.	II	III											Zone III Mean (8)	V			Zone V Mean (3)	VI		
		U.P.	OD	OD	OD (2)	BI	BI	BI	BI (3)	W.B	U.P.	U.P.	U.P. (2)		CG	MH	MH		MH	MH	MH (4)
		KNP	CTK	BBN	Mean	PSA	PTN-ICAR	PTN	Mean	CHN	MSD	VRN	Mean		RPR	SND	SKL		KJT	SHR	Mean
3701	25485	283	295	168	232	179	320	368	289	296	329	253	291	276	204	290	205	233	216	219	232
3702	25486	179	252	212	232	196	323	315	278	278				262	233	279	217	243	187	183	216
3703	25487	349	273	198	235	196	322	263	260	301	330	315	323	274	207	367	241	271	280	221	277
3704	25488	260	294	143	218	193	232	385	270	302	312	208	260	258	195	291	224	236	220	232	242
3705	25489	229	222	175	198	175	217	263	218	305	299	254	276	238	189	208	177	191	160	156	175
3706	25490	159	246	207	227	206	382	263	283	309		359	359	282	197	324	338	286	270	244	294
3707	25491	279	269	201	235	170	233	403	268	301	358	265	311	275	194	298	290	260	234	201	256
3708	25492	333	243	229	236	179	281	315	258	292				256	184	304	192	226	275	220	248
3709	25493	284		211	211	243	243	333	273	296	314	359	336	285	194	269	228	230	238	198	233
3710	25494	417	287	206	247	240	251	438	309	312	329	258	293	290	169	234	193	199	173	147	187
3711	25495	213	290	218	254	189	287	455	310	311	282	287	284	290	205	221	197	208	285	191	223
3712	25496	176	242	197	219	156	282	350	262	292	317	302	309	267	188	274	244	235	200	237	239
3713	WGL-14 (NC-1)	201	288	199	243	168	308	368	281	317	280	256	268	273	193	214	220	209	239	161	208
3714	25497	172	278	219	248	186	280	333	266	293		346	346	276	201	291	229	240	275	212	251
3715	25498	241	242	218	230	239	301	420	320	302		317	317	291	231	242	234	236	230	156	215
3716	25499	261	238	212	225	209	325	315	283	298		333	333	276	211	253	253	239		227	244
3717	25500	284	247	169	208	225	288	298	270	303		286	286	259	226	287	209	241	212	182	222
3718	25501	178	287	201	244	232	275	350	286	292		414	414	293	193	263	220	225	292	156	233
3719	25502	196	237	210	223	171	272	298	247	296		304	304	255	190	259	205	218	187	207	214
3720	Zone Check	228	289	219	254	202	321	333	285	309		327	327	285	189	290	293	257	172	177	233
3721	25503	146	247	219	233	191	322	228	247	304		395	395	272	246	268	266	260	199	224	239
3722	25504	329		212	212	269	288	298	285	309		321	321	283	190	293	276	253	300	243	278
3723	25505	190	291	215	253	254	282	333	289	305	314	301	307	287	167	272	282	240	308	189	262
3724	25506	188	268	212	240	207	270	278	251	303	295	339	317	271	182	228	280	230	263	195	241
3725	25507	188	235	221	228	193	247	385	275	292		299	299	267	190	264	223	226	217	202	226
3726	25508	421	262	175	218	172	242	333	249	284	322	299	311	261	197	242	220	220		159	207
3727	25509	364	257	171	214	207	238	278	241	290	291	276	283	251	209	228	202	213	151	189	192
3728	25510	336	291	219	255	208	200	280	229	309	308	212	260	253	240	209	180	209	240	151	195
3729	25511	208	252	190	221	204	235	298	245	280	308	303	306	259	192	284	258	244	222	194	239
3730	25512	169	268	229	249	261		385	323	317				292	254	217	258	243	275	212	240
3731	25513	186	280	189	234	217	276	315	269	298		273	273	264	201	277	242	240	189	190	225
3732	25514	146	266	239	253	274	374	298	315	291		348	348	298	222	311	281	271	244	197	258
3733	25515	212	259	210	235	219	302	368	296	297	298	292	295	280	255	238	258	250	204	149	212
3734	25516	225	287	212	249	242	292	333	289	296		326	326	284	188	282	327	265	189	242	260
3735	25517	283	273	199	236	243	231	455	310	276	319	292	305	286	179	243	218	213	195	177	208
3736	25518	322	268	205	236	226	246	298	256	296	282	273	278	262	189	214	242	215	235	183	219
3737	25519	197	293	186	239	230	229	333	264	303	355	246	300	272	211	230	229	223	160	157	194
3738	BPT 5204 (NC 2)	211	296	215	256	247	325	263	278	303		309	309	279	174	217	260	217	192	165	208
3739	25520	283	319	205	262	235	240	295	257	286	263	298	280	267	189	206	233	209	198	160	199
3740	25521	321	257	220	239	283	291	298	291	302	307	195	251	269	201	282		241	223	217	240
3741	25522	149	254	211	232	248	218	228	231	299	313		313	253	191	262	228	227	197	186	218
3742	25523	356	282	216	249	200	275	280	252	305	327	257	292	268	201	296	226	241	205	211	235
3743	25524	156	280	201	240	187	211	263	220	312	275	316	295	255	178	261	220	219	157	192	207
3744	25525	414	291	203	247	257	229	333	273	298		296	296	272	223	359	263	282	198	220	260
3745	25526	376	311	211	261	156	286	298	246	284		324	324	267	223	301	212	245	204	215	233
3746	25527	245	281	212	246	188	232	263	227	302	307	289	298	259	191	294	211	232		227	244
3747	25528	319	258	194	226	157	300	333	263	303	303	237	270	260	175	211	213	199	186	160	192
3748	Local Check	355	336	212	274	169	211	280	220	289	310	269	290	259	188	313	244	248	276	212	261
3749	25529	210	297	183	240	153	230	228	203	299	283	273	278	243	192	218	217	209	153	147	184
	Exp Mean	**253**	**272**	**204**	**237**	**209**	**272**	**321**	**267**	**298**	**308**	**295**	**300**	**270**	**200**	**265**	**237**	**234**	**220**	**193**	**229**
	C.D. 5%	21	60	19	31	78	53	82	31	25	36	46	28	21	25	17	43	15	44	22	16
	C.V.%	4.16	10.98	4.56	9.19	18.54	9.70	12.73	10.28	4.24	5.77	7.68	6.68	11.30	6.09	3.29	8.97	5.53	9.89	5.71	7.12

Table No. 11.5 Contd.: Panicles/ M² of entries in IVT-MS Kharif 2015

Entry No.	IET No.	VI			Zone VI Mean (4)	VII															Zone VII Mean (10)	Overall Mean (26)
		GU	GU	GU (2)		A.P.	A.P.	A.P.	A.P.	A.P. (4)	TEL	TEL	TEL (2)	TN	TN	TN (2)	KA	KA	KA	KA (2)		
		NWG	DNT	Mean		MTU	NLR	RGL	BPT	Mean	WGL	RNR	Mean	CBT	ADT	Mean	@MND	GNV	SRS	Mean		
3701	25485	276	202	239	228	301	243	322	228	273	330	432	381	438	294	366	605	584	300	442	347	291
3702	25486	267	185	226	206	288	327	439	312	341	297	473	385	380	343	362	570	458	313	386	363	289
3703	25487	276	271	273	262	343	357	451	204	338	363	455	409	468	322	395	820	615	331	473	391	320
3704	25488	270	235	252	239	304	260	306	240	277	314	438	376	363	347	355	720	357	238	298	316	275
3705	25489	270	243	256	207	218	294	378	173	266	264	471	368	410	322	366	605	495	197	346	322	260
3706	25490	261	512	386	322	304	189	368	276	284	429	474	452	328	364	346	1110	641	385	513	376	321
3707	25491	266	403	334	276	291	320	352	241	301	314	458	386	365	359	362	730	585	285	435	357	305
3708	25492	273	198	236	241	301	263	347	238	287	347	461	404	473	452	462	765	602	339	471	382	306
3709	25493	260	294	277	247	363	287	428	278	339	164	462	313	418	333	375	555	457	308	382	350	298
3710	25494	269	340	305	232	294	267	426	218	301	297	459	378	423	336	379	690	543	294	418	355	301
3711	25495	270	225	247	242	330	357	443	240	342	314	441	377	440	343	392	820	518	256	387	368	300
3712	25496	268	370	319	268	324	340	444	314	355	330	450	390	480	347	413	710	489	310	399	383	304
3713	WGL-14 (NC-1)	276	254	265	232	291	263	428	233	303	330	471	401	383	357	370	645	472	291	381	352	287
3714	25497	268	281	274	259	380	234	502	243	339	347	456	401	438	368	403	730	402	359	380	373	303
3715	25498	265	373	319	256	304	260	396	252	303	330	443	386	478	382	430	710	413	257	335	351	301
3716	25499	270	291	280	262	294	237	509	256	324	347	471	409	478	350	414	710	508	378	443	383	313
3717	25500	267	317	292	244	248	379	400	278	326	330	486	408	323	340	331	680	330	225	277	334	285
3718	25501	269	195	232	228	297	323	428	181	307	330	449	389	410	424	417	790	564	345	455	375	303
3719	25502	277	376	327	262	307	237	403	277	306	297	449	373	485	315	400	585	375	287	331	343	284
3720	Zone Check	254	320	287	231	287	300	391	187	291	380	462	421	343	326	334	555	497	317	407	349	296
3721	25503	271	195	233	222	281	350	426	306	340	297	494	395	430	347	388	555	466	280	373	367	296
3722	25504	279	198	239	255	333	235	416	213	299	347	447	397	430	354	392	585	423	273	348	347	303
3723	25505	285	301	293	270	304	290	333	268	299	330	486	408	410	333	371	575	556	252	404	356	302
3724	25506	270	311	290	260	310	290	441	268	327	314	446	380	358	350	354	620	464	396	430	363	297
3725	25507	271	344	307	258	300	198	469	282	312	330	449	389	498	326	412	685	383	304	343	354	292
3726	25508	280	291	285	243	274	170	408	287	284	314	483	398	338	357	347	545	498	323	411	345	294
3727	25509	264	271	267	218	231	237	375	143	246	314	467	390	400	357	379	660	462	308	385	329	276
3728	25510	290	281	285	240	257	172	355	222	251	330	494	412	305	508	406	565	330	309	319	328	278
3729	25511	294	284	289	248	357	309	464	230	340	363	471	417	370	350	360	700	456	276	366	364	294
3730	25512	268	198	233	238	393	310	481	287	368	330	467	398	505	340	422	680	523	309	416	394	315
3731	25513	291	373	332	261	304	364	504	202	343	330	471	401	398	364	381	565	474	347	411	376	302
3732	25514	279	202	240	230	366	394	462	258	370	330	477	404	478	417	447	695	656	314	485	415	325
3733	25515	272	287	279	228	353	237	466	324	345	347	465	406	368	350	359	590	459	357	408	372	302
3734	25516	275	414	344	280	354	304	477	280	354	314	464	389	385	336	361	520	689	330	509	393	322
3735	25517	293	287	290	238	271	207	429	312	305	314	452	383	375	350	363	630	415	274	344	340	291
3736	25518	281	281	281	245	264	280	436	212	298	363	455	409	315	364	340	460	438	296	367	342	287
3737	25519	286	238	262	210	287	294	457	187	306	347	470	408	413	340	376	430	372	338	355	350	284
3738	BPT 5204 (NC 2)	260	330	295	237	340	227	414	214	298	363	455	409	443	343	393	505	529	339	434	366	297
3739	25520	272	284	278	228	271	350	446	219	321	314	462	388	330	329	330	470	347	297	322	336	282
3740	25521	267	278	272	246	330	337	449	309	356	347	468	407	348	415	381	425	421	385	403	381	310
3741	25522		215	215	199	244	285	437	233	300	314	429	371	393	399	396	510	434	338	386	350	279
3742	25523	282	320	301	254	281	310	381	264	309	314	479	396	445	343	394	445	525	386	455	373	306
3743	25524	262	340	301	238	321	210	454	209	298	281	468	374	395	368	381	535	409	301	355	341	278
3744	25525	273	340	306	258	360	207	451	247	316	347	464	405	453	382	417	660	461	342	401	371	316
3745	25526	269	357	313	261	344	235	398	249	306	429	479	454	413	308	360	550	397	341	369	359	305
3746	25527	277	360	318	288	327	194	355	242	279	347	456	401	403	357	380	450	428	279	353	338	290
3747	25528	272	327	299	236	307	227	456	179	292	314	474	394	310	322	316	435	399	260	329	325	276
3748	Local Check	293	307	300	272	363	222	467	255	327	330	482	406	470	329	400	560	388	372	380	368	305
3749	25529	254	234	244	197	261		385	229	291	314	453	383	368	340	354	490	387	351	369	343	266
	Exp Mean	**273**	**292**	**283**	**245**	**307**	**274**	**421**	**245**	**312**	**328**	**463**	**395**	**405**	**355**	**380**	**616**	**471**	**312**	**392**	**358**	**296**
	C.D. 5%	11	29	16	14	58	53	96	83	42	73	37	50	38	49	28	278	72	59		23	12
	C.V.%	2.06	4.99	3.97	5.95	9.43	9.53	11.34	16.84	13.52	11.13	3.97	9.05	4.71	6.81	5.28	22.39	7.63	9.39		10.32	10.13

Table No. 11.6: Summary of grain quality characteristics of entries in IVT-MS-KHARIF 2015

ENTRY NO.	IET NO.	HULL	MILL	HRR	KL	KB	L/B	Grain Type	Grain Chalk	ASV	AC	GC
3701	IET 25485	79.3	69.5	61.7	4.82	1.83	2.63	MS	A	4.0	24.2	22
3702	25486	81.0	70.6	61.4	5.18	1.88	2.75	MS	VOC	4.0	23.32	31
3704	25488	79.4	71.3	64.6	4.96	1.83	2.71	MS	VOC	7.0	23.76	22
3705	25489	79.6	71.1	69.1	5.64	2.16	2.61	MS	VOC	4.0	24.02	47
3706	25490	80.3	69.9	63.9	5.26	1.87	2.81	MS	VOC	4.0	22.7	22
3707	25491	77.5	69.1	64.5	4.96	1.81	2.74	MS	VOC	4.0	23.52	33
3708	25492	77.8	68.9	65.0	5.42	1.95	2.77	MS	VOC	4.0	23.64	32
3709	25493	75.1	66.5	64.3	5.36	2.03	2.64	MS	VOC	5.0	24.05	23
3711	25495	79.6	68.6	64.7	5.42	2.08	2.60	MS	A	5.0	27.1	43
3712	25496	78.9	69.1	61.0	5.24	1.83	2.86	MS	A	4.0	26.66	35
3713	WGL-14 (NC-1)	80.6	68.5	59.2	4.80	1.82	2.63	MS	VOC	5.0	24.05	23
3714	25497	79.4	70.8	66.2	4.88	1.86	2.62	MS	A	4.0	23.81	27
3716	25499	80.2	72.1	63.6	4.68	1.86	2.51	MS	A	4.0	22.41	23
3717	25500	79.8	68.7	55.9	4.92	1.79	2.74	MS	VOC	4.0	24.46	29
3718	25501	78.5	70.7	67.7	5.00	1.93	2.59	MS	A	4.0	21.12	22
3719	ADT-43-(ZC)	77.4	68.6	65.1	4.50	1.95	2.30	SB	VOC	4.0	23.34	28
3720	25502	76.5	63.2	22.1	5.21	1.93	2.69	MS	VOC	4.0	23.14	25
3722	25504	77.6	69.6	59.7	4.70	2.28	2.06	SB	VOC	4.0	21.38	28
3724	25506	81.9	70.3	65.8	5.30	1.83	2.89	MS	VOC	4.0	24.46	41
3725	25507	80.1	71.6	66.8	5.49	1.84	2.98	MS	VOC	4.0	22.11	25
3726	25508	78.9	68.8	64.9	5.19	1.63	3.18	SS	A	4.0	19.88	24
3727	25509	79.3	66.6	50.5	6.14	1.95	3.14	LS	VOC	4.0	24.28	46
3728	25510	80.2	69.5	63.2	5.08	1.88	2.78	MS	VOC	4.0	19.88	22
3729	25511	79.7	70.0	63.2	5.40	1.96	2.75	MS	A	4.0	21.5	22
3730	25512	78.1	67.7	64.3	5.46	2.13	2.56	MS	A	5.0	24.14	23
3731	25513	81.3	68.4	58.0	4.65	1.93	2.40	SB	A	4.0	22.14	22
3732	25514	81.1	72.1	66.6	4.82	1.88	2.56	MS	A	4.0	24.28	22
3733	25515	82.2	73.2	65.8	5.18	1.92	2.69	MS	A	4.0	24.46	24
3734	25516	80.1	73.4	69.1	5.03	1.83	2.74	MS	A	4.0	21.14	22
3735	25517	81.5	72.3	69.0	5.42	2.06	2.63	MS	A	4.0	23.93	22
3736	25518	80.6	70.7	65.9	5.00	1.90	2.63	MS	A	4.0	22.29	22
3737	25519	82.7	72.3	68.3	5.12	1.86	2.75	MS	A	4.0	22.46	23
3738	BPT-5204 (NC-2)	80.4	71.4	65.9	4.96	1.83	2.71	MS	A	4.0	24.31	23
3739	25520	79.9	72.4	70.4	5.14	1.76	2.92	MS	A	4.0	23.11	22
3740	25521	77.0	66.8	63.5	5.46	1.79	3.05	SS	A	4.0	19.74	23
3741	25522	80.7	70.0	57.1	5.49	2.00	2.74	MS	VOC	4.0	25.78	23
3742	25523	78.4	70.1	67.5	5.24	1.92	2.74	MS	A	4.0	23.11	23
3743	25524	79.7	69.8	67.4	5.17	1.85	2.79	MS	A	7.0	24.25	22
3744	25525	79.3	70.8	66.5	4.94	1.50	3.29	SS	A	4.0	19.91	22
3745	25526	81.1	71.7	67.2	5.54	1.77	3.12	SS	A	4.0	20.06	22
3746	25527	79.6	70.8	67.8	5.19	2.19	2.36	SB	VOC	4.0	20.44	23
3747	25528	80.4	71.7	68.5	5.19	1.91	2.71	MS	VOC	4.0	21.64	23
3749	25529	82.0	71.9	63.5	4.81	1.85	2.60	MS	VOC	4.0	19.3	22
3703	25487	79.7	70.7	67.0	5.13	1.82	2.81	MS	VOC	4.0	22.7	22
3710	25494	79	70.8	67.9	5.10	2.19	2.32	SB	VOC	4.0	22.88	22
3715	25498	82.5	70.2	57.3	5.52	1.90	2.90	MS	VOC	5.0	26.81	33
3721	25503	80.5	72.2	68.7	4.95	1.75	2.82	MS	A	4.0	20.5	22
3723	25505	80.9	71.2	65.5	4.82	1.78	2.70	MS	A	4.0	24.46	22

HULL: Hulling (%); Mill: Milling (%); HRR: HRR rice recovery (%);KL: Kernal length(mm); KB: Kernal breadth(mm); SS: Short slender; L/B Length and breadth ratio; Grain Chalk: Grain Chalkiness; VOC: Very occasionally present; A: Absent; MS: Medium slender; ASV: Alkali spreading value; AC: Amylose content(%); GC: Gel consistency; LB Long bold; SB: Short bold; LS: Long slender;

INITIAL VARIETY TRIAL-NEW PLANT TYPE

Locations: 18 **Entries: 21**
Checks: NC 1: NDR 359, NC 2: Jaya; **Tables: 12.1**
ZC: Swarna-Eastern & North Eastern zones, NDR 8002-Northern & Central zone, CO 50- Western and Southern zones
HC: PA 6444 and Local

The Initial Variety Trial-New Plant Type (IVT-NPT) was constituted for the first time during 50th ARGM in 2015, with the objective of identifying varieties suitable for dense planting conditions with new plant type concept. The trial consisted of twenty one entries including five checks. NDR 359 and Jaya were used as National checks. Swarna for Eastern and North Eastern zones, NDR 8002 for Northern and Central zones, CO-50 for Western and Southern zones as Zonal checks, PA 6444 as Hybrid check and one local check were included in the trial. Remaining sixteen entries were new nominations. The trial was sent to eighteen locations of which nine locations conducted the trial with regular spacing of 20X15 cm (S1-NPT locations) and remaining nine locations with 15X15 spacing (S2-NPT locations).

S1-NPT (20x15 cm spacing):

Of the nine S1-NPT locations, data from three locations *viz*., Bhubaneswar -1, Bhubaneswar -2 and Sabour was not included in the overall mean yield analysis. At Bhubaneswar -1, appropriate plot size was not maintained, at Bhubaneswar-2, drought conditions prevailed and planting was delayed at Sabour. Remaining six S1-NPT locations are Pantnagar, Ludhiana, Pusa, Chinsurah, Maruteru and Coimbatore. CV of the experiments ranged from 5.67 (Chinsurah) to 17.02 (Pusa). Experimental mean varied from 2563 kg/ha at Sabour to 5953 kg/ha at Chinsurah. Overall mean yield of the entries varied from 3081 kg/ha (IET 25538) to 5901 kg/ha (Hybrid check-PA 6444). Days to 50% flowering varied from 91 days (IET 25533) to 117 days (IET 25545). Plant height varied from 97 cm (IET 25538) to 146 cm (IET 25545). Panicles/m^2 ranged from 240 (IET 25534) to 325 (IET 25540). None of the entries showed more than 5% yield superiority over the best check on overall basis. However, one entry, IET 25530 showed more than 5% yield superiority over the best check in the Eastern zone and is discussed below.

IET 25530 (CR 3561-3-2-1-1-1-1) derived from the cross of Surendra/Annapurna with a mean yield of 6111 kg/ha, 95 days to 50% flowering and medium bold grains recorded 14.93, 38.79, 47.39, 14.1 and 27.45 % yield superiority over the National-1, National-2, Zonal, Local and Hybrid checks, respectively. It yielded 5556 kg/ha at Pusa and ranked first in Bihar with 43 and 60 % yield superiority over the best and hybrid checks, respectively.

S2-NPT (15x15 cm spacing):

CV at two S2-NPT locations Raipur and IIRR was very low and high respectively and hence not included in the analysis. The actual IVT-NPT test locations (S2-NPT) are Kaul, Cuttack, Varanasi, Jabalpur, Shirgaon, Gangavati and Mandya. CV of the experiments ranged from 2.80 at Raipur to 28.96 at IIRR. Experimental mean varied from 4152 kg/ha at Mandya to 7708 kg/ha at Gangavati. Overall mean yield of the entries ranged from 3917 kg/ha (IET 25545) to 6713 kg/ha (IET 25531). Days to 50% flowering ranged from 93 days (IET 25533) to 123 days (IET 25545). Plant height ranged from 91 cm (IET 25538) to 146 cm (IET

25545) and panicles/m^2 varied from 237 (IET 25544) to 341 (National check-Jaya). On overall mean yield basis, none of the entries out yielded the best check by more than 5%, however one entry IET 25543 recorded yield advantage of more than 5% over the best check in the Eastern zone and is discussed below.

Zonal performance of the entries in IVT-NPT, Kharif 2015

IET No./Designation/ Cross combination	GY/ FD/ GT	Yield adv. (%) over NC/RC/LC	Superior to check / yield (kg/ha) / rank	Increase over the best check	
				State	
			3 checks	Rank/ Yield	% BC, HC
S1-NPT (20x15 cm spacing)					
IET 25530 (CR 3561-3-2-1-1-1-1) Surendra/Annapurna	6111 95 MB	14.93 38.79 47.39 ***14.1*** 27.45	PSA 5556 (1)	BI-1	43, 60
NDR 359 (NC-1)	5317				
Jaya (NC -2)	4403				
Zonal check	4146				
Local check	***5356***				
PA 6444 (HC)	4795				
S2-NPT (15x15 cm spacing)					
IET 25543 (R 1501-HR-NPT-1) IR 71677-402-3-3-2/IR 64	6725 102 SB	14.22 5.76 ***4.6*** 7.58 -1.6	CTK 7183 (1)	OD-1	24, 9
NDR 359 (NC-1)	5888				
Jaya (NC -2)	6359				
Zonal check	***6429***				
Local check	6251				
PA 6444 (HC)	6837				

Bold italic: Best check and over the best check; NC-National check, ZC- Zonal check, LC-Local check, HC-Hybrid check, GY: Grain yield (Kg/ha), FD: Days to 50% flowering, GT: Grain type

IET 25543 (R 1501-HR-NPT-1) derived from the cross of IR 71677-402-3-3-2/IR 64 with 6725 kg/ha mean yield, 102 days to 50% flowering and short bold grains recorded 14.22, 5.76, 5 and 7.58 % yield advantage over the National-1, National-2, Zonal and local checks, respectively. It yielded 7183 kg/ha at Cuttack and ranked first in Odisha with 24 and 9 % yield advantage over the best and hybrid checks, respectively. (Tables 12.2, 12.3, 12.4, 12.5).

On the basis of zonal mean yield of more than 5% over the best check, two entries IET 25530 (CR 3561-3-2-1-1-1-1) and IET 25543 (R 1501-HR-NPT-1) are promoted to AVT1-NPT.

Table No 12.1: Composition of entries in Initial Variety Trial- New Plant Type (IVT-NPT), Kharif 2015

Entry No.	IET No.	Designation	To be dispatched (Overall/Zones)	Grain type
1st year of testing				
3801	25530	CR 3561-3-2-1-1-1-1	Surendra/Annapurna	MB
3802	25531	CB 12 132	CO 50/CB 05501	MS
3803	25532	RP 5952-41-20-8-2-1-1	LP 2/JV42//NDR 359	SB
3804	25533	R 1500-HR-NPT-1	IR 71677-402-3-3-2/Mahamaya	LS
3805	25534	CR 3856-44-22-2-1-11-1	IR 73963-86-1-5-2-2/CR 2324-1	MS
3806	25535	NPT 14-10	NPT 29/R 296	LS
3807	**NDR 359 (NC)**			
3808	25536	RP 5953 -43-9-1-1-1-1	LP3/JV 40// RP 5125-12-4-1-1-1	SB
3809	25537	CR 3816-1-2-1-1-1	Gayatri/AC 38700	SB
3810	25538	RTN-1109-39-1-5	RNT 95-2-1-1-1/RNT 50-1-1-1	MS
3811	**Swarna (Eastern & North Eastern), NDR 8002 (Northern & Central) , CO 50 (Western & Southern) -- (ZC)**			
3812	25539	CR 3936 -11-1-1-1-1-1	IR 72967-12-2-3/MTU-1001	MB
3813	25540	GNV-13-01	RS 17-1/IET 19228	MS
3814	25541	RP 5953-118-11-4-3-2-1-B	LP3/JV 40// RP 5125-12-4-1-1-1	MS
3815	**PA 6444 (HC)**			
3816	25542	CR 2683-7-1-2-2-2	CRLC 899/Ac.38700	MS
3817	25543	R 1501-HR-NPT-1	IR 71677-402-3-3-2/ IR 64	SB
3818	25544	RP 5954-18-6-4-1-1-1	Secormandi/NDR 359// IR 78878-53-2-2-2	SB
3819	25545	CR 2682-1-2-5-1-3	CRLC899/AC.38606	MS
3820	**Local Check**			
3821	**Jaya (NC)**			

Table No. 12.2: Grain Yield (kg/ha) of entries in IVT-NPT S1 Kharif 2015

Entry No.	IET No.	II				Zone II Mean (2)		III									
		UT		PUN				OD		OD		BI		BI		BI (1)	
		PNT		LDN				@BBN-1		@BBN-2		@SBR		PSA		Mean	
3801	25530	6232	2 * ...14%	6201	7	6217	2 1%	3045		4344	5	3513	1	5556	1 *#	5556	1 *# 43% **60%**
3802	25531	2603		5542		4073		3539		3033		2859	6	4167	4	4167	4 7% **20%**
3803	25532	4288	6	4996		4642	9	3621	8	3178		2369		2778		2778	
3804	25533	2439		5025		3732		2387		3033		1806		2500		2500	
3805	25534	2401		5842		4121		2963		3811	9	3145	3	4167	5	4167	5 7% **20%**
3806	25535	3887	9	6424	6	5155	8	3128		4156	7	2614		4306	3	4306	3 11% **24%**
3807	NDR 359 (NC)	4017	8	6436	5	5226	5	3539		4633	3	2900	5	3889	6	3889	6 **12%**
3808	25536	4037	7	4991		4514		3539		3522		1797		1944		1944	
3809	25537	1347				1347		4362	3	2689		2778	9	3472	8	3472	8
3810	25538	2038		3513		2776		3210		2867		1716		2222		2222	
3811	Zonal Check	2058		6061	8	4060		4444	1	3711		2410		3194		3194	
3812	25539	3181		5009		4095		4033	5	3467		2533		3194		3194	
3813	25540	4296	5	6042	9	5169	7	3621	9	4622	4	2859	7	4583	2 #	4583	2 # 18% **32%**
3814	25541	3302		5367		4335		3210		3667		2696		2361		2361	
3815	PA 6444 (HC)	6246	1 * ...14%	7665	1	6956	1 * 13%	3951	6	5311	1 *	3170	2	3472	9	3472	9
3816	25542							4444	2	3011		2574		2500		2500	
3817	25543	2951		7484	2	5217	6	3292		4267	6	2819	8	3194		3194	
3818	25544	2406		5414		3910		3539		3422		2288		2361		2361	
3819	25545							3704	7	2589		1307		2083		2083	
3820	Local Check	5461	3	6806	4	6134	3	4280	4	4778	2	2696		3889	7	3889	7 **12%**
3821	Jaya (NC)	4961	4	6831	3	5896	4	3210		4122	8	2982	4	3472		3472	
	Exp Mean	**3587**		**5869**		**4697**		**3574**		**3725**		**2563**		**3300**		**3300**	
	C.D. 5%	532		1021		566		619		499		533		927		915	
	C.V.%	8.95		10.48		10.47		10.49		8.11		12.59		17.02		16.81	
	Sowing Date	03-Jul		02-Jul				13-Jul		25-Jul		27-Jul		03-Jul			
	Planting Date	27-Jul		23-Jul				14-Aug		20-Aug		12-Aug		13-Aug			
	Local ©			PR 121				Hiranmayee		Hiranmayee		Rajendra Sweta		Rajendra Mahsuri			

Table No. 12.2 Contd.: Grain Yield (kg/ha) of entries in IVT-NPT S1 Kharif 2015

Entry No.	IET No.	W.B		Zone III Mean (2)		VII				Zone VII Mean (2)		Overall Mean (6)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		CHN				A.P. MTU		TN CBT								
3801	25530	6667	4	6111	1 *# 14% **27%**	4199		4004		4101		5476	3	96	115	272
3802	25531	6980	1 #	5574	2 # 4% **16%**	3200		6844	3	5022	5	4889	6	99	118	310
3803	25532	5961	9	4369		3728		5546	8	4637		4550		97	117	270
3804	25533	5961		4230		2223		4432		3328		3763		91	101	253
3805	25534	6588	5	5377	3 # **12%**	3542		4341		3941		4480		96	114	240
3806	25535	5961		5133	7 **7%**	4207	9	5709	5	4958	7	5082	5	97	103	290
3807	NDR 359 (NC)	6745	3 #	5317	5 # **11%**	3790		6200	4	4995	6	5179	4	98	101	279
3808	25536	5569		3757		4273	8	5197		4735	8	4335		104	114	284
3809	25537	6196	7	4834	8 **1%**	4735	3 _4%	4674		4704	9	4085		116	126	286
3810	25538	5569		3895		2264		2877		2570		3081		92	97	249
3811	Zonal Check	5098		4146		3970		7241	2	5605	3	4604	9	105	107	316
3812	25539	5490		4342		3164		4030		3597		4012		110	120	285
3813	25540	5961		5272	6 **10%**	2530		3261		2896		4445		107	118	325
3814	25541	6588	6	4475		4559	5	3321		3940		4250		98	113	273
3815	PA 6444 (HC)	6118	8	4795	9	4563	4	7339	1	5951	1 5%	5901	1 3%	98	106	294
3816	25542	5569		4034		4920	2 _8%	4101		4510		4272		112	128	292
3817	25543	5020		4107		4428	7	4631		4529		4618	8	100	125	280
3818	25544	5725		4043		4036		5030		4533		4162		103	116	280
3819	25545	5098		3591		4441	6	5608	7	5025	4	4308		117	146	288
3820	Local Check	6824	2 #	5356	4 # **12%**	5688	1 # _25%	5638	6	5663	2	5718	2	105	118	306
3821	Jaya (NC)	5333		4403		2940		5440	9	4190		4829	7	92	99	283
	Exp Mean	**5953**		**4627**		**3876**		**5022**		**4449**		**4587**		**101**	**114**	**283**
	C.D. 5%	557		513		398		1156		608		328		1	0	16
	C.V.%	5.67		9.66		6.22		13.95		11.90		10.87		1.49	0.00	8.85
	Sowing Date	15-Jul				30-Jun		07-Jul								
	Planting Date	27-Aug				30-Jul		31-Jul								
	Local ©	Koushalya				BPT 5204		IR 20								

* Superior to Best Check % Superior over Best Check @ not included in means
\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 12.2 : Grain Yield (Kg/ha) of entries in IVT-NPT-S2 Kharif 2015

Entry No.	IET No.	II		III				Zone III Mean (2)		V				Zone V Mean (1)	
		HAR		OD		U.P.				M.P.		CG			
		KUL		CTK		VRN				JBP		@PR			
3801	25530	4167		5204		8200	1	6702	3 4%	8156	2 # _48%	6176	6	8156	2 # **48%**
3802	25531			5707	6	7067	6	6387	6	7931	4 # _44%	6054	9	7931	4 # **44%**
3803	25532	4833		4409		7133	4	5771		4414		4000		4414	
3804	25533	5633	8	3361		6600		4981		6867	5 # _25%	4506		6867	5 # **25%**
3805	25534	5700	5	6688	2 …16% _1%	6267		6477	4 1%	5532	9	4114		5532	9
3806	25535	6533	2 …3%	4834		7133	5	5984		8118	3 # _47%	5014		8118	3 # **47%**
3807	NDR 359 (NC)	4533		4775		7000	8	5888		6220	6 _13%	6468	3 #	6220	6 **13%**
3808	25536	5567	9	4556		6467		5511		5269		5305		5269	
3809	25537			4561				4561		4514		4996		4514	
3810	25538	5667	6	3781		6600		5190		5236		4304		5236	
3811	Zonal Check			5324	9	7533	3	6429	5	5603	8 _2%	6514	2 #	5603	8 **2%**
3812	25539			4731		6800		5765		3575		5565		3575	
3813	25540	6300	4	5333	8	6800		6067		4731		6111	8	4731	
3814	25541	5133		5588	7	7000	9	6294	8	4914		4589		4914	
3815	PA 6444 (HC)	7467	1 * …18%	6607	3 …14%	7067	7	6837	1 6%	5515		6146	7	5515	
3816	25542			6195	4 …7%			6195		4385		4382		4385	
3817	25543			7183	1 * …24% _9%	6267		6725	2 5%	5090		6256	4	5090	
3818	25544			3251		6400		4826		3212		4404		3212	
3819	25545			3883				3883		1181				1181	
3820	Local Check	5667	7	4635		7867	2	6251	9	5903	7 _7%	6187	5	5903	7 **7%**
3821	Jaya (NC)	6333	3	5784	5	6933		6359	7	8577	1 # _56%	6643	1 #	8577	1 # **56%**
	Exp Mean	**5656**		**5066**		**6952**		**5936**		**5474**		**5387**		**5474**	
	C.D. 5%	414		1242		1530		996		912		249		811	
	C.V.%	4.35		14.86		13.26		14.60		10.09		2.80		8.99	
	Sowing Date	30-Jun		01-Jul		02-Jul				15-Jun		06-Jul			
	Planting Date	28-Jul		02-Aug		24-Nov				06-Jul		24-Jul			
	Local ©	HKR 127		NAVEEN						JR 201					

Table No. 12.2 Contd.: Grain Yield (Kg/ha) of entries in IVT-NPT-S2 Kharif 2015

Entry No.	IET No.	VI		VII								Zone VII Mean (2)		Overall Mean (7)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		MH		TEL		KA		KA		KA (2)								
		SHR		@IRR		GNV		MND		Mean								
3801	25530	3971		3587		7403		2580		4991		4991	*	5669		103	110	300
3802	25531	5089	9	4790		9652	2 #	4831	8	7242	3	7242	3 *	6713	1 2%	112	112	305
3803	25532	4472		4603		7607		4117		5862		5862	*	5284		104	108	265
3804	25533	3992		5153		5773		4127		4950		4950	*	5193		93	106	275
3805	25534	4664		6110	9	9073	6	4139		6606	7	6606	7 *	6009	8	98	114	253
3806	25535	5014		4143		7903	9	3776		5839		5839	*	6187	6	100	100	287
3807	NDR 359 (NC)	5267	5	9543	2	6555		4616	9	5585		5585	*	5567		100	96	284
3808	25536	4973		5693		7298		3509		5403		5403	*	5377		106	113	277
3809	25537	3628		8720	4	9507	3	4922	6	7215	4	7215	4 *	5426		119	137	272
3810	25538	5391	2 ...2%	3460		3636		906		2271		2271	*	4459		99	91	257
3811	Zonal Check	5171	7	4777		9112	4	4842	7	6977	5	6977	5 *	6264	4	111	107	315
3812	25539	4554		5187		7291		3517		5404		5404	*	5078		114	113	281
3813	25540	3745		8427	5	6101		4210		5155		5155	*	5317		103	116	310
3814	25541	5206	6	3847		8113	7	3886		6000		6000	*	5692	9	100	113	299
3815	PA 6444 (HC)	5508	1 ...5%	8963	3	9099	5	5540	1	7320	2	7320	2 *	6686	2 2%	102	105	307
3816	25542	3903		7577	7	8087	8	5355	2	6721	6	6721	6 *	5585		119	140	265
3817	25543	5329	3 ...1%	5407		7370		5183	5	6277	9	6277	9 *	6070	7	101	115	247
3818	25544	4877		2500		7791		4212		6002		6002	*	4957		109	111	237
3819	25545	5302	4 ...1%	9860	1	6864		2356		4610		4610	*	3917		123	146	287
3820	Local Check	4355		7400	8	9816	1 #	5307	3	7561	1 **3%**	7561	1 * **3%**	6221	5	101	103	310
3821	Jaya (NC)	5158	8	8360	6	7811		5270	4	6540	8	6540	8 *	6552	3	104	100	341
	Exp Mean	**4741**		**6100**		**7708**		**4152**		**5930**		**5930**		**5652**		**105**	**111**	**285**
	C.D. 5%	661		2915		546		540		373				338		1	8	18
	C.V.%	8.44		28.96		4.29		7.88		5.48				9.83		1.10	0.00	11.95
	Sowing Date	07-Jul		18-Jun		15-Jul		10-Aug										
	Planting Date	23-Jul		09-Jul		14-Aug		10-Sep										
	Local ©			Swarna		GGV-05-01		Thanu										

* Superior to Best Check % Superior over Best Check @ not included in means

\# Superior to Hybrid Check **% Superior over Hybrid Check**

Table No. 12.3: Days to 50% flowering of entries in IVT-NPT S1 Kharif 2015

Entry No.	IET No.	II		Zone II Mean (2)	III						Zone III Mean (2)	VII		Zone VII Mean (2)	Overall Mean (6)
		UT	PUN		OD	OD	BI	BI	BI (1)	W.B		A.P.	TN		
		PNT	LDN		@BBN-1	@BBN-2	@SBR	PSA	Mean	CHN		MTU	CBT		
3801	25530	101	101	101	94	94	94	105	105	86	95	91	94	93	96
3802	25531	85	105	95	110	105	111	116	116	100	108	82	108	95	99
3803	25532	102	98	100	102	100	105	104	104	88	96	81	109	95	97
3804	25533	86	91	89	91	92	91	100	100	85	92	90	94	92	91
3805	25534	99	92	96	95	95	96	102	102	86	94	97	103	100	96
3806	25535	99	94	97	93	92	98	104	104	92	98	96	98	97	97
3807	NDR 359 (NC)	99	97	98	95	92	104	100	100	99	100	92	100	96	98
3808	25536	102	101	101	102	101	102	108	108	96	102	105	113	109	104
3809	25537	102		102	123	109	108	139	139	99	119	125	118	121	116
3810	25538	94	95	95	96	91	98	98	98	84	91	81	101	91	92
3811	Zonal Check	102	99	101	110	105	107	115	115	95	105	114	105	110	105
3812	25539	105	115	110	95	105	106	113	113	100	106	112	116	114	110
3813	25540	100	98	99	100	96	105	141	141	97	119	100	107	103	107
3814	25541	101		101	94	95	96	109	109	100	104	89	93	91	98
3815	PA 6444 (HC)	101	96	99	95	95	95	101	101	95	98	95	100	97	98
3816	25542		99	99	124	110	115	137	137	84	110	125	118	121	112
3817	25543	102	102	102	96	94	105	103	103	101	102	96	98	97	100
3818	25544	102	99	100	105	97	105	105	105	99	102	105	110	107	103
3819	25545				124	110	114	129	129	95	112	124	120	122	117
3820	Local Check	100	101	101	102	97	95	112	112	95	104	111	113	112	105
3821	Jaya (NC)	101	99	100	94	91	98	100	100	65	82	89	101	95	92
	Exp Mean	**99**	**99**	**99**	**102**	**98**	**102**	**111**	**111**	**92**	**102**	**100**	**106**	**103**	**101**
	C.D. 5%	3	4	3	2	1	1	2	2	1	1	2	2	1	1
	C.V.%	2.13	2.64	2.35	1.25	0.74	0.64	0.92	0.90	0.91	0.88	0.92	0.96	0.93	1.49

Table No. 12.3: Days to 50% flowering of entries in IVT-NPT-S2 Kharif 2015

Entry No.	IET No.	II	III		Zone III Mean (2)	V		Zone V Mean (2)	VI	VII				Zone VII Mean (3)	Overall Mean (9)
		HAR	OD	U.P.		M.P.	CG		MH	TEL	KA	KA	KA (2)		
		KUL	CTK	VRN		JBP	RPR		SHR	IIRR	GNV	MND	Mean		
3801	25530	103	114	101	108	115	94	104	92	108	103	96	100	102	103
3802	25531		113	106	109	121	107	114	100	121	124	105	114	116	112
3803	25532	105	113	91	102	115	97	106	95	107	103	112	108	107	104
3804	25533	89	109	82	96	108	82	95	78	99	97	94	95	97	93
3805	25534	93	108	89	98	111	89	100	83	108	101	105	103	105	98
3806	25535	98	110	94	102	114	93	103	88	100	100	102	101	101	100
3807	NDR 359 (NC)	98	110	94	102	111	93	102	88	109	101	100	100	103	100
3808	25536	105	112	101	106	115	105	110	91	107	104	111	108	107	106
3809	25537		109		109	125	127	126	116	137	124	97	111	119	119
3810	25538	93	108	96	102	110	89	99	90	99	102	105	104	102	99
3811	Zonal Check		115	106	111	115	101	108	99	120	124	107	115	117	111
3812	25539		115	107	111	125	108	116	101	119	123	112	117	118	114
3813	25540	106	114	102	108	115	95	105	89	101	102	105	104	103	103
3814	25541	105	115	89	102	113	87	100	87	103	102	97	99	101	100
3815	PA 6444 (HC)	107	116	97	106	107	93	100	90	108	103	99	101	103	102
3816	25542		114		114	119	127	123	110	138	124	101	112	121	119
3817	25543		118	98	108	113	94	103	86	102	102	97	99	100	101
3818	25544		111	106	109	124	99	111	92	119	109	110	109	113	109
3819	25545		113		113	135		135	113	137	124	119	122	127	123
3820	Local Check	98	103	101	102	106	96	101	96	108	101	103	102	104	101
3821	Jaya (NC)	99	111	101	106	114	95	104	94	104	107	111	109	107	104
	Exp Mean	**100**	**112**	**98**	**105**	**116**	**98**	**107**	**94**	**112**	**108**	**104**	**106**	**108**	**105**
	C.D. 5%	0	2	0	1	2	0	1	1	1	2	4	2	2	1
	C.V.%	0.00	1.05	0.20	0.85	0.82	0.00	0.62	0.75	0.34	1.13	2.52	1.90	1.53	1.10

Table No. 12.4 : Plant Height (cm) of entries in IVT-NPT S1 Kharif 2015

Entry No.	IET No.	II		Zone II Mean (2)	III						Zone III Mean (2)	VII		Zone VII Mean (2)	Overall Mean (6)
		UT	PUN		OD	OD	BI	BI	BI (1)	W.B		A.P.	TN		
		PNT	LDN		@BBN-1	@BBN-2	@SBR	PSA	Mean	CHN		MTU	CBT		
3801	25530	107	113	110	115	112	104	103	103	116	110	138	111	125	115
3802	25531	105	108	106	108	112	93	95	95	153	124	143	103	123	118
3803	25532	109	114	112	112	117	104	103	103	112	108	145	117	131	117
3804	25533	106	105	105	99	108	103	86	86	92	89	115	104	109	101
3805	25534	116	120	118	110	117	110	100	100	92	96	146	111	129	114
3806	25535	97	103	100	90	98	85	95	95	107	101	122	96	109	103
3807	NDR 359 (NC)	98	98	98	103	96	83	85	85	112	99	114	98	106	101
3808	25536	107	116	111	117	118	105	96	96	118	107	152	98	125	114
3809	25537	94		94	120	134	121	116	116	120	118	147	154	150	126
3810	25538	98	91	94	85	89	80	77	77	128	103	102	88	95	97
3811	Zonal Check	93	98	96	80	91	69	75	75	115	95	145	113	129	107
3812	25539	121	104	113	94	120	98	94	94	145	120	139	119	129	120
3813	25540	109	126	117	125	121	105	107	107	110	109	139	116	127	118
3814	25541	114	114	114	117	117	102	100	100	100	100	142	109	125	113
3815	PA 6444 (HC)	109	107	108	102	109	93	83	83	100	92	132	104	118	106
3816	25542				138	149	128	119	119	94	107	147	152	149	128
3817	25543	132	139	136	114	125	109	93	93	115	104	144	127	136	125
3818	25544	111	114	113	125	121	100	100	100	111	106	147	113	130	116
3819	25545				145	148	130	120	120	140	130	151	172	161	146
3820	Local Check	132	96	114	105	114	70	106	106	135	121	134	103	119	118
3821	Jaya (NC)	94	102	98	99	97	85	81	81	105	93	114	96	105	99
	Exp Mean	**108**	**109**	**109**	**110**	**115**	**99**	**97**	**97**	**115**	**106**	**136**	**115**	**125**	**114**

Table No. 12.4: Plant Height (cm) of entries in IVT-NPT-S2 Kharif 2015

Entry No.	IET No.	II	III		Zone III Mean (2)	V		Zone V Mean (2)	VI	VII				Zone VII Mean (3)	Overall Mean (9)
		HAR	OD	U.P.		M.P.	CG		MH	TEL	KA	KA	KA (2)		
		KUL	CTK	VRN		JBP	RPR		SHR	IIRR	GNV	MND	Mean		
3801	25530	98	116	132	124	102	116	109	115	114	113	82	97	103	110
3802	25531		121	137	129	98	118	108	109	111	118	87	103	106	112
3803	25532	91	128	124	126	88	114	101	105	114	118	91	105	108	108
3804	25533	99	117	122	119	97	116	106	101	110	108	88	98	102	106
3805	25534	103	122	119	121	104	124	114	118	112	124	101	113	112	114
3806	25535	94	102	127	114	80	111	96	98	96	110	86	98	97	100
3807	NDR 359 (NC)	86	98	107	102	79	110	95	94	109	104	79	91	97	96
3808	25536	97	127	132	129	91	123	107	114	116	128	93	111	112	113
3809	25537		150		150	107	140	123	140	152	163	109	136	141	137
3810	25538	76	93	127	110	71	107	89	94	100	81	73	77	85	91
3811	Zonal Check		94	137	116	68	106	87	117	109	127	95	111	110	107
3812	25539		126	138	132	82	126	104	121	105	115	94	105	105	113
3813	25540	100	129	133	131	100	130	115	110	136	114	97	106	116	116
3814	25541	89	123	123	123	92	116	104	115	139	124	96	110	120	113
3815	PA 6444 (HC)	82	112	124	118	84	115	100	109	116	111	90	100	105	105
3816	25542		148		148	98	140	119	153	169	156	114	135	146	140
3817	25543		129	129	129	83	119	101	115	111	126	105	116	114	115
3818	25544		127	137	132	86	106	96	114	111	122	89	105	107	111
3819	25545		155		155	99		99	171	160	169	121	145	150	146
3820	Local Check	91	121	132	127	85	98	91	95	97	108	102	105	102	103
3821	Jaya (NC)	86	103	132	118	88	99	93	105	99	106	79	92	94	100
	Exp Mean	**92**	**121**	**128**	**124**	**90**	**117**	**103**	**115**	**118**	**121**	**94**	**107**	**111**	**111**
	C.D. 5%				0			4					0		8

Table No. 12.5: Panicles/ M² of entries in S1 IVT-NPT 2015 Kharif 2015

Entry No.	IET No.	II		Zone II Mean (2)	III						Zone III Mean (2)	VII		Zone VII Mean (2)	Overall Mean (6)
		UT	PUN		OD	OD	BI	BI	BI (1)	W.B		A.P.	TN		
		PNT	LDN		@BBN-1	@BBN-2	@SBR	PSA	Mean	CHN		MTU	CBT		
3801	25530	218	248	233	211	330	192	233	233	264	248	307	363	335	272
3802	25531	245	326	286	190	300	213	211	211	297	254	366	413	390	310
3803	25532	215	229	222	218	241	204	224	224	275	250	337	340	338	270
3804	25533	204	156	180	187	273	204	196	196	315	256	277	368	323	253
3805	25534	217	194	206	185	249	196	170	170	230	200	304	327	315	240
3806	25535	223	257	240	212	335	265	250	250	306	278	320	383	352	290
3807	NDR 359 (NC)	230	247	238	210	292	204	210	210	264	237	317	405	361	279
3808	25536	225	249	237	216	249	219	175	175	341	258	314	398	356	284
3809	25537	253		253	181	241	218	220	220	292	256	318	348	333	286
3810	25538	199	244	222	186	241	143	157	157	270	214	290	333	312	249
3811	Zonal Check	269	317	293	225	365	298	219	219	329	274	343	418	381	316
3812	25539	258	273	266	213	227	225	215	215	272	243	307	385	346	285
3813	25540	221	336	279	227	311	214	233	233	330	281	323	505	414	325
3814	25541	217	235	226	230	260	256	201	201	275	238	386	322	354	273
3815	PA 6444 (HC)	239	262	250	235	296	206	217	217	308	262	330	412	371	294
3816	25542				157	206	194	187	187	330	259	311	340	325	292
3817	25543	227	211	219	213	233	191	243	243	322	283	310	367	338	280
3818	25544	217	231	224	206	226	195	232	232	327	280	320	353	337	280
3819	25545				167	245	177	186	186	283	234	307	378	342	288
3820	Local Check	228	352	290	235	365	316	222	222	285	253	297	453	375	306
3821	Jaya (NC)	257	323	290	204	281	193	213	213	226	219	300	380	340	283
	Exp Mean	**230**	**261**	**245**	**205**	**275**	**215**	**210**	**210**	**292**	**251**	**318**	**381**	**349**	**283**
	C.D. 5%	29	75	38	23	54	38	19	19	35	23	29	39	24	16
	C.V.%	7.51	17.35	13.64	6.83	12.02	10.82	5.55	5.48	7.27	7.83	5.59	6.14	5.93	8.85

Table No. 12.5: Panicles/ M² of entries in IVT-NPT-S2 2015 Kharif 2015

Entry No.	IET No.	II	III		Zone III Mean (2)	V		Zone V Mean (2)	VI	VII				Zone VII Mean (3)	Overall Mean (9)
		HAR	OD	U.P.		M.P.	CG		MH	TEL	KA	KA	KA (2)		
		KUL	CTK	VRN		JBP	RPR		SHR	IIRR	GNV	MND	Mean		
3801	25530	349	262	294	278	324	173	248	227	253	492	330	411	359	300
3802	25531		286	274	280	318	190	254	277	270	467	360	414	366	305
3803	25532	280	251	236	243	275	165	220	218	307	334	320	327	320	265
3804	25533	322	216	254	235	376	127	252	206	290	407	280	344	326	275
3805	25534	262	238	282	260	233	136	184	181	273	408	265	337	315	253
3806	25535	311	238	291	264	322	153	237	259	297	418	300	359	338	287
3807	NDR 359 (NC)	314	249	258	253	283	166	224	249	313	444	280	362	346	284
3808	25536	328	240	233	236	325	146	235	237	217	474	290	382	327	277
3809	25537		218		218	208	151	180	224	327	492	285	389	368	272
3810	25538	260	209	221	215	285	180	232	218	260	424	260	342	315	257
3811	Zonal Check		264	340	302	326	179	252	273	333	503	305	404	380	315
3812	25539		233	266	250	283	177	230	218	300	468	305	387	358	281
3813	25540	298	264	287	276	233	170	202	254	420	503	365	434	429	310
3814	25541	365	238	256	247	296	145	220	272	260	568	295	432	374	299
3815	PA 6444 (HC)	301	227	322	274	335	163	249	263	377	487	285	386	383	307
3816	25542		249		249	214	169	192	198	277	469	280	375	342	265
3817	25543		233	234	234	238	143	190	275	223	333	295	314	284	247
3818	25544		233	232	233	231	160	196	212	143	409	275	342	276	237
3819	25545		235		235	164		164	223	313	537	250	394	367	287
3820	Local Check	363	271	364	317	261	174	217	251	450	436	220	328	369	310
3821	Jaya (NC)	447	266	319	293	285	162	223	250	373	630	340	485	448	341
	Exp Mean	**323**	**244**	**276**	**258**	**277**	**161**	**220**	**237**	**299**	**462**	**295**	**378**	**352**	**285**
	C.D. 5%	39	40	56	34	16	11	9	25	125	56	35	31	45	18
	C.V.%	7.25	9.84	12.26	11.46	3.52	4.17	3.49	6.32	25.28	7.39	7.30	7.24	13.76	11.95

MULTI - LOCATION LATE SOWN TRIAL – EARLY

Location : 19 **Entries: 36**

Table : 13.1

The changing climatic conditions, such as drought at different crop growth stages, frequent delay in monsoon resulting in the delayed planting in rice crop. Farmers in different parts of the country are unable to transplant the nursery, or many times they transplant over aged nurseries. Under such situations farmers are forced to grow rice in late sown conditions either in the last week of August or first week of September. Late sown rice mostly faces the cold temperature during grain filling stage resulting in lower yields. Hence, an attempt was made to evaluate the released early duration rice varieties with high yield potential under late sown conditions through direct seeding during last week of August or first week of September 2015. Thirty six released varieties of early and very early duration were obtained from different states in the country i.e., Punjab, UP, Bihar, Jharkhand, Assam, Chhattisgarh, Odisha, Andhra Pradesh, Telangana and Karnataka.

Multi-Location Late Sown – Early (MLSE) was constituted with 36 entries, mainly to evaluate the released varieties with less than 115 days duration for their suitability under late sown conditions i.e., last of week of August/1st week of September. The trial was sent to 19 locations while data from six locations was received i.e., Raipur, Sindewahi, Maruteru, Ragolu, Warangal and Jagityal. The data from Sindewahi was not considered due to very low yield. The experimental mean yield at the test locations ranged from 1658 kg/ha (Raipur) to 5270 kg/ha (Jagityal). The CV% of the experimental sites ranged from 6.16 (Maruteru) to 16.20 (Ragolu). Among the test entries, Vandana recorded lowest mean yield of 1945 kg/ha and NLR 34449 recorded highest yield (4295 kg/ha) across the locations. KMP 105 recorded 65 days to 50% flowering while Erramallelu recorded 85 days. Plant height of the entries ranged from minimum 70cm (Erramallelu and NLR 40024) to a maximum of 103cm (IET 23356). No. of panicles per sqm ranged from 191 (Shabaghidhan) to 360 (Erramallelu).

Performance of Varieties in Chhattisgarh:

Experimental mean yield was low (1658 kg/ha) at Raipur representing Chhattisgarh state. CR Dhan 100 recorded first rank with maximum grain yield of 2631 kg/ha, followed by CR Dhan 203 (2502 kg/ha), Luit (2474 kg/ha) and IET 23356 (2306 kg/ha). All these 4 varieties were statistically on par although ranked First to fourth in Chhattisgarh. However Tripura Khara 1 (5th rank variety) with grain yield of 2190 kg/ha to 9th rank variety CR Dhan 40 (2080 kg/ha) showed on par performance. Results suggested in the late sown condition (1st week of September) that **CR Dhan 100, CR Dhan 203, Luit and IET 23356** recorded more than 2.3 ton/ha yield. Probably due to low temperature (17^{o}C) prevailed over the state for longer period at the time of grain filling, yields of the promising varieties affected. However it is inferred that varieties CR Dhan 100, CR Dhan 203, Luit and new variety IET 23356 are promising for late sown conditions in the Chhattisgarh.

Performance Varieties in Andhra Pradesh:

During the months of November and December minimum temperature dropped down to 19.0^{0}c and 16.0^{0}c respectively. Experimental mean yield was 4058 kg/ha in the state of Andhra Pradesh. CR Dhan 203 recorded maximum grain yield 5159 kg/ha followed by PR 124 (5008kg/ha), NLR 40024 (4927 kg/ha), DRR Dhan 44 (4770kg/ha), CR Dhan 100 (4743 kg/ha) and Tripura Khara 1 (4739 kg/ha) . Of the varieties which recorded more than 4.5

ton/ha of grains yield under late sown conditions in Andhra Pradesh were **CR Dhan 203, PR 124, NLR 40024, DRR Dhan 44, CR Dhan 100, Tripura Khara 1, Samaleshwari and IET 23420**. It may be noted that these varieties with 5 ton/ha yield under late sown conditions performed well even when temperature dropped below the normal for rice cultivation.

Temperature status at the locations during flowering and grain filling

November			
Location	**Temperature Maximum**	**Temperature Minimum**	**Crop growth stage**
Raipur	31.3	17.2	Flowering
Ragolu	30.45	23.76	Flowering
Warangal	28.0	19.0	Flowering
Jagityal	33.2	17.4	Flowering
December			
Raipur	**-**	**-**	Grain filling
Ragolu	**30.27**	**22.85**	Grain filling
Warangal	**25.0**	**16.0**	Grain filling
Jagityal	**32.5**	**16.4**	Grain filling

Performance of Entries in Telangana:

Experimental mean yield were 5177 kg/ha. It may be noted that the temperature during November-December at the two locations in Telangana ranged from 16^0c to 19^0c, which coincided with the grain filling and maturity stages. Under such conditions the state sown entries yielded more than 6 t/ha of grain yield in the varieties **CR Dhan 201, CR Dhan 101, NLR 40024, Luit, cotton Dora Sannalu, Samleswari, and IET 23356**. The results suggested that the above mentioned varieties can be considered for late sown condition in these states. It is also suggested that the entries promoted in AVT 1 early DS & TP can also be evaluated in late sown conditions in the zone.

State wise grain yield (Kg/ha) of entries in MLT-E- DS

S. No	Code	Chhattisgarh	Yield Kg/ha	Code	Andhra Pradesh	Yield Kg/ha	Code	Telangana	Yield/ha
1	4218	CR DHAN 100	2631.1	4214	CR Dhan 203	5159.5	4203	CR Dhan 201	7615.8
2	4214	CR DHAN 203	2502.2	4220	PR 124	5008.0	4204	CR Dhan 101	6825.0
3	4225	Luit	2474.4	4232	NLR 40024	4927.0	4232	NLR 40024	6382.6
4	4219	IET 23356	2305.6	4209	DRR Dhan 44	4769.7	4225	Luit	6260.8
5	4213	TripuraKhara-1	2190.0	4218	CR Dhan 100	4742.8	4208	Cotton Dorasannalu	6242.2
6	4201	DRR Dhan 42	2168.9	4213	Tripura Khara-1	4739.9	4236	Samaleshwari	6128.3
7	4216	CR Dhan 205	2142.2	4236	Samaleshwari	4684.6	4219	IET 23356	6123.3
8	4235	Indira Aerobic 1	2088.9	4221	IET 23420	4682.1	4233	JGL 11118	5960.9
9	4230	CR Dhan 40	2080.0	4234	NLR 34449	4399.0	4235	Indira Aerobic 1	5896.7
		Exp Mean	1658.0		Exp Mean	4058.1		Exp Mean	5177.3
		C.D. %	414.1		C.D. %	620.1		C.D. %	627.6
		C.V.%	15.3		C.V.%	13.4		C.V.%	10.6

Table No. 13.1: Composition of entries in Multi-location testing of Early duration variety - Late sown situation (MLT-E), Kharif 2015

Entry No.	Variety Name
4201	DRR Dhan 42 (IR 64 Drt-1) (IET 22836)
4202	Sahbhagidhan
4203	CR Dhan 201
4204	CR Dhan 101
4205	Narendra 97
4206	DRR Dhan 43 (IET 22080)
4207	CR Dhan 204
4208	Cotton Dorasannalu (MTU 1010)
4209	DRR Dhan 44 (IET 22081)
4210	Vandana
4211	CR Dhan 202
4212	Govind
4213	Tripura Khara Dhan 1 (IET 22837)
4214	CR Dhan 203
4215	Varalu
4216	CR Dhan 205
4217	Tripur Khara Dhan 2 (IET 22835)
4218	CR Dhan 100
4219	IET 23356
4220	PR 124
4221	IET 23420
4222	IR 64
4223	Tulasi
4224	Anjali
4225	Luit
4226	CR Dhan 103
4227	KMP 105
4228	RNR 15048
4229	Erramallelu
4230	CR Dhan 40
4231	JGL 17004
4232	NLR 40024
4233	JGL 11118
4234	NLR 34449
4235	Indira Aerobic 1
4236	Samaleshwari

Table No. 13.2: Grain Yield (kg/ha) of entries in MLT-EARLY DS Kharif 2015

Entry No.	IET No.	V				Zone V Mean (2)		VII					
		CG		MH				A.P.		A.P.		A.P. (2)	
		RPR		SND				MTU		RGL		Mean	
4201	DRR Dhan 42	2169	6	738	6	1454	5	3625		4636		4131	
4202	Sahbhagidhan	1473		177		825		3695		4643		4169	
4203	CR Dhan 201	1696		815	3	1255		3965		3115		3540	
4204	CR Dhan 101	1972		453		1213		3680		3313		3497	
4205	Narendra 97	709		267		488		3250		3320		3285	
4206	DRR Dhan 43	1790		448		1119		3555		4550		4053	
4207	CR Dhan 204	1242		856	2	1049		3305		3882		3594	
4208	Cotton Dorasannalu	1748		784	5	1266		4085	9	4134		4109	
4209	DRR Dhan 44	1854		1051	1	1453	6	4255	3	5284	7	4770	4
4210	Vandana	649		231		440		2730		1964		2347	
4211	CR Dhan 202	2039		811	4	1425	8	3365		4299		3832	
4212	Govind	934		285		610		4065		2665		3365	
4213	IR 64 Sukha 1	2190	5	693	8	1441	7	4030		5450	5	4740	6
4214	CR Dhan 203	2502	2	575		1539	3	4155	5	6164	1	5160	1
4215	Varalu	797		494		645		4190	4	3717		3953	
4216	CR Dhan 205	2142	7	666		1404		4110	8	4603		4357	
4217	IR 64 Sukha 2	1607		593		1100		3950		3882		3916	
4218	CR Dhan 100	2631	1	548		1590	2	4135	6	5351	6	4743	5
4219	IET 23356	2306	4	435		1370		3455		4848		4151	
4220	PR 124	1120		290		705		4315	2	5701	3	5008	2
4221	IET 23420	1758		525		1142		3855		5509	4	4682	8
4222	IR 64	1366		670	9	1018		3450		4735		4093	
4223	Tulasi	1847		734	7	1290		3160		4623		3892	
4224	Anjali	1239		498		869		3055		3611		3333	
4225	Luit	2474	3	593		1534	4	4115	7	3988		4052	
4226	CR Dhan 103	1866		476		1171		2845		4259		3552	
4227	KMP 105	1901		507		1204		4070		4306		4188	
4228	RNR 15048	1024		516		770		3595		4431		4013	
4229	Erramallelu			462		462		3815		4861		4338	
4230	CR Dhan 40	2080	9	444		1262		2910		3472		3191	
4231	JGL 17004	877		557		717		3975		3538		3757	
4232	NLR 40024	1672		430		1051		3690		6164	2	4927	3
4233	JGL 11118	1187		285		736		3470		4769		4119	
4234	NLR 34449							3745		5053	8	4399	9
4235	Indira Aerobic 1	2089	8			2089	1	3485		4821		4153	
4236	Samaleshwari	1422				1422	9	4475	1	4894	9	4685	7
	Exp Mean	**1658**		**543**		**1109**		**3712**		**4404**		**4058**	
	C.D. 5%	414		163		226		372		1162		620	
	C.V.%	15.32		18.39		17.88		6.16		16.20		13.39	
	Sowing Date	01-Sep		31-Aug				31-Aug		01-Sep			

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 13.2 Contd.: Grain Yield (kg/ha) of entries in MLT-EARLY DS Kharif 2015

Entry No.	IET No.	VII						Zone VII Mean (4)		Overall Mean (6)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		TEL		TEL		TEL (2)								
		WGL		JGL		Mean								
4201	DRR Dhan 42	4576		6403	5	5490		4810		3691		76	84	300
4202	Sahbhagidhan			5512		5512		4617		3100		68	88	191
4203	CR Dhan 201			7616	1	7616	1	4899		3441		71	89	251
4204	CR Dhan 101			6825	3	6825	2	4606		3249		72	89	262
4205	Narendra 97	3981		3173		3577		3431		2450		76	74	297
4206	DRR Dhan 43			5017		5017		4374		3072		69	83	217
4207	CR Dhan 204	4444		5771		5108		4351		3250		74	88	267
4208	Cotton Dorasannalu	6819	1	5665		6242	5	5176	2	3872	6	73	81	305
4209	DRR Dhan 44	4537		5348		4943		4856		3722	9	77	87	287
4210	Vandana	3998		2098		3048		2698		1945		66	99	238
4211	CR Dhan 202	4074		4527		4300		4066		3186		74	95	258
4212	Govind	4965		4893		4929		4147		2968		76	79	255
4213	IR 64 Sukha 1	4715		4655		4685		4713		3622		73	83	291
4214	CR Dhan 203			5073		5073		5131	5	3694		72	81	268
4215	Varalu	4836		5912	9	5374		4664		3324		76	76	295
4216	CR Dhan 205	6134	3	5472		5803		5080	8	3855	7	71	91	256
4217	IR 64 Sukha 2	5132		5639		5386		4651		3467		74	86	285
4218	CR Dhan 100			5828		5828		5105	6	3699		69	99	254
4219	IET 23356			6123	7	6123	7	4809		3433		71	103	280
4220	PR 124	5252	9	5068		5160		5084	7	3624		80	72	298
4221	IET 23420	5053		5877		5465		5074	9	3763	8	74	85	286
4222	IR 64	5667	7	6037	8	5852		4972		3654		76	75	311
4223	Tulasi	4991		2857		3924		3908		3035		71	78	310
4224	Anjali	4854		2487		3670		3502		2624		68	97	243
4225	Luit	5208		7313	2	6261	4	5156	4	3949	5	69	80	262
4226	CR Dhan 103	5949	6	3443		4696		4124		3140		69	100	257
4227	KMP 105			4153		4153		4176		2987		65	77	329
4228	RNR 15048	4431		5347		4889		4451		3224		74	81	293
4229	Erramallelu			5140		5140		4605		3570		85	70	360
4230	CR Dhan 40	5648	8	5012		5330		4261		3261		72	99	251
4231	JGL 17004	5995	5	5175		5585		4671		3353		73	76	299
4232	NLR 40024	6090	4	6675	4	6383	3	5655	1	4120	3	76	70	324
4233	JGL 11118	6343	2	5579		5961	8	5040		3605		78	74	290
4234	NLR 34449	4199		4182		4190		4295		4295	1	82	73	376
4235	Indira Aerobic 1			5897		5897	9	4734		4073	4	73	86	269
4236	Samaleshwari			6128	6	6128	6	5166	3	4230	2	74	94	254
	Exp Mean	**5116**		**5220**		**5177**		**4571**		**3411**		**73**	**85**	**279**
	C.D. 5%	1078		808		628		464		319		1		26
	C.V.%	12.83		9.51		10.61		12.63		14.28		2.01		14.18
	Sowing Date	01-Sep		01-Sep										

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 13.2: Grain Yield (kg/ha) of entries in MLT-EARLY TP Kharif 2015

Entry No.	IET No.	V		VII		Overall Mean (2)		Days to 50% Flowering	Plant Height (cm)	Panicles/ M²
		CG		KA						
		RPR		MND						
4201	DRR Dhan 42	1450		3827		2638		87	78	430
4202	Sahbhagidhan	809		3933	5	2371		79	76	395
4203	CR Dhan 201	2051		4083	3	3067	5	80	80	365
4204	CR Dhan 101	2546	4	3865	7	3205	3	86	83	375
4205	Narendra 97	1294		2567		1931		80	71	415
4206	DRR Dhan 43	1656		3724		2690		87	72	385
4207	CR Dhan 204	2366	7	3311		2838		89	78	370
4208	Cotton Dorasannalu	1452		2821		2136		86	73	445
4209	DRR Dhan 44	2551	3	3516		3034	6	91	78	425
4210	Vandana	1310		1737		1524		69	92	345
4211	CR Dhan 202	706		3385		2045		93	83	380
4212	Govind	543		4224	2	2384		86	75	455
4213	IR 64 Sukha 1	1303		2760		2031		86	74	380
4214	CR Dhan 203	2426	5	4317	1	3371	1	89	77	380
4215	Varalu	912		3308		2110		95	75	375
4216	CR Dhan 205	1526		3413		2470		88	80	425
4217	IR 64 Sukha 2	1364		3561		2463		87	75	405
4218	CR Dhan 100	1656		3833	9	2744		93	88	380
4219	IET 23356	2726	1	3308		3017	7	91	81	395
4220	PR 124	1261		3330		2296		90	73	355
4221	IET 23420	1689		3702		2695		89	80	395
4222	IR 64	1461		3696		2578		89	68	355
4223	Tulasi	1518		3615		2567		84	75	335
4224	Anjali	1548		3679		2614		74	86	415
4225	Luit	2698	2	3856	8	3277	2	83	76	370
4226	CR Dhan 103	1429		2965		2197		77	96	445
4227	KMP 105	2001		3830		2916	9	80	73	475
4228	RNR 15048	1009		3340		2174		88	75	390
4229	Erramallelu			2519		2519		99	78	380
4230	CR Dhan 40	2083	9	3314		2699		77	96	400
4231	JGL 17004	1003		3042		2023		79	74	365
4232	NLR 40024	2262	8	3603		2932	8	90	60	360
4233	JGL 11118	909		3676		2293		91	67	365
4234	NLR 34449			2516		2516		107	66	360
4235	Indira Aerobic 1	1848		3897	6	2873		87	73	355
4236	Samaleshwari	2383	6	3994	4	3188	4	92	73	420
	Exp Mean	**1640**		**3446**		**2567**		**86**	**77**	**391**
	C.D. 5%	442		1015		556		2		52
	C.V.%	16.53		18.09		18.95		2.26		8.12
	Sowing Date	28-Aug		27-Aug						

* Superior to Best Check % Superior over Best Check @ not included in means

Table No. 13.3: Days to 50% Flowering of entries in MLT-EARLY DS Kharif 2015

Entry No.	IET No.	V		Zone V Mean (2)	VII						Zone VII Mean (4)	Overall Mean (6)
		CG	MH		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)		
		RPR	SND		MTU	RGL	Mean	WGL	JGL	Mean		
4201	DRR Dhan 42	76	76	76	71	67	69	100	65	82	76	76
4202	Sahbhagidhan	65	68	67	75	69	72		64	64	69	68
4203	CR Dhan 201	75	76	76	70	70	70		65	65	68	71
4204	CR Dhan 101	75	78	77	71	68	70		66	66	68	72
4205	Narendra 97	77	86	81	73	69	71	85	66	76	73	76
4206	DRR Dhan 43	71	75	73	71	65	68		64	64	67	69
4207	CR Dhan 204	78	77	77	73	72	72	72	71	71	72	74
4208	Cotton Dorasannalu	77	76	76	71	66	68	83	64	73	71	73
4209	DRR Dhan 44	80	78	79	71	71	71	89	72	80	76	77
4210	Vandana	84	59	72	69	56	62	82	49	65	64	66
4211	CR Dhan 202	71	73	72	73	78	76	83	64	73	74	74
4212	Govind	77	74	76	70	71	71	100	64	82	76	76
4213	IR 64 Sukha 1	71	76	73	71	64	68	94	66	80	74	73
4214	CR Dhan 203	74	78	76	72	69	71		66	66	69	72
4215	Varalu	66	86	76	71	67	69	99	71	85	77	76
4216	CR Dhan 205	70	70	70	69	64	66	91	64	77	72	71
4217	IR 64 Sukha 2	70	74	72	71	66	69	99	67	83	76	74
4218	CR Dhan 100	70	77	74	72	63	67		64	64	66	69
4219	IET 23356	73	78	76	73	66	69		66	66	68	71
4220	PR 124	80	83	82	68	71	69	99	77	88	79	80
4221	IET 23420	75	77	76	71	70	70	85	69	77	74	74
4222	IR 64	76	78	77	71	67	69	98	66	82	75	76
4223	Tulasi	65	67	66	70	60	65	100	63	81	73	71
4224	Anjali	88	60	74	69	53	61	81	57	69	65	68
4225	Luit	66	70	68	74	62	68	84	61	72	70	69
4226	CR Dhan 103	87	59	73	70	55	63	85	60	72	67	69
4227	KMP 105	65	68	67	69	62	65		59	59	63	65
4228	RNR 15048	73	75	74	70	65	68	96	65	81	74	74
4229	Erramallelu	111	88	99	79	75	77		73	73	75	85
4230	CR Dhan 40	90	59	75	72	63	67	86	62	74	70	72
4231	JGL 17004	71	76	73	70	68	69	86	65	75	72	73
4232	NLR 40024	76	78	77	71	71	71	96	68	82	76	76
4233	JGL 11118	71	87	79	68	66	67	105	74	89	78	78
4234	NLR 34449	99		99	70	78	74	88	77	82	78	82
4235	Indira Aerobic 1	74		74	71	82	77		64	64	72	73
4236	Samaleshwari	81		81	73	82	78		62	62	72	74
	Exp Mean	**76**	**75**	**75**	**71**	**68**	**69**	**90**	**65**	**76**	**72**	**73**
	C.D. 5%	1	1	1	1	5	3	2	1	1	1	1
	C.V.%	0.78	0.81	1.03	0.60	4.74	3.28	1.23	1.34	1.25	2.49	2.01

Table No. 13.4 : Plant Height (cm) of entries in MLT-EARLY DS Kharif 2015

Entry No.	IET No.	V		Zone V Mean (2)	VII						Zone VII Mean (4)	Overall Mean (6)
		CG	MH		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)		
		RPR	SND		MTU	RGL	Mean	WGL	JGL	Mean		
4201	DRR Dhan 42	70	66	68	98	105	101	77	90	83	92	84
4202	Sahbhagidhan	70	64	67	101	109	105		98	98	102	88
4203	CR Dhan 201	74	68	71	106	109	107		90	90	101	89
4204	CR Dhan 101	78	56	67	101	109	105		99	99	103	89
4205	Narendra 97	59	48	54	85	93	89	83	74	79	84	74
4206	DRR Dhan 43	74	58	66	92	103	98		87	87	94	83
4207	CR Dhan 204	74	72	73	107	108	108	69	97	83	95	88
4208	Cotton Dorasannalu	62	68	65	92	105	98	75	83	79	89	81
4209	DRR Dhan 44	81	64	72	104	109	107	80	86	83	95	87
4210	Vandana	93	76	85	107	121	114	83	114	99	106	99
4211	CR Dhan 202	75	74	75	107	120	113	92	101	97	105	95
4212	Govind	62	55	58	85	86	85	86	103	94	90	79
4213	IR 64 Sukha 1	71	62	66	97	104	101	79	88	84	92	83
4214	CR Dhan 203	62	62	62	93	104	98		87	87	95	81
4215	Varalu	57	67	62	90	94	92	69	77	73	83	76
4216	CR Dhan 205	74	74	74	105	117	111	73	104	89	100	91
4217	IR 64 Sukha 2	70	66	68	107	103	105	83	88	85	95	86
4218	CR Dhan 100	85	76	80	111	119	115		102	102	111	99
4219	IET 23356	78	89	83	115	127	121		108	108	117	103
4220	PR 124	59	58	59	87	86	87	75	68	72	79	72
4221	IET 23420	62	76	69	95	109	102	74	93	84	93	85
4222	IR 64	52	63	58	82	91	86	92	70	81	84	75
4223	Tulasi	71	66	69	82	91	87	83	77	80	83	78
4224	Anjali	92	81	87	111	112	112	86	99	93	102	97
4225	Luit	61	65	63	91	97	94	77	89	83	88	80
4226	CR Dhan 103	83	80	81	119	132	126	79	108	94	110	100
4227	KMP 105	57	58	58	90	95	92		84	84	89	77
4228	RNR 15048	62	58	60	94	99	96	84	89	86	91	81
4229	Erramallelu		55	55	77	89	83		60	60	75	70
4230	CR Dhan 40	85	73	79	113	130	122	82	112	97	109	99
4231	JGL 17004	58	57	57	85	92	88	81	82	82	85	76
4232	NLR 40024	57	50	53	75	87	81	80	71	75	78	70
4233	JGL 11118	58	61	60	81	96	88	75	74	74	81	74
4234	NLR 34449				71	79	75	80	64	72	73	73
4235	Indira Aerobic 1	62		62	90	105	98		86	86	94	86
4236	Samaleshwari	72		72	107	107	107		91	91	101	94
	Exp Mean	**69**	**66**	**68**	**96**	**104**	**100**	**80**	**89**	**85**	**93**	**85**
	C.D. 5%			4						0		

Table No. 13.5: Panicles/ M² of entries in MLT-EARLY DS Kharif 2015

Entry No.	IET No.	V		Zone V Mean (2)	VII						Zone VII Mean (4)	Overall Mean (6)
		CG	MH		A.P.	A.P.	A.P. (2)	TEL	TEL	TEL (2)		
		RPR	SND		MTU	RGL	Mean	WGL	JGL	Mean		
4201	DRR Dhan 42	1	302	151	416	370	393	330	383	356	375	300
4202	Sahbhagidhan	0	156	78	68	327	197		403	403	266	191
4203	CR Dhan 201	1	248	124	244	313	278		450	450	335	251
4204	CR Dhan 101	1	201	101	336	308	322		463	463	369	262
4205	Narendra 97	0	311	155	382	385	383	308	398	353	368	297
4206	DRR Dhan 43	1	215	108	251	315	283		305	305	290	217
4207	CR Dhan 204	0	291	146	250	343	297	352	365	359	328	267
4208	Cotton Dorasannalu	1	196	98	361	424	392	374	473	423	408	305
4209	DRR Dhan 44	1	212	106	339	409	374	374	390	382	378	287
4210	Vandana	0	237	118	186	309	248	308	390	349	298	238
4211	CR Dhan 202	1	303	152	216	337	277	330	362	346	311	258
4212	Govind	0	219	109	145	359	252	374	432	403	327	255
4213	IR 64 Sukha 1	1	193	97	322	439	380	374	418	396	388	291
4214	CR Dhan 203	1	227	114	327	397	362		388	388	371	268
4215	Varalu	0	229	115	333	403	368	352	450	401	384	295
4216	CR Dhan 205	1	166	83	269	282	275	396	425	411	343	256
4217	IR 64 Sukha 2	0	244	122	263	399	331	374	430	402	367	285
4218	CR Dhan 100	1	176	88	299	355	327		438	438	364	254
4219	IET 23356	1	326	163	311	331	321		433	433	358	280
4220	PR 124	0	259	130	350	392	371	374	413	393	382	298
4221	IET 23420	1	275	138	304	382	343	374	380	377	360	286
4222	IR 64	0	317	159	305	429	367	352	463	407	387	311
4223	Tulasi	1	300	150	275	452	364	330	505	418	391	310
4224	Anjali	0	280	140	142	304	223	352	380	366	294	243
4225	Luit	1	148	74	260	389	325	330	443	386	356	262
4226	CR Dhan 103	1	208	104	291	334	312	308	403	355	334	257
4227	KMP 105	1	297	149	385	489	437		475	475	450	329
4228	RNR 15048	0	195	98	413	386	400	308	453	380	390	293
4229	Erramallelu		254	254	327	435	381		423	423	395	360
4230	CR Dhan 40	1	157	79	344	297	321	352	358	355	338	251
4231	JGL 17004	0	301	150	376	327	351	374	415	395	373	299
4232	NLR 40024	1	300	150	405	461	433	396	385	391	412	324
4233	JGL 11118	0	310	155	282	353	317	396	398	397	357	290
4234	NLR 34449				410	419	415	330	345	338	376	376
4235	Indira Aerobic 1	1		1	292	321	307		463	463	359	269
4236	Samaleshwari	0		0	287	347	317		380	380	338	254
	Exp Mean	**0**	**244**	**120**	**299**	**370**	**335**	**353**	**413**	**388**	**359**	**279**
	C.D. 5%	0	20	10	91	81	61	33	73	42	39	26
	C.V.%	15.32	4.95	7.50	18.70	13.42	16.08	5.69	10.92	9.55	13.35	14.18

Table No. 13.3 : Days to 50% Flowering of entries in MLT-EARLY TP Kharif 2015

Entry No.	IET No.	V	VII	Overall Mean (2)
		CG	KA	
		RPR	MND	
4201	DRR Dhan 42	82	92	87
4202	Sahbhagidhan	74	83	79
4203	CR Dhan 201	73	86	80
4204	CR Dhan 101	84	88	86
4205	Narendra 97	73	87	80
4206	DRR Dhan 43	84	90	87
4207	CR Dhan 204	85	92	89
4208	Cotton Dorasannalu	82	90	86
4209	DRR Dhan 44	85	97	91
4210	Vandana	65	73	69
4211	CR Dhan 202	93	92	93
4212	Govind	84	88	86
4213	IR 64 Sukha 1	83	90	86
4214	CR Dhan 203	87	90	89
4215	Varalu	102	87	95
4216	CR Dhan 205	85	90	88
4217	IR 64 Sukha 2	82	92	87
4218	CR Dhan 100	92	94	93
4219	IET 23356	86	96	91
4220	PR 124	85	94	90
4221	IET 23420	86	91	89
4222	IR 64	84	93	89
4223	Tulasi	80	88	84
4224	Anjali	66	81	74
4225	Luit	79	86	83
4226	CR Dhan 103	72	82	77
4227	KMP 105	74	85	80
4228	RNR 15048	86	90	88
4229	Erramallelu	103	95	99
4230	CR Dhan 40	70	83	77
4231	JGL 17004	74	83	79
4232	NLR 40024	84	95	90
4233	JGL 11118	87	95	91
4234	NLR 34449	103	111	107
4235	Indira Aerobic 1	84	90	87
4236	Samaleshwari	90	93	92
	Exp Mean	**83**	**90**	**86**
	C.D. 5%	2	4	2
	C.V.%	1.15	2.90	2.26

Table No. 13.4: Plant Height (cm) of entries in MLT-EARLY TP Kharif 2015

Entry No.	IET No.	V	VII	Overall Mean (2)
		CG	KA	
		RPR	MND	
4201	DRR Dhan 42	75	81	78
4202	Sahbhagidhan	68	83	76
4203	CR Dhan 201	78	82	80
4204	CR Dhan 101	79	87	83
4205	Narendra 97	62	79	71
4206	DRR Dhan 43	73	71	72
4207	CR Dhan 204	74	82	78
4208	Cotton Dorasannalu	70	75	73
4209	DRR Dhan 44	75	80	78
4210	Vandana	96	88	92
4211	CR Dhan 202	79	87	83
4212	Govind	64	86	75
4213	IR 64 Sukha 1	72	75	74
4214	CR Dhan 203	67	88	77
4215	Varalu	68	82	75
4216	CR Dhan 205	76	84	80
4217	IR 64 Sukha 2	73	77	75
4218	CR Dhan 100	80	95	88
4219	IET 23356	75	87	81
4220	PR 124	58	89	73
4221	IET 23420	73	88	80
4222	IR 64	56	79	68
4223	Tulasi	66	85	75
4224	Anjali	81	91	86
4225	Luit	68	84	76
4226	CR Dhan 103	97	95	96
4227	KMP 105	65	81	73
4228	RNR 15048	58	92	75
4229	Erramallelu		78	78
4230	CR Dhan 40	95	97	96
4231	JGL 17004	67	80	74
4232	NLR 40024	45	75	60
4233	JGL 11118	58	75	67
4234	NLR 34449		66	66
4235	Indira Aerobic 1	60	87	73
4236	Samaleshwari	59	86	73
	Exp Mean	**71**	**83**	**77**

Table No. 13.5: Panicles/ M² of entries in MLT-EARLY TP Kharif 2015

Entry No.	IET No.	V
		CG
		RPR
4201	DRR Dhan 42	430
4202	Sahbhagidhan	395
4203	CR Dhan 201	365
4204	CR Dhan 101	375
4205	Narendra 97	415
4206	DRR Dhan 43	385
4207	CR Dhan 204	370
4208	Cotton Dorasannalu	445
4209	DRR Dhan 44	425
4210	Vandana	345
4211	CR Dhan 202	380
4212	Govind	455
4213	IR 64 Sukha 1	380
4214	CR Dhan 203	380
4215	Varalu	375
4216	CR Dhan 205	425
4217	IR 64 Sukha 2	405
4218	CR Dhan 100	380
4219	IET 23356	395
4220	PR 124	355
4221	IET 23420	395
4222	IR 64	355
4223	Tulasi	335
4224	Anjali	415
4225	Luit	370
4226	CR Dhan 103	445
4227	KMP 105	475
4228	RNR 15048	390
4229	Erramallelu	380
4230	CR Dhan 40	400
4231	JGL 17004	365
4232	NLR 40024	360
4233	JGL 11118	365
4234	NLR 34449	360
4235	Indira Aerobic 1	355
4236	Samaleshwari	420
	Exp Mean	**391**
	C.D. 5%	52
	C.V.%	8.12

INTERNATIONAL TRIALS
INGER Observational Nurseries

The International Network for Genetic Evaluation of Rice (INGER), is one of the oldest multilateral systems of sharing genetic resources, which provides access to wide range of genetic materials of rice developed globally under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which uses the Standard Material Transfer Agreement to facilitate access and benefit sharing. It also helps in monitoring of genetic variation of pathogens and insect pests over the years. Under this programme, during Kharif- 2015, the results of 186 sets, with 666 entries including checks of 14 observational nurseries *viz.,* IIRON Module 1 & 2, IRTON, IRLON, IURON, IRHTN, IRSSTN Module 1 & 2, IRBN, IRBBN, IRBPHN, GSR-IRLL & RFLL and MAGIC Global were reported to ICAR-IIRR from different locations. Details in respect of the INGER nursery Trials such as number of entries, locations etc are given below:

Details of the INGER trails and locations in India, Kharif 2015

INGER Trial	No. of Entries	No. of locations	Locations
IIRON-M-1	56	22	Rajendranagar, Almora, Maruteru, Cuttack, Jeypore, Nawagam, Pantnagar, Ludhiana, Chinsurah, Gangavati, Kota, Brahmavar, Raipur, Karjat, Rewa, Khudwani, Faizabad, Coimbatore, Allahabad, Aduthurai, Patna, Lembucherra
IIRON-M-2	30	16	Almora, Tirur, Maruteru, Cuttack, Nawagam, Pantnagar, Ludhiana, Chinsurah, Brahmavar, Rewa, Khudwani, Faizabad, Coimbatore, Aduthurai, Sabour, Lembucherra
IRTON	30	5	Almora, Jagtial, Khudwani, Malan, Imphal
IRLON	42	15	Karimganj, Wangbal, Maruteru, Cuttack, Shirgaon, Sirsi, Chinsurah, Goa, Ghagharaghat, Imphal, Sabour, Ranchi, Patna (2), Lembucherra
IURON	50	15	Rajendranagar, Almora, Pattambi, Hathwara, Paramkudi, Faizabad, Imphal, Ranchi, Hazaribag, Lembucherra, Mugad, Jeypore, Nawagam, Rewa, Khudwani
IRHTN	16	9	Rajendranagar, Hathwara, Maruteru, Cuttack, Jeypore, Raipur, Annamalainagar, Nellore, Hazaribag
IRSSTN-M-1	56	7	Rajendranagar, Port Blair, Cuttack, Chinsura, Faizabad, Navsari, Gangavati
IRSSTN-M-2	49	5	Rajendranagar, Trichy, Karnal, Chinsurah, Goa
IRBN	63	22	Rajendranagar (2), Almora, Wangbal, Maruteru, Shirgoan, Mandya, Mugad, Chatha, New Delhi, Jagtial, Gangavati, Raipur, Warangal, Karjat, Khudwani, Malan, Coimbatore, Imphal, Navsari, Hazaribag, Jammu and Kashmir
IRBBN	69	14	Rajendranagar (2), Port Blair, Maruteru, New Delhi, Ludhiana, Gangavati, Karjat, Coimbatore, Imphal, Navsari, Nellore, Aduthurai, Hazaribag
IRBPHN	49	16	Rajendranagar (3), Wangbal, Maruteru, Nawagam, Kolkata, Chatha, New Delhi, Ludhiana, Gangavati, Raipur, Warangal, Coimbatore, Imphal, Nellore
GSR-IRLL	36	19	Rajendranagar, Pattambi, Maruteru, Cuttack, Mandya, Nawagam, Kolkata, New Delhi, Ludhiana, Jagtial, Raipur (2), Warangal, Khudwani, Faizabad, Imphal, Navsari, Aduthurai, Jabalpur
GSR-RFLL	36	17	Rajendranagar, Port Blair, Wangbal, Maruteru, Cuttack, Shirgaon, Mugad, Sirsi, Ludhiana, Chinsurah, Raipur (2), Karjat, Ghagharaghat, Imphal, Navsari, Ranchi
MAGIC Global	84	2	Rajendranagar, Jammu and Kashmir
Total	**666**	**186**	

INTERNATIONAL IRRIGATED RICE OBSERVATIONAL NURSERIES (IIRON) Module 1 & 2

The 41st module1 and module2 nurseries were sent to around 38 locations across India. IIRON Module1 sent to 22 locations. On the basis of grain yield, flowering duration and overall phenotypic acceptability, promising entries in module 1 are IR 10A270, IR 11A257, IR 11A293, IR 11A302 and IR 11A429 and in module 2 are IR 10N389, IR 11A108, IR 11A307, IR 11A316, IR 11A546, IR 11N294 and IR 79643-23-3-3-3.

INTERNATIONAL RAINFED LOWLAND RICE OBSERVATIONAL NURSERY (IRLON)

The 38th International Rainfed Lowland Rice Observational Nursery (IRLON) comprised of 37 test entries and 4 international checks. The entries originated from India, Malaysia, and from IRRI. The trial was conducted at 15 locations during Kharif 2015. Entries *viz.,* IR14L116, IR13L188 and IR 95836-14-3-1-2 showed consistency in performance at two or more locations.

INTERNATIONAL UPLAND RICE OBSERVATIONAL NURSERY (IURON)

The 41st IURON nursery contains 43 genetically-diverse test entries and six international checks. Assessment of the performance of the entries was made on the basis of different parameters recorded at different locations. Entries *viz.,* IR13L114, IR12L369, IR13L406 and IR13L413 showed consistency in performance at two or more locations.

INTERNATIONAL TEMPERATE RICE OBSERVATIONAL NURSERY (IRTON)

The 16th International Temperate Rice Observational Nursery (IRTON) consists of 23 genetically diverse test entries originating from Egypt, Republic of Korea, Turkey, and from IRRI. Three entries namely, IR 10K182, IRRI 102 and IR 13K177 were found to have cold tolerance at reproductive stage.

GREEN SUPER RICE PROJECT-IRRIGATED AND RAINFED LOWLAND YIELD TRIALS (GSR-IRLL & GSR-RFLL)

The 6th Green Super Rice nursery of lowland was evaluated the entries namely, HHZ 10-DT5-LI1-LI1, HHZ 14-SAL19-Y1, HHZ 15-SAL13-Y1, HHZ 16-SAL13-LI1-LI1, HHZ 18-Y3-Y1-Y1, HHZ 21-Y4-Y2-Y1, HHZ 22-Y3-DT1-Y1, HHZ 23-DT16-DT1-DT1, HHZ 3-SAL4-Y1-Y1, HHZ 3-SAL6-Y1-Y1, HHZ 4-SAL12-LI1-LI1 and HHZ 6--DT1-LI1-LI1 were identified as promising in GSR-IRLL.

Similarly in the 6th Green Super Rice Project- Rainfed Lowland Yield Trial the promising entries *were* HHZ 10-DT5-LI1-LI1, HHZ 15-DT7-SAL2, HHZ 15-SAL13-Y1, HHZ 15-SAL13-Y3, HHZ 18-Y3-Y1-Y1, HHZ 23-DT16-DT1-DT1 and HHZ 4-SAL12-LI1-LI1 in GSR-RFLL.

INTERNATIONAL RICE SOIL STRESS TOLERANCE NURSERIES (IRSSTN- MODULE 1 &2)

The IRSSTN consists of two modules, Module 1 has 39 and Module 2 with 32 test entries were evaluated during Kharif 2015. Promising entries with high yield, better phenotypic acceptability and salt tolerance ware IR14T114, IR13T145 and IR 55179-3B-11-3 in Module 1 and IR 58443-6B-10-3, IR11T185 and A 69-1 in Module 2.

INTERNATIONAL RICE HEAT TOLERANCE NURSERY (IRHTN)

The 9th International Rice Heat Tolerance Nursery consists of 14 test entries from IRRI, and Iran. The promising entries at more than two locations were FIROOZ (ACC 39261), IR 11C219, IR 11C208, IR 83142-B-36-B, IR 11C221, IR 11C214, IR 11C208 and IR 11C206.

INTERNATIONAL RICE BLAST NURSERY (IRBN)

Thirty-Third International Rice Blast Nursery (IRBN) composed consists of 36 test entries and 25 reference materials (23 blast monogenic lines and 2 checks). The entries were screened at Rajendranagar (2), Almora, Wangbal, Maruteru, Shirgoan, Mandya, Mugad, Chatha, New Delhi, Jagtial, Gangavati, Raipur, Warangal, Karjat, Khudwani, Malan, Coimbatore, Imphal, Navsari, Hazaribag, Jammu and Kashmir during Kharif 2015. Some of the entries viz., IRBLKM-TS[CO], IRBLSH-B[CO], IRBLTA-ME[CO] and IR 09N127 were found resistant at majority of the test locations.

INTERNATIONAL RICE BACTERIAL BLIGHT NURSERY (IRBBN)

27th International Rice Bacterial Blight Nursery (IRBBN) consists of 67 entries originating from Taiwan, and the Philippines and from IRRI including checks were screened at 14 locations namely, Rajendranagar (2), Port Blair, Maruteru, New Delhi, Ludhiana, Gangavati, Karjat, Coimbatore, Imphal,

Navsari, Nellore, Aduthurai and Hazaribag during Kharif 2015. Promising BB resistant entries are IRBB1, IRBB13, IRBB52 and HHZ-5-DT20-DT3-Y2.

INTERNATIONAL RICE BROWN PLANTHOPPER NURSERY (IRBPHN)

The 33st International Rice Brown Planthopper Nursery (IRBPHN) consisting 47 entries originating from Bangladesh, India, Myanmar, Republic of Korea, Sri Lanka, Taiwan and IRRI was screened at Rajendranagar, Wangbal, Maruteru, Nawagam, Kolkata, Chatha, New Delhi, Ludhiana, Gangavati, Raipur, Warangal, Coimbatore, Imphal and Nellore during Kharif 2015. The entries, MILYANG 46(CHEONGCHEONGBYEO, MILYANG 55(SAMGANGBYEO), BG 367-2, MUDGO (ACC 6663), MUT NS 1, PTB 33, IR 09A 235 and IR 09A 235 were found to be resistant with a damage score of 3 or less.

Multiparent Advanced Generation Intercross (MAGIC) MAGIC-Global:

The MAGIC-Global trial consists of 42 entries originating from IRRI and the trial was conducted at IIRR, Hyderabad during Kharif 2015. The entries, IR 104473:2-B-20-17-10-2-3-B, IR 104444:12-B-9-4-7-5-3-B, IR 104532:2-B-7-19-17-3-3-B, IR 104560:6-B-18-5-15-5-3-B and IR 104439:2-B-13-9-17-5-3-B were among the top 5 entries.

Monitoring of AICRIP Trials

Southern III: Drs. M.S. Prasad,. K. Surekha,. A.P. Padmakumari,. S. Arun Kumar and. R.M. Sundaram (IIRR) and R. Suresh, TNRRI, Aduthurai (07.10.2015 to 10.10. 2015 & 02.11.2015 to 03.11. 2015)

Kurumbapet, Puducherry: The allotted 4 trials were conducted. The sowing/planting was delayed due to labour problem in the station. All the entries were in vegetative state and none of them were flowering during monitoring team visit. No apparent pest/disease damage was reported.

Karaikal, Puducherry: Eight trials were allotted. IVT-L, AVT-L, IHRT-M were at vegetative stage; the trials IVT-M, IVT-MS, AVT1-IM, and AVT2-IM trials nursery was sown and not yet planted during the team visit. IVT-AL & ISTVT and AVT-AL & ISTVT conducted as per recommendations and were at flowering. The condition of the crop was very good.

Aduthurai: 14 trials were allotted. AVT2-IM, AVT1-IM, IVT-IM, AVT1-L, IVT-L, IVT-MS, IHRT-Medium were at vegetative stage. IHRT-Early, IVT-E-TP, AVT-1E-TP, AVT-2E-TP, IVT1-Biofort, AVT1-Biofort, AVT2-Biofort were at a maturity stage. All the trails were conducted as per recommendations and the condition of the crop was very good. Incidence of stem borer, leaf folder, bacterial blight and sheath rot infection was observed. In IHRT-Early, there was significant infection of bacterial blight.

Maruteru: A total of 16 breeding and 3 hybrid rice trials were allotted to this centre. All the trials were conducted as per recommendations and crop condition was very good. The early trials were at maturity during team visit. Some of the entries in trials had lodged due to excessive vegetative growth expression. In some of the trials, stem borer, leaf folder, bacterial blight, brown spot, sheath blight and sheath rot infection was observed. The centre has generated significant breeding material suited for semi-deep water conditions, early, medium and late duration.

North Western 1: Drs. S.M. Balachandran, CH. Padmavathi, Brajendra (IIRR) and Ram Singh, Kaul, Haryana, S.L. Krishna Murthy, CSSRI, Karnal (05-10-2015 to 12-10-2015)

IARI, New Delhi : Out of the three allotted trials two trials viz., AVT1-BT and IVT-BT were conducted as per the guidelines. Since the seed for the AVT1-NIL-Blast was received late, the same trial was sent to IARI, Aduthurai. The crop stand of the trials was very good.

Modipuram, Karnal, Kaul, Uchani, Rauni, Kapurtala & Ludhiana : All the allotted six trials were conducted and the crop stand in general was good at Modiupuram. At CSSRI, Karnal, two trials *viz*., AVT1-AL&ISTVT and IVT-AL&ISTVT were conducted. The same trials were also conducted at Nyan Farm, Panipat. At Kaul, all the allotted 11 breeding trials and two hybrid rice trials were conducted well, though at the time of sowing and planting the centre experienced heavy flooding for nearly a week. The team also visited a FLD at Dhand Village, Kaithal. Two hybrid rice trials were conducted. Both trials were conducted well at Uchani. Two trials (AVT1-BT and IVT-BT) were allotted and both the trials were good conducted as per the guidelines at Rauni. Four breeding trials (AVT1-BT, IVT-BT, AVT1-AL&ISTVT and IVT-AL&ISTVT were conducted. All the experiments were good and crop stand was also good at Kapurtala. 17 breeding trials and two hybrid rice trials were allotted to this centre and all these trials were conducted as per the technical program. The crop stand was good, but there was a heavy infestation of False Smut in the rice field.

SKUAST, Jammu: Five breeding trials and one hybrid rice trial (IHRT-M) were allotted. All the trials were conducted as per the technical program. The crop stand was generally good.

Southern 1: Drs. P. Revathi, N. Somasekhar, Amtul Waris (IIRR) and Manonmani, Gudalur, TNAU (12.10.2015 to 18.10.2015).

Vytilla: Two trials of CSTVT were conducted. Late receipt of seed of IVT-CSTVT and the crop establishment was poor and many entries showed poor germination. The popular varieties in this region are Jyothi, Uma and Jaya. **AVT-1 CSTVT** trial was laid out as per the instructions was well established. Stem borer and leaf folder damage was observed in both the trials.

Moncompu: Kuttanad is a unique system where in rice is grown up to 3 m below sea level. Dr. Leenakumary, the Centre Head has informed that the seed material sent is being damaged during the transit and also requested to send sufficient quantity of seed. Weedy rice is posing a problem in this area. Broadcasting of sprouted seeds and use of drum seeder are gaining popularity. The eight AICRIP trials conducted were IVT, AVT-1, and AVT-2 biofortification, AVT-2 IME, IVT, AVT-1, AVT-2 early and AVT 1 NIL Sub & Drt. All the trails were well conducted and maintained. The NIL trial of submergence tolerance was in late vegetative stage and not flowered. Incidence of stem borer was noticed in some of the entries.

Pattambi: IVT, AVT-1, AVT-2 Early, IVT, AVT-1, AVT-2 bio fortification, INGER GSR IRLL and INGER IURON were well conducted and maintained as per the instructions received from IIRR.

TNAU Coimbatore, Trichy & Gudalur: A total of 22 breeding and hybrid rice trials were conducted at Coimbatore. All the trials were conducted very well as per instructions. At Trichy, AVT-1 AL-ISTVT and IVT- AL-ISTVT trials were conducted and both the trials were at vegetative stage.IVT & AVT medium hills trials and IHRT-MS trials were laid out at **Gudalur** as per the instructions.

Eastern Zone: Drs. P. Senguttuvel, C. Kannan, Satendra K Mangrautia, Mangal D Tuti (IIRR) and Vijay Kumar Yadav, Kanpur (28-10-16 to 3-11-16)

Lucknow: Three breeding trials viz., IVT&AVT1-AL&ISTVT, IVT&AVT1-ASG, agronomy trials and soil science trials were conducted as per the plan. Overall, the crop growth was good with moderate to severe stress symptoms noticed. No incidence of pest and diseases occurrence. IET 23782 looks promising under high pH.

Kanpur: During Kharif 2015 very deficit rainfall 241.6 mm received from May to October 2015 in erratic manner, resulting in delayed sowing/transplanting and stress during both vegetative and reproductive phase of experiments. Due to this, weeds infestation increased at high rate. 5 breeding trials were sent and all were conducted as per the technical programme and most of them are at vegetative stage. DRR Dhan 42 and DRR Dhan 43 performed well under Sodic conditions.

Faizabad: The crop performance was poor due to initial drought, even though trials were irrigated later, yield data can't be considered for analysis except hybrid rice trials.

Ghagharghat: There were 4 breeding trials, 2 agronomy and 2 pathology trials. Overall crop stand was good and conducted as per instructions provided by IIRR. All the trials were direct seeded. Plant pathology trials included in this centre were NSN-1, 2, NHSN and DSN. Moderate to severe incidence of brown spot and blast was noticed. In case of NIL trials viz., NIL submergence and NIL drought, none of the trial experienced stress at any stage of crop growth.

ICAR-Patna: In both the places, the trials were conducted well and crop stand was good. Sheath blight and BLB stress was good during the trial period. Expression of NILs on drought was good.

Pusa, Samastipur: Overall the performance of the crop was good. However, no stress was imposed in deep and semi deep water trials, due to drought during early growth stage. Conducted seed production of Rajendra Mahsuri.
Varanasi: 6 breeding trials viz., IVT ASG, AVT1 ASG, IVT MS, IVT NPT and 2 NIL trials viz., NIL drought and NIL blast were allotted and evaluated. The incidence of blast was moderate, there were incidences of false smut and brown leaf spot. There was complete flooding due to heavy rains during the initial period of leaf blast and brownspot screening and NIL drought trials. The false smut symptoms were so severe that there were more than two false smut heads in a single panicle in many of the plants.

Hills: Drs. L.V. Subba Rao, V. Jhansi Lakshmi and M.B.B. Prasad Babu (IIRR) and Dhirendra Singh, Malan (10-09-2015 to 20-09- 2015).
Khudwani: 8 Plant breeding trials were conducted. The general crop stand and management of the trials were excellent. Except grasshoppers, no other biotic stress was noticed. All the early and medium hill trials were conducted as per the technical program. However, it was informed that the seed material of Basmati and aromatic short grain trials were received late due to which the plant growth was affected.
ARS, Rajouri: All the allotted trials have been conducted as per the technical programme. Crop growth is satisfactory. Blast incidence was found to be very severe in some of the entries.
RWRS, Malan: All the allotted trials were conducted and some amount of water stress is seen. Leaf scald is seen in some entries in all the trials. The breeder seed production of Palam Lal Dhan 1, Kasturi and Palam Basmati was found to be genetically pure and well maintained.
Palampur: 2 trials were conducted as per the technical programme and crop stand is good. Also visited the FLDs conducted at *Dhiana Khurd* village in an area of 5 ha by Shri Rana and other farmers.
Dhaulakuan: Six trials were allotted to the station out of which four were conducted successfully. Two upland trials could not be conducted. General crop stand is good and healthy. Most of the entries just started flowering. Brown spot was observed in some of the entries.

Upland 2/Salinity: Drs. Suneetha Kota, Gururaj Katti, D. Subramanyam (IIRR) and N.P. Mandal, CRURRS, Hazaribagh (26-09-2015 to 1-10-2015)
Varanasi: 13 trials allotted and all the trials were conducted. The general crop stand was very good. The rainfall distribution was abnormal with a rainfall deficit of 17% this season. No severe incidence of major diseases except brown spot was noticed. Incidence of sheath blight was observed in the farmer's field. However, severe leaf folder infestation during vegetative stage was observed. HUR 4-3, HUR 105, HUR 3022 were taken up for breeder seed production and the crop was at flowering stage and general crop stand was good and uniform.
Masodha, Faizabad: 22 AICRIP plant breeding trials and 3 hybrid rice trials were sent. All the trials were taken up. Except hybrid rice trials, all the trials failed due to drought and lack of irrigation facilities in the research station. The hybrid rice trials were at booting stage. It was informed that in MLT trial there was no germination. The rainfall data shows that there was 50 percent deficit.
Ranchi: All the allotted 13 Plant Breeding trials, three hybrid rice trials, two INGER trials and one GSR-RFLL trial were conducted. The total rainfall received from June to September 2015 was around 616 mm as compared to normal rainfall of 1149 thus accounting to almost

50 percent deficit. Also visited the farmer's fields of Boroya village where BVD 203 and BVS 1 were cultivated where there is no irrigation facilitates available, the field is totally dried. Extreme dry conditions and most of the entries were completely dried to that extent that there was termite damage to rice straw in the IVT- E DS and Aerobic and INGER trials. The crop experienced drought situation in most of the trials and stunted.

Hathwara: Total 9 AICRIP trials were sent and eight trials were conducted. The research station is best suited for drought screening; hence it may not be suitable for other trials like biofortification and short grain trials. Extreme dry conditions and most of the entries are completely dried in IVT E –DS. IVT-Aerobic trial was late sent and the crop was stunted and failed, while crop stand was very good in biofortification and short grain trials as the field is low lying.

Hazaribagh: Three Plant breeding trials (IVT- EDS, AVT 2 IME, AVT 1-NIL (SUB & DRT) and one hybrid rice trial (IHRT-E) was sent to this station. Dr. N P Mandal informed that AVT 1-NIL (SUB & DRT) trial could not be conducted due to late receipt of the trial as Swarna is late duration which will not flower under late sown condition. Seed production: Sneha, Virendra, CR Dhan 40, Shabhagi, Kalinga III, Anjali, Hazaridhan, Abhishek etc were taken up for production. Extreme dry conditions and most of the entries were completely dried in IVT E- DS. Rest of the trials, the crop stand is very good and conducted as per the guidelines.

Southern: Drs CN Neeraja, Jyothi Badri, AP Padma Kumari, CN Neeraja, B. Nirmala, V. Prakasam and P. Valarmathi (IIRR) and Dr Lingaiah (RARS, Warangal) (23.11.2015 to 25.11.2015)

Rajendranagar: This centre conducted a total of six trials pertaining to irrigated ecosystem. The trials were irrigated medium (IVT, AVT-1 and AVT-2) and medium slender grain type trials. Conduct of trials was as per the guidelines of IIRR and crop growth was good. Initially, this centre experienced acute water shortage and to cope up with this situation, the existing wells were deepened and one bore well was dug incurring an expenditure of 5.0 lakhs on urgent basis. Subsequently, all the experiments were conducted nicely without any short falls and the crop expression was also very good. The incidence of insect pests *viz.,* stem borer was severe, and leaf folder, BPH and panicle mite was moderate.

Kunaram (3/3): Trials were conducted as per the guidelines and crop was good. Many cultures flowered later than local check. Certain entries were found to have mixtures. Incidence of panicle mite was observed in few entries. The breeding material developed in short slender grain types is good. The overall performance of the trials was good.

Warangal (11/10): Eleven Varietal, three hybrid trials and three INGER nurseries were allotted to this station. All the trials were conducted as per the guidelines. Trial conduct was very good. Due to land constraint, IVT-E-DS trials conducted in smaller plot size. Certain entries were found to be late in IM and IME trials.

Western: Drs. Raghuveer Rao, D. Ladhalakshmi, C. Gireesh and Divya Balakrishnan (IIRR) and B. D. Waghmode (Shirgaon) (11.10.2015 to 17.10.2015)

Goa: Two breeding trials on AVT1- CSTVT and IVT CSTVT were allotted but due to heavy rains, salinity was not maintained uniformly in the field. The local check 'Korgut' was completely damaged under this condition. The general crop condition was good, even under the problems of flash floods, salinity and submergence. Low intensity of stem borer was observed and there was no disease.

Radhnagiri: There were 8 trials in Plant Breeding; AVT 1- L, IVT- L, AVT 2- Biofort, AVT 1- Biofort, IVT- Biofort, IVT- MS, IVT- NPT and HRT- MS and Agronomy trials. Trials were conducted as per the technical programme. The general crop conditions were very good and farm maintenance was also good. Severe incidences of sheath blight, neck blast and blue beetle were observed in some of the breeding trials. Since blast disease incidence occurs regularly during crop season, it is considered to be hot spot for blast disease. In addition, during past three years, severe incidence of sheath blight was also recorded at this location.

Vadagaon: Monitored three breeding trials (IVT-E-TP, AVT1-E-TP, AVT 2-E-TP), hybrid rice trial (IVT early hybrid), seed production plots and display of released varieties. The crop was in very good condition and there was no incidence of pest and disease. Incidence of bacterial leaf streak was observed and samples were collected.

Lonavala: All the proposed Plant Pathology trials were conducted as per the technical programme. The screening nursery trials (NSN-1, NSN-2, NSN-H, NHSN and DSN) against leaf blast, neck blast, sheath rot, leaf scald, brown spot, false smut; virulence monitoring of *P. oryzae* and management trial against location specific diseases were conducted. In general disease pressure of leaf blast, neck blast, sheath rot was very high.

Panvel: CSTVT breeding trials, AVT1-CSTVT and IVT-CSTVT trials were conducted at Coastal saline station (5m MSL), Panvel. Salinity conditions were maintained whenever water inundation occurred from sea creek. During dry spell there is severe salinity stress upto 14dsm-1 and stress reduced to 2dsm-1 where there was heavy rain.

Karjat: There were 13 breeding trials, 4 hybrid rice trials and breeder seed production conducted as per the technical programme. With respect to Plant Pathology trials, screening trial (NSN-1, NSN-2, NSN-H, NHSN and DSN) against bacterial leaf blight and virulence monitoring trial on leaf blast was taken up and disease pressure was nil. Special screening trial on false smut was conducted where disease pressure was low. Six trials of entomology (IET, BIET, EPDP, MPNE, MRST and LFST) were monitored and in general pest intensity of stem borer and leaf folder was low. IPMS trials (3 trials) are conducted at farmer's field.

Igatpuri: Conducted only two agronomy trials. Seeds were sent for IVT early, medium and late but as the material reached station very late after transplanting of their fields and trials were not conducted. There was incidence of stem borer, blast and Bph in this region.

North East: Drs T. Ram, GS Laha, B Sreedevi and Vidhan Singh (IIRR) and Indrani Dana (Chinsurah) (27-10-2015 to 2-11-2015)

The AICRIP trials were monitored at Pundibari, Chinsurah, Chakda, Kolkata University, Gosaba and Canning. At Gangtok two experiments were conducted AVT1 U(H) and IVT U (H). Both the trials were conducted as per the instruction. At Kalimpong also two trials were conducted AVT 1 E(H) and IVT E (H),5 trials were conducted at Pundibari , the conduct of trial was good , they have very good collection of scented short grain rices. Twenty six trials at Chinsurah were conducted. The conduct of trial was very good and the crop growth was really good without any pest pressure. The breeder seed production of several state indented varieties was good. The breeding materials developed at Chinsurah are very good. The germplasm collection at Chinsurah has potential to improve yield further. At Chakda also, the conduct of trial was good inspite of voluntary center. On 1st we left to Gosaba and Canning where two trials of CSTVT were conducted. At Gosaba at flowering stage salinity was only Ece 4.5 mmhos that was the reason crop stand was good. Some entries did well. While at Canning the trial was conducted at Ece 8.2 mmhos. Several entries were better than the checks.

LIST OF BREEDERS

Indian Institute of Rice Research, Rajendranagar					
Dr. V. Ravindra Babu, Director					
Plant Breeding			**Hybrid rice**		
Dr. T. Ram	:	Principal Scientist & PI	Dr. A.S. Hari Prasad	:	Principal Scientist
Dr. L.V. Subba Rao	:	Principal Scientist	Dr. P. Senguttuvel	:	Scientist
Dr. M.M.Azam	:	Principal Scientist	Dr. P. Revathi	:	Scientist
Dr. G. Padmavathi	:	Principal Scientist	Dr. Kemparaju	:	Scientist
Dr. Vijai Pal Bhadana	:	Sr. Scientist			
Dr. C.Gireesh	:	Scientist			
Dr. K. Suneetha	:	Scientist			
Dr. Jyothi Badri	:	Scientist			
Dr. D.Sanjeeva Rao	:	Scientist			
Dr. Abdul Fiyaz		Scientist			

COOPERATORS

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
1.	Aduthurai	Dr.R.Suresh, Assistant Professor (PB & G),TRRI, Aduthurai – 612101 91-9578305324 (M), sureshphg@gmail.com
2.	Almora	Dr. J. P. Aditya, Scientist, ICAR-VPKAS, ALMORA Mall Road – 263601, Uttarakhand 09410795850, 059620231539, 095962241003, jpaditya4011@rediffmail.com/ jayaprakashaditya@gmail.com
3.	Annamalai Nagar	Prof & Head, Dept. of Genetics and Plant Breeding Faculty of Agriculture, Annamalai University, Annamalai Nagar, Chidamabarm – 608 002, 04144238248*296 (O).
4.	Aurndhutinagar	Dr. A. K. Pal, Assistant Director of Agriculture, Plant Breeding Division, State Agriculture Research, Arundhutinagar, Agarthala-799003, Tripura 0381-2370249 (O), 0381-2379535, 094361267929 (M), email: dratanukpb60@gmail.com, dratanu@hotmail.com
5.	Ambikapur	Dr. Jitendra Kumar Tiwari, Scientist, Department of Genetics and Plant Breeding, RMD, Co Agriculture and Research Station, IGKV, Ambikapur-497001, Chhattisgarh. tiwarijk5@gma
6.	Bengaluru	Dr. HE Sashidhar, Professor, Dept. of Genetics and Plant Breeding, College of Agricultural Sciences, GKVK, Bangaluru-560 065, 91-80- 236 24967 (O), 91-80-2333 0277 (F) 09886319919 (M) heshashidar@rediffmail.com, heshashidhar@gmail.com
7.	Beng.aluru	Dr. C.A.Deepak, Asst.Prof. (Rice Breeding), College of Agricultural Sciences, GKVK, Bangaluru-560 065.
8.	Bengaluru	Dr. Shailaja Hittalmani, Professor, Marker Assisted Selection Laboratory, Department of Genetics & Plant Breeding, College of Agriculture, GKVK, Bengaluru- 560 065,080-23624967/ 09845017436 Shailajah_maslb@rediffmail.com
9.	Bankura	Dr G. K. Mallick, Joint Director I/c & Asst. Botanist, Rice Research Station, Natunchati, Bankura - 722101, West Bengal 03242-251306 (O) , 09474184953 (M),rrsbankura@gmail.com
10.	Banswara	Dr. Rajesh Pandya, Associate Professor ; Plant Breeding & Genetics Department, Agricultural Research Station, (Maharana Pratap University of Technology), P.B. No. 25, Borwat Farm, Dohad Road, PIN : 327001 – Rajasthan; 02962-260013, 70 (O), 02962-242813 (F), 02962-246629 (R), rajesh05pandya@yahoo.com
11.	Bapatla	Dr.B. Krishna Veni, Scientist (Breeding),Rice Research Unit,(ANGRAU). Agril.College farm Campus, Bapatla, Guntur (Dt.)- 522 101 08643225901 (Telefax), 9441721120 (M), bkv_lam@yahoo.co.in
12.	Bhubaneswar	Dr. D. N. Bastia, Assoc. Prof. & Rice Breeder, Dept. of Plant Breeding & Genetics, College of Agriculture, OUAT, Bhubaneswar-751 003 0674-2397780 (F), 09861106427 (M), debendranath.bastia@gmail.com

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
13.	Bhubaneswar	Dr Simachal Sahu, Professor, Rice Research Station, Dept. of Plant Breeding & Genetics.College of Agriculture, OUAT, Bhubaneswar-750113 Mob: 09437499306
15	Brahmavar	Dr. Shridevi A Jakkeral , Junior Rice Breeder (AICRIP); UAS (Bangalore), Zonal Agricultural Research Station, Brahmavar-576213,Udupi District, Karnataka 0820-2561011 (Telefax) ,0820-2561011 Cell 09972607223 gowrishrigpb@gmail.com
14.	Canning	Dr. S.K. Sarangi, Sr, Scientist (Agronomy); Central Soil Salinity Research Station, Canning Town- 743329, South 24 Paraganas, West Bengal 03218-255241/255085 (O), 03218-255084 (F), sksrangicanning@gmail.com, cssri.canning@gmail.com
15.	Chatha	Dr. Bupesh Kr Sharma, Jr. Scientist (PBG) –AICRIP, Div. of PBG, FoA, SKUAST-J, Chatha, Jammu-180009 (J&K) 09419171543(M), bupeshsharma@gmail.com
16.	Chakdaha	Dr B. K. Senapati, Professor& Head, Dept. of Plant Breeding, Mohanpur 741252 West Bengal, 03473-22273 (F), 033-25820779 (R), 09433841648 (M), bksbckv@yahoo.in
17.	Chinsurah	Dr. Indrani Dana, Asst. Botanist, Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly, West Bengal. indranidana@yahoo.co.in
18.	Chinsurah	Dr. M.Mandal, Asst. Botanist, Rice Research Station, Govt. of West Bengal, Chinsurah, Hooghly, West Bengal. drmandalrrs@gmail.com
19.	Chinsurah	Dr. Santanu Sankar Aich, Asst. Botanist, Rice Research Station , CHINSURAH-712101.Hoogly District.West Bengal, 9836061161 (M), santanu69.aich@gmail.com
20.	Chinsurah	Dr Bijan Adhikari, Asst. Botanist, o/o of Jt. Director of Agriculture (Rice Dev.), Rice Research Station, Chinsurah, Hooghly-712102, West Bengal 033-26861149 (O), 09433643509 (M) adhikaribijan@gmail.com
21.	Chintapalle	Dr. B. Padmodaya, Associate Director of Research, Regional Agricultural Research Station,CHINTAPALLE – 531 111, Visakhapatnam Dist. (A.P.) 08937–238244 (O), 08937–2 (R) 08937–238244 (F), adr_hatzone@yahoo.co.in
22.	Chiplima	Dr. Bhimasen Naik, Prof. (PBG) & O/C; All India Co-ordinated Rice Improvement Project, RRTTS, O.U.A.T., Sambalpur-768025 Orissa 0943715136(M), bsnaikouat@rediffmail.com
23.	Coimbatore	Dr. S. Robin, Professor & Head; Department of Rice, TNAU, Coimbatore-641 003; 0422-2474967 (Telefax),0422-4342408 (R), 09442224409 (M), robin.tnau@gmail.com, rice@tnau.ac.in
24.	Coimbatore	Dr K Amutha, Asst. Professor, Department of Rice, TNAU, Coimbatore-641 003 0422-2474967 (Telefax), amudha_16g@yahoo.com
25.	Cuttack	Dr. O.N Singh, P S & Head,Crop Improvement Division, NRRI, Cuttack -753006 ,0671-2367788-83, Extn-2278, 0671-2367663 (F), 9861068179 (M) onsingh01@yahoo.com
26.	Cuttack	Dr. J. N. Reddy, Principal Scientist 0671-2367768 (O), 9437272692 (M), jnreddycrri@gmail.com
27.	Cuttack	Dr. S.S.C. Patnaik, Principal Scientist 0671-2428223 (R),09437142920 (M), sasank.crri@gmail.com
28.	Cuttack	Dr.S. K. Pradhan, Principal Scientist 0671-2367788-83, Extn-2219, 09937750353 (M), pradhancrri@gmail.com
29.	Cuttack	Dr. K.Chattopadhayay, Sr. Scientist, 9178248015(M), krishnenducrri@gmail.com
30.	Cuttack	Dr. S.K.Dash, Sr. Scientist
31.	Cuttack	Dr. B.C.Marndi, Scientist (SB), 09437179781, bcmarndicrri@gmail.com,
32.	Cuttack	Dr. J.Meher, Scientist
33.	Cuttack	Dr. A.Anandan, Sr. Scientist
34.	Dabhoi	Shri R.L.Chotalia, Assistant Research Scientist, Anand Agril. University,, Paddy Research Station, Anand ,Agril University, Dabhoi – 391110, (Dist - Vadodra) 02663-290 233, 9974707782 prsdabhoi@gmail.com
35.	Danti	Dr. R.D. Vashi, Prof. (Breeding); Soil and water management Research Institute, Navsari-396450, Gujarat 02637-282771 to 3824459 -114, Pfdc_navsari@yahoo.co.in
36.	Dhaulakauan	Dr Dhirendra Singh, Principal Scientist (Plant Breeding) CSK HPKV, HAREC,Dhaulakauan

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		(HP) singh1dhirendra@rediffmail.com
37.	Derol	Dr.V. V. Sonani, Research Scientist , Agril.Research Station, Anand Agril University, Derol –389320 , (Dist - Panchmahals), 02676-35528 (P), ars_derol@yahoo.com,vvsonani 1@yahoo.com
38.	Gangavati	Dr. Mahantashivayogayya K Hiremath, Scientist (Plant Breeding), AICRP-Rice, Agricultural Research Station, Gangavati -583 227, Dist. Koppal, Karnataka 08533-270143 (O),09845639892 (M) mahant.shivayogayya2@gmail.com
39.	Gerua	DrK.B.Pun, Officer-Incharge, Regional Rainfed Lowland Rice Research Station, Gerua, Hajo, District Kamrup, PIN : 781102 – Assam 0361-2820370 (O),,0361-2820370 (F) khembahadurpun@rediffmail.com
40.	Ghagharaghat	Dr. Nitendra Prakash,Asstt. Prof./Rice Breeder, Crop Research Station, P.O. -Jarwal Road, Bahraich, PIN -271901, Uttar Pradesh 05251-225481 (O) ,05262-224669 (R),09415160709 (M),nitendra63@yahoo.co.in
41.	Goa	Dr. K.K. Manohara, Scientist (Plant Breeding), ICAR Research Complex for Goa (ICAR) , Old Goa – 403402 0832-2284678 (O),0832-2284607 (R), 07507943679 (M), 0832-2285649 (F) manohar.gpb@gmail.com
42.	Gorakhpur	Dr. B.N.Singh, Chairman,Centre for Research and Development, Gorakhpur, UP, 91-8586889606(M), baijnathsingh08@rediffmail.com
43.	Gudalur	Dr S Manonmani, Ph.d., professor and Head, Hybrid Rice Evaluation Centre,Gudalur, Pin-643 212, niligiri district,Tamil Nadu 04262264945 (O),09443376334 (M), arsgudalur@tnau.ac.in
44.	Gudalur	Dr. PS Devanand, Assistant Professor (PBG)
45.	Gurdaspur	Dr Indoo Bhagat, Plant Breeder, Regional Station, PAU, Gurdaspur 143521; 01874-220825, 09216121666 (M), bhagatindoo@gmail.com
46.	Hathwara	Shri Monoranjan Jana,Asstt. Botanist & Incharge,Zonal Drought Resistant Paddy Research Station,V. Nagar, Hathwara, Purulia, West Bengal, 03252-201191 09836666577 (M), monoranjanjana8@gmail.com, zdrprs@gmail.com
47.	Hazaribag	Dr. N. P. Mandal, Principal. Scientist (Plant Breeding), CRURRS(CRRI- ICAR), Post Box-48, Hazaribag-825 301, Jharkhand 06546-222263 (O),06546-224506 (R) 09430391164(M), 06546-223697 (F) npmandal@hotmail.com, nimai.mandal@gmail.com
48.	Imphal, CAU	Dr. Ph. Ranjit Sharma, Professor (PGB)& i/c AICRIP (Rice), Dept. of Plant Breeding & Genetics, College of Agriculture, Central Agricultural University, Imphal, PIN- 795004, Manipur 0385-241415/2410427 (Telefax), 09191702032 (R) ,09436027358/09862567488 (M), drcau@yahoo.co.in
49.	Jagdalpur	Dr. Abhinav Sao, Scientist (GPB), Indira Gandhi Krishi Vishwavidyalaya, S.G. College of Agriculture & Research Station,Kumhrawand, Jagdalpur-494 005. Chhattisgarh, Off: 0778-229360, 08989963300, 09826668880(M), saoabhi27@yahoo.co.in
50.	Jabalpur	Dr. G.K. Koutu, Principal Scientist & Incharge, Hybrid Rice Project, Jabalpur, Department of Plant Breeding & Genetics, College of Agriculture, JNKVV: Adhartal, Jabalpur- 482004 Madhya Pradesh 0761-2681021 (O), 0761-2680118 (R),09424676726 /09407884019(M) 0761-2681021 (F), gk_koutu@yahoo.co.in
51.	Jabalpur	Dr. Sanjay Kumar Singh, Rice Breeder (Scientist) Department of Plant Breeding & Genetics, J.N.K.V.V., Jabalpur (M.P.) 482004
52.	Jagtial	Dr. Y. Chandra Mohan,Scientist (Plant Breeding), Office of Associate Director of Research, Regional Agricultural Research Station (PJTSAU), Polasa, Jagtial-505 529, Karimnagar (AP); 08724 – 277281(O),08724-277283 (F),09908577040 (M), drycmohan@yahoo.co.in
53.	JAGTIAL	Dr. S. Thippeswamy Scientisst plant breeding Office of Associate Director of Research, Regional Agricultural Research Station (PJTSAU), Polasa, Jagtial-505 529,
54.	Jeypore	Sri Mihir Ranjan Mohanty,Junior Breeder-cum-Officer-In-Charge RRTTSS (OUAT),

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		M.G.Road, Jeypore-764001, Koraput, Odisha mihirgenetics@gmail.com, ouatjeypore@gmail.com
55.	Kalimpong	Dr. Tulsi Saran Ghimiray, Associate Professor,Dept. of Genetics & Plant Breeding, Regional Research Station (Hill zone) Uttar Banga Krishi Vidyalaya Kalimpong Centre, Kalimpong-734301; West Bengal 03552-255606 (O), 09434429350 (M), ghimiraykpg@gmail.com
56.	Kanpur	Dr. Vijay Kumar Yadav, Rice Breeder & Officer in charge AICRIP on Rice, Department of Genetics and Plant Breeding, C.S. Azad. University of Agriculture and Technology, Kanpur – 208002, Uttar Pradesh 0512-2533808 (F), 0512-2530055 ® 07376105454 (M), vkyadu@gmail.com
57.	Kapurthala	Dr T. P. Singh, Asst. Seed Production Specialist, Regional Station, PAU, Kapurthala 144601; 01822-265094, 09872428072 (M), tonasaini@yahoo.com
58.	Karaikal	Dr. V.Chellamuthu,Dean; Pandit Jawaharlal Nehru College of Agriculture and Research , Karaikal- 609603, Pondicherry 04368-261372, 261288 (O), 04368-261260 (F)
59.	Karaikal	Dr. K. Paramasivam, Professor and Head (PBG),Pandit Jawaharlal Nehru College of Agriculture and Research , Karaikal- 609603, Puducherry 04368-261372 (O),09443143171 (M),04368-261260 (F), sivampjn@gmail.com
60.	Karimganj	Dr V. Baruah, In charge & Chief Scientist; Regional Agricultural Research Station, AAU, Akborpur, Karimganj - 788 710, Assam; 03843 212418 (O), 09435066460, rars.karimganj@gmail.com
61.	Karjat	Dr. L.S. Chavan, Associate Director of Research and Rice Specialist; Regional Agricultural Research Station, (Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth), Dist. Raigad. Karjat– 410 201, Maharashtra 02148 - 222035 (telefax), 09405360927(M), adrkarjat@rediffmail.com
62.	Karjat	Dr. R. L. Kunkerkar, Rice Breeder (AICRIP), Regional Agricultural Research Station, (Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth), Dist. Raigad. Karjat– 410 201, Maharashtra 09322077823 (R), 09730738464 (M) , rlkramesh@rediffmail.com
63.	Karjat	Dr. Mahendra P Gawai, Jr. Rice Breeder (AICRIP) 09423454447 (M), mahendra_gawai@gmail.com
64.	Karnal	Dr. Krishna Murthy, S. L., Scientist (Plant Breeding), Division of Crop Improvement , Central Soil Salinity Research Institute (CSSRI), Kachwa Road, Karnal-132001, Haryana 0184-2291218 Ext.216 (O), 08053726399 (M), kmurthy@cssri.ernet.in, krishnagene@gmail.com
65.	Kathalegere	Dr. C. Mallesappa, Plant Scientist (Paddy); Agriculture Research Station,(UAS, Bengaluru), Channagir (TQ), Davangere Distt, Kathalegere- 577219 – Karnataka 08188 273827 (O), 9448624118(M), mallesh52@rediffmail.com
66.	Katrain	Dr Gurdev Singh, Agronomist & Scientist Incharge; Rice Research Sub-Station, (CSK HPKV, Palampur), Katrain-175129 Distt. Kullu, H.P; 01905-287235 (O), 01905 287236 (F)
67.	Kaul	Dr. Khushi Ram, Sr. Rice Breeder; CCS HAU Rice Research Station, Kaul (Kaithal)-136 021, Haryana 01746-254550 (O), 01746-254946 (F), 09813136867 (M), khushirambattan60@yahoo.com
68.	Kaul	Dr.B.S.Mehla, Rice Breeder, CCS HAU Rice Research Station, Kaul (Kaithal)-136 021, Haryana
69.	Khudwani	Dr. G.A Parray,Associate Director, Mountain Research Centre for Field Crops, SKUAST-Kashmir Khudwani, Anantnag- 192102, Kashmir 01931-238246 (O), 0194-2313216 (R) , 01931-238246 (F) 09419009738 (M), parray_2005@rediffmail.com
70.	Khudwani	Dr. Najeebul Rehman Sofi, Sr. Scientist (PBG), SKUAST-K, MRCFC, Khudwani, Anantnag-192102, Kashmir 01931-238246 (O), 09419040582 (M), najeeb_sofi@rediffmail.com
71.	Khudwani	Dr. Asif Iqbal, Jr. Scientist, PBG, Mountain Research Centre for Field Crops,Khudwani, Anantnag-192 102 Kashmirs Tel/Fax No. 01931-238246
72.	Kolasib	Dr S. Basanta Singh, Joint Director, ICAR- RC for NEH Region, Mizoram Centre, Kolasib- 796081, Mizoram

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		03837-220041 (O), 03837-220560 (F)
73.	Kota	Dr. N.R. Koli, Asstt. Prof. (PB&G), Agricultural Research Station (MPUAT), Ummedganj farm, PB. No. 7, G.P.O. Nayapura, Kaithoon Road, Kota -324001, Rajasthan 0744-2844369 (O), 0744-2844306 (F), 09413530031(M), nanag70@yahoo.co.in
74.	KUNARAM	Dr. Sreedhar Siddi Scientist PL& Head Agricultural Research Station Kunaram 505174 kalva Srirampur mandal karimnagar TS, 09849635235 arskunaram@yahoo.com
75.	Kurumbapet	Dr. Mohan A. Savery, Rice Breeder, Perunthalaivar Kamaraj Krishi Vigyan Kendra, Kurumbapet, Puducherry – 605 009, 0413-2271292 (O), 0413-2279758 (R), 09585535767 (M), pondicherrykvk@yahoo.co.in
76.	Kurumbapet	Dr. R.Narasimman, Rice Breeder i/c ,Perunthalaivar Kamaraj Krishi Vigyan Kendra, Kurumbapet, Puducherry-605 009 Ph.0413-2271292,Fax. 0413-2279758 Mobile – 0944 2502107,pondicherrykvk@yahoo.co.in
77.	Lamphelpat	Dr. N. Prakash, Joint Director, ICAR RC for NEH Region Manipur Centre, Lamphelpat, , -795004, Imphal 0385-2414654 (O),0385-2415727 (R),09436894982 (M), 0385-2414749 (F), nprakashicar@gmail.com, nprakash_1@sify.com
78.	Lamphelpat	Dr. S Bhuvaneswari , Scientist (Genetics), ICAR RC for NEH Region Manipur Centre, Lamphelpat-795004, Imphal 0385-2414654 (Tel/Fax), 09402794020 (M), bhuvana0284@gmail.com
79.	Lembucherra	Dr. S. P. Das, Senior Scientist, Div. of Plant Breeding, ICAR Research Complex for NEH Region, Tripura Centre, PIN : 799210 - West Tripura 0381-2865203 (O), 09436450747 (M), 0381-2865537 (F), drspdas@gmail.com
80.	Lucknow	Dr. Y.P Singh, Principal Scientist, Regional Research Station (CSSRI), 21/467, ICCMRT Building, Ring Road, Indira nagar, PIN : 226016 - Uttar Pradesh;
81.	Ludhiana	Dr. G. S. Mangat, Senior Rice Breeder, Rice Section, GS Khush Labs, Dept. of Plant Breeding & Genetics, PAU,Ludhiana 141 004, Punjab 0161-2401960 extn 423 (O), 0161-2409891 (F),0161-2400770 (R) 09814516464 (M), mangatgs2005@yahoo.co.in
82.	Ludhiana	Dr. R. S. Gill, Plant Breeder (Rice), Rice Section, Department of Plant Breeding and Genetics, PAU, Ludhiana-141004,91-9888310070, ranvirgillz@gmail.com
83.	Ludhiana	Dr. Rupender Kaur, Asst. Plant Breeder, Rice Section, GS Khush Labs, Dept. of Plant Breeding & Genetics, PAU, Ludhiana 141 004, Punjab 08146560105 (M), kaurrupinder_pbg@pau.edu, rupinder.kaur@rediffmail.com
84.	Ludhiana	Dr Renu Khanna, Asst Plant Breeder, Rice Section, GS Khush Labs, Dept. of Plant Breeding & Genetics, Ludhiana 141 004 09855552034 (M), renukhanna_pgb@pau.edu
85.	Ludhiana	Dr Navjot Sidhu, Asst Geneticist,Rice Section, GS Khush Labs, Dept. of Plant Breeding & Genetics, Ludhiana 141 004 09914714690 (M), navjotsidhu_pgb@pau.edu
86.	Machilipatnam	Dr. T. Anuradha, Sr. Scientist (Pl.Br) & Head; Agricultural Research Station, Machilipatnam-521002, Krishna District, Andhra Pradesh 08672-223266 (O)
87.	Majhera	Dr. Anjuli Agarwal, Officer Incharge, Agriculture Research Station (GBPUA & T), Majhera, P.O. Garampani-263135, Naintal, Uttarakahand 05942-245538(O),05942-245538 (F) oicmajhera@gmail.com
88.	Malan	Dr. Daisy Basandrai Principal Scientist (Plant Breeding) Rice & Wheat Research Centre, Malan (Kangra) HP 176 04701892-252306 (O & Fax), 09816179192 (M) bunchy@rediffmail.com
89.	Malan	Dr DP Pandey, Rice Breeder, Rice & Wheat Research Centre, CSKHPKV, Malan (Kangra) -176 047, HP 01892-252306 (O), 09418149787 (M), pandeydp04@yahoo.co.in
90.	Mandya	Dr. M. P. Rajanna,Senior Rice Breeder & Head, AICRIP,Zonal Agricultural Research Station, V.C.Farm, Mandya – 571 405 08232-277923 (O),09945900893 (R),09141894715 (M) 08232-277392 (Fax), mprajanna@rocketmail.com, mprajanna2@gmail.com

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
91.	Mandya	Dr CA Deepak, Jr Rice Breeder,Zonal Agricultural Research station, V.C.Farm Mandya – 571 405
92.	Mandya	Dr. N. Shiva Kumar,Associate Professor (Hybrid Rice), ZARS, VC Farm,Mandya – 571405 08232-221166 (R), 09448528481 (M), shivu2356@gmail.com
93.	Maruteru	Dr. P.V. Satynanarayana, Director, APRRI&RARS, Maruteru-534122, W.G., A.P. 08819-246848 (R),9490545888 (M), satya_rice@yahoo.com, rarsmtu@yahoo.com
94.	Maruteru	Dr.N.Chamundeshwari, Scientist (PB), RARS, Maruteru, Narne_chhamundeswari@rediffmail.com
95.	Maruteru	Dr.M.Girja Rani, Scientist, Plant Breeding, RARS Maruteru, 9490195904(M) girijaaprri@yahoo.co.in
96.	Maruteru	Dr.B.N.S.V. R. Ravi kumar Scientist (PB) APRRI&RARS, Maruteru 534 122, 9866649495(M)
97.	Maruteru	Dr. P. Venkata Ramana Rao, Scientist (G.&P.B.), APRRI&RARS, Maruteru-534122, W.G., A.P. 09440441922 (M),08819-247583 (F), pvrgene@gmail.com
98.	Masodha	Dr. S.P.S. Rathi, Senior Rice Breeder, Officer incharge , CSR, MASODHA, (NDUAT). CSR, Masodha, post. Dabhasemar, Faizabad, PIN : 224 133 - Uttar Pradesh; 05278254153,9415716398 (M) aicripmasodhafzd@gmail.com, spsrathi@rediffmail.com
99.	Masodha	Saurab Dixit. Senior Rice Breeder, Crop Research Station, NDUA&T, Masodha , P.O. Dabhasemar, Faizabad, PIN- 224 133, UP 05278-254153 (O), 05278-243033, 254153 (F), 09450763002 (M) saurabhnduat@gmail.com
100.	Masodha	Dr. S. P. Giri, Hybrid Rice Breeder, C.R.S., Masodha (NDUAT), Dabhasemar, Faizabad, PIN- 224 133, Uttar Pradesh 05278-254404 (R), 09415719861 (M), giripp06@rediffmail.com spsgirinduat@gmail.com
101.	Modipuram	Rice Breeder, SVBPUA&T, Modipuram, Meerut - 250110, Uttar Pradesh 0121-2888618 (O),0121-2888675 (R), 0121-2888505 (F), 09358918146 (M), devisingh11@gmail.com, devisingh11@yahoo.co.in
102.	Moncompu	Dr. Leena Kumary S., Professor & Head, Rice Research Station, Moncompu, Thekkekkara, Alleppey Dt- 688503, Kerala, India 0477-2702245(O), 09447597915 (M),0477-2702245(F), leenakumarys@rediffmail.com, rrsmoncompu@kau.in
103.	Moncompu	Smt. Faseela K.V. Asst. Prof.; Rice Research Station, Moncompu, Thekkekkara, Alleppey Dt- 688503, Kerala, India 04662212228, 04933229816, 09947542929; faseelajafer@yahoo.co.in
104.	Mudigere	Dr. D Lakshmana, Associate Professor (PB), Zonal Agriculture Research Station, Mudigere – 577 132, Chikmagalur Dist., Karnataka , 08263-228455 (O), 09448902780 (M)
105.	Mugad	Dr. P. Surendra, Sr. Scientist (GPB) & Head, ARS (Paddy), UAS Dharwad, , Uttara Kannada, Karnataka 08384-226419 (Telefax), 08384 – 234429 (R), 092422 81402 (M), psurendra63@gmail.com
106.	Nagina	Dr. Rajendra Singh, P I & Breeder (AICRIP), Rice Research Station, Nagina (Bijnore) - 246 762, UP 01343250271 (O), 01343250271(F), 09410401520 (M) malik_zrsnagina@rediffmail.com, rsmalik53@gmail.com
107.	Nandyal	Dr. K. Mohan Vishnuvardhan, Scientist (PB), Rice Scheme, RARS, Nunepalli, Nandyal-518502,Kurnool district,Andhra Pradesh Ph: 08514-242296/ fax: 08514-248264/ mobile: +91-9652697573, 8096620615/mohanvishy15@gmail.com
108.	Navsari	Dr. P.B Patel, Associate Research scientist&PL of AICRIP on Rice, t, Main Rice Research Centre, Navsari Agril. University, Navsari – 396450, Gujarat 02637-282772-75 Ex-113 (O), 02637-283794 (F), 09725023750 9427083858(M) pbp_swm@nau.in/ pathik_pbg@yahoo.com
109.	Nawagam	Dr. A. M. Mehta, Research Scientist (Rice), Main Rice Research Station, Anand Agril. University, Nawagam-387540, (Dist-Kheda) 02694-284 278 (O), 02694-284 208 (F), 09879231377 (M), rsrice_mrrs@yahoo.com,

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		rsrice_mrrs@rediffmail.com
110.	Nawagam	Dr. M. G. Makwana, Assoc. Res. Scientist; Main Rice Research Station., Anand Agril. University, Nawagam-387540, (Dist-Kheda); 02694-284 278 (O), 02692-263235 (R), 02694-284 208 (F), mgmakwana1@gmail.com, rsrice_mrrs@yahoo.com
111.	Nellore	Dr Y. Suryanarayana, Head, Agricultural Research Station, (ANGRAU), NCF post, Muthukur Road, Nellore – 524004, A.P. 0861-2327803 (Telefax), ,09989625214 (M),08819-247583 (F) surya_viptha@yahoo.co.in
112.	Nellore	Dr. P. Ramesh Babu, Principal Scientist (Breeding); Agricultural Research Station, (ANGRAU), NCF post, Muthukur Road, Nellore – 524004, A.P. 0861-2327803 (Telefax), 0861-2314236 (R), 09885392215 (M), ramesh_ars2004@yahoo.com
113.	New Delhi	Dr. A.K. Singh, Principal Scientist, Division of Genetics, IARI, Pusa, New Delhi-110012 011- 25841112 (O), 011-25841481 (F), 011-25843464 (R), 09899045037(M), aks_gene@yahoo.com
114.	New Delhi	Dr. Gopala Krishnan, Senior Scientist (Rice Breeding) 011-25843550 (R), 09873545505 (M), gopal_icar@yahoo.co.in
115.	New Delhi	Dr PK Bhowmick, Scientist (Rice) 0968024408, prolaybhowmick@gmail.com
116.	North Lakhimpur	Dr. Kishore Kumar Sharma, Chief Scientist, RARS, Garumuria, P.O. Moidamia, North Lakhimpur - 787 032, Assam 03752-222714 (O), 9435489157 (M), drkksttb@yahoo.co.in
117.	Palampur	Dr. Gopal Katna, Rice Breeder, Experimental Farm, Deptt. of Crop Improvement, CSKHPKV,, Palampur- 176 062, Himachal Pradesh 01894-230391 (O), 01894-230399 (F), 09418155748 (M), gkatna@rediffmail.com
118.	Palghar	MG Palsgetkar, Asst Breeder, Agril. Research Station (Dr BS KKV), Palghar, Dist.Thane, 401404 (M.S.), Maharashtra 026525 241048 (O), 8087963276 (M), mpalsgetkar2007@rediffmail.com
119.	Pantnagar	Dr. Surendra Singh, Professor/ Sr Rice breeder Project Leader Ricve breeding; Department of Genetics and Plant Breeding, College of Agriculture, GBPUA&T, Pantnagar-263 145, Distt.- U.S. Nagar, Uttarakhand 05944-233294(O), 05944-233473 (F), 0594423394 (R), 09410120640 (M), ss_meher@rediffmail.com
120.	Pantnagar	Dr. Indra Deo Pandey, Sr. Scientist (Rice Breeding) 05944-233210 (O),05944-235279 (R), 08755790584 (M), idpandey2005@rediffmail.com
121.	Pantnagar	Dr.D.C.Basket, Junior Rice Breeder, Department of Genetics and Plant Breeding, College of Agriculture, GBPUA&T, Pantnagar-263 145, Distt.- U.S. Nagar, Uttarakhand
122.	Pantnagar	Dr. M. K. Nautiyal,Sr. Scientist (Rice Breeding) 05944-230254 (R),09412120767 (M), adbspc@yahoo.com
123.	Panvel	Dr K.D.Patil, Khar Land Scientist, Kharland Research Station, Dr. BSKKV, Raigad Dist. PIN : 410206 – Maharashtra 022-27452775 (O & F), klrs59@rediffmail.com
124.	Panvel	Dr. P.B. Vanave,Asstt Rice Breeder Khar Land Research Station, Panvel – 410206, Dist. Raigad, Maharashtra state Phone -022/27452775,Mobile – 9420959529,Fax – 022/27452775,Klrs59@rediffmail.com,pbvanave@gmail.com
125.	Paramakudi	Dr. S. Senthivel, Professor & Head (PBG); Agricultural Research Station, TNAU, Paramakudi – 623707 Tamil Nadu 04564 – 222139 (O), 04566-221756 (R), 944226175 (M), arspmk@tnau.ac.in
126.	Parbhani	S.B.Borgaonkar, Rice Breeder, Upland Paddy Research Scheme, V.N.M,K,V., Parbhani, Maharashtra.
127.	Pattambi	Dr. P. Sindhumole, Assistant Professor, Regional Agricultural Research Station, Pattambi (KAU), Pattambi, Palakkad, Kerala- 679306,09495390571 (M), sindhumolp@gmail.com
128.	Patna	Dr. Ajay Kumar, Chief Scientist (Rice), Rice Section Agricultural Research Institute, P. O.- Dhelwa, Via- Lohianagar Patna-800 020 (Bihar)

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		09431094394 (O) drajay_dhan9@yahoo.co.in
129.	Patna	Dr. Ashok Kumar Singh, Sr. Rice Breeder, Agricultural Research Institute, Mithapur, Patna 800 001
130.	Patna (ICAR)	Dr. Santosh Kumar, Scientist (Plant Breeding), ICAR Research Complex for Eastern Region, ICAR Parisar, PO. Bihar Veterinary College, Patna – 800014, Bihar 0612-2228882 (O),09973113026 (M),0612-2223956 (F), santosh9239@gmail.com
131.	Patna (ICAR)	Dr. Narayan Bhakta, Senior Scientist (Plant Breeding), ICAR Research Complex for Eastern Region, ICAR Parisar, PO. Bihar Veterinary College, Patna – 800014, Bihar nbhakta65@rediffmail.com
132.	Phondaghat	Prof. A.P CHAVAN, Agronomist; (Dr. Balasaheb Sawant Konkan Krishi Vidhyapeeth, Dapoli) Agricultural Research Station, Phondaghat-416601, Dist. Sindhudurg, Maharashtra 02367 – 245236 (O) , 02367-245105(F),9422373396 (M), arsphondaghat@rediffmail.com, arsphondaghat@gmail.com
133.	Ponnampet	Dr. Govindappa N. Hosagoudar,Junior Rice Pathologist,Agricultural & Horticulture Research Station,PONNAMPET- 571216,Kodagu (Dist), Karnataka. Off: 08274249156gnhosagoudar@rediffmail.com
134.	Port Blair	Dr. R.K. Gautam, PS& Head , Division of Field Crops, Central Agricultural Research Institute, Port Blair-744101, Andaman and Nicobar Islands 03192-250238 extn 162(O), 03192-251068 (F), 09933247901 (M), rgautampb@gmail.com
135.	Port Blair	Dr. P.K. Singh, Senior Scientist (Plant Breeding), 03192-250238 extn 167(O), 09474273099 (M), pksing99@rediffmail.com
136.	Pundibari	Dr. Bidhan Roy, Associate Professor, Dept. Genetics and Plant Breeding RRS, Terai Zone Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar 736 165, West Bengal, 09434117057 (M) bcroy10@yahoo.com
137.	Pusa	Dr. N.K. Singh, Chief Scientist (Rice), Dpt of Plant Breeding, RAU, PIN : 848125 – Bihar. 06274-240255 (F), 06274-240947 (R), 09431834065 (M) , nksingh_1958@yahoo.com
138.	Pusa	Dr. Rajesh Kumar, Jr. Scientist, A.I.C.R.I.P.(Rice), Dept. of PB&G, R.A.U. Pusa, Samastipur, Bihar-848125 08809435010 (M), rajrau.2007@rediffmail.com
139.	Pusa	Dr. Nilanjaya, Asst. Professor, Pl. Breeding & Genetics, RAU, Pusa nilanjayapbg@gmail.com
140.	Radhanagari	Prof. C. D. Sarawate,Officer-In-Charge, Agricultural Research Station, MPKV, Rahuri (M.S.), Radhanagari.Dist. Kolhapur (M.S.) – 416 212, 02321 – 234041 (O), 02321-234041 (F), 02321-234126 (R), 09421101364 (M), arsradha@yahoo.com, sarawatecd@yahoo.co.in
141.	Ragolu	Dr.K.Madhukumar, Scientist (Breeding), Agricultural Research Station,(ANGRAU), Ragolu, Srikakulam dist.-532484, 08942-279836 (O), 09618186286 (M) 08942-279836 (F) arsragolu@yahoo.co.in
142.	Raipur	Dr. A. K. Sarawgi, Principal scientist (Rice), Head, Dept. of Genetics and Plant Breeding, IGKVV, Raipur, PIN – 492006, Chhattisgarh 0771-2442352 (O) ,0771-2442131 (F),0771-2442152 (R) 09425507284 (M), sarawgi1@yahoo.co.in
143.	Raipur	Dr. Deepak Sharma, Principal Scientist, Dept. of Genetics and Plant Breeding 0771-2442302 (F),0771-4010573 (R) ,09826647509 (M) deepakigkv@gmail.com
144.	Raipur	Dr. Ravindra Kumar Verma, Scientist (Rice); Dept. of Genetics & Plant Breeding 09827167044 (M), rvermaigau@yahoo.com
145.	Raipur	Dr. Sandeep Bhandarkar, Scientist (G &PB), Dept. of Genetics and Plant Breeding 0771-2442492 (R),09425213462 (M), 0771-2442352 (O),o771-2443035 (F) sandeep_bhandarkar2002@yahoo.com
146.	Raipur	Dr Bhawana Sharma, Scientist (GPB), 08871595894 (M), bhavana.s.pandey1980@gmail.com
147.	Raipur	Dr. S.K.Nair Scientist Department of Genetics and Plant Breeding,College of Agriculture,

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
		IGKV, Raipur – 492012 (C.G.),9826192630 (M) sunil_ryp@yahoo.com
148.	Rajendranagar	Dr. Ch. Surendra Raju, Principal Scientist and Head; AICRIP, Rice Research Section, ARI, (PJTSAU), Rajendranagar, Hyderabad-30, Telangana State. 040-24015011 / 24015817 (O), 9849059297(M), rajuchs.raju@gmail.com
149.	Rajouri	Dr.A. K. Singh, Jr. Scientist, RARS, Agricultural Research Station, J& K- 185131;
150.	Ranchi	Dr. Krishna Prasad, Rice Breeder, Deptt. of Plant Breeding & Genetics, Birsa Agril. Univ., Kanke, Ranchi, Jharkhand 834006 06151-2450625 (O), 09934199128 (M), krishna_dumka@yahoo.co.in
151.	Ranichauri	Dr. Arun Bhatt, Associate Professor, College of Forestry and Hill Agriculture, GBPUA&T, Hill Campus, Tehri, Garhwal, PIN : 249199-Uttarakhand 01376-252606 (O), 07662-220732 (F), 09634794563 arun.bhatt@rediffmail.com
152.	Rewa	Dr P. Perraju, Sr. Rice Breeder, College of Agriculture, (JNKVV), REWA-486004, Madhya Pradesh 07662-220732(O), 07662-221014(R), 09827681203(M), 07662-220857/220706(F), perraju.p@rediffmail.com
153.	Rudrur	Dr.N.Sandhyakishore Scientist (Plant Breeding) Regional Sugarcane and Rice Research Station, Rudrur Nizamabad9948976575,9100519561 & 849625218kishoregene@gmail.com rsrrs.head@gmail.com
154.	Rudrur	Sri.G.Praveen Kumar, Scientist (Plant Breeding Regional Sugarcane and Rice Research Station, Rudrur Nizamabad9948976575, 9100519561 & 9849625218 kishoregene@gmail.com,rsrrs.head@gmail.com
155.	Sabour	Dr, Suresh Prasad Singh, Asst. Professor-cum-Jr. Sciemtist,BAC, Birsa Agril.University, Sabour, Bhagalpur-813210, Bihar 91-9472060575 (M) sps2007bau2011@gmail.com
156.	Sakoli	Dr GR Shamkuwar, Senior Rice Breeder, Agriculture Research Station, Sakoli –441802, Dist:Bhandara, (M.S.) 07186- 236343 (O), 09403049472 (M), srb_skl@rediffmail.com
157.	Shirgaon	Dr. B.D. Waghmode, Officer Incharge, Agricultural Research Station, Shirgaon-415 629, Dist-Ratnagiri ,(Konkan); MS 02352-232179 (O), 02352-232179 (F), 09404580416 ,(M), bharat_breed@yahoo.com, arsshirgaon@rediffmail.com
158.	Sindewahi	Dr NV Kayande, Rice Breeder, Zonal Agriculture Research Station, (Dr. Panjabrao Deshmukh Krishi Vidyapeeth) , Chandrapur Dt. (M.S.) 07178-288225 (O), 07178-288225(F), navinchandra_kayande@rediffmail.com
159.	Sirsi	Dr. N.G. Hanamaratti, Sr. Scientist (GPB), Agricultural Research Station, Sirsi, Karnataka.08951878044 (R), 09449188471 (M), hanamaratti@gmail.com
160.	Thirupatisaram	Dr. A.P.M.K. Soundaraj, Professor & Head; Agricultural Research Station (TNAU), Kanyakunari Dist., Tamil Nadu-629901; 04652-276728 (O), 9443434724 (M), arstps@tnau.ac.in
161.	Tirur	Dr. S. Banumathy, Assistant Professor (PB&G), Rice Research Station,Tirurkuppam, Tirur (Post),602 025, Tiruvallur-District, Tamil Nadu 044-27620233(O), 044-27620383 (F), 044-23744525(R), 9443566162(M), mathysakthi@yahoo.co.in
162.	Titabar	Dr. Ranjit Kr. Chowdhury, Principal Scientist (Breeding), R.A.R.S.,(Assam Agricultural University) Titabar, Assam, PIN- 785630 03771-248453 (O), 09435916478(M), 037623100831(F), ranjitchowdhury56@rediffmail.com
163.	Trichy	Dr.S. K. Ganesh, Professor and Head, Dept of Crop Improvement,Anbil Dharmalingam Agrl. College & Res. Institute, Navalur Kuttappattu-620 009 – Tamil Nadu 0431-2690577 (O), 0-431-2690 693 (F), skganesh@lycos.com
164.	Tuljapur	Dr. B.A.Madrap, Jr. Rice Breeder, Agril. Research Station, (Marathwada Agril. University, Parbhani), Tuljapur, Dist. Osmanabad, PIN- 413 601 Maharashtra 02471 242060 (O),09765085830 (M), rprstuljapur@gmail.com
165.	Umiam-ICAR	Dr. J.P.Tyagi, Sr. Scientist (Plant Breeding) & Incharge ICAR Research Complex for NEH Region,Umiam (Barapani)– 793103 Meghalaya Off: 0364-2570364,08974609163 (M) jppusa@yahoo.co.in

Sl.No.	Location	Name & Designation /Organization & Addresses / Tel. No/ Mobile No./ email
166.	Umiam-ICAR	Dr. Avinash Pandey,Sr. Scientist (Plant Breeding),ICAR Research Complex for NEH Region,Umiam (Barapani)– 793103, Meghalaya Off: 0364-2570364,09402134178(M) nashpgr@gmail.com
167.	Umiam, CAU	Dr. Mayank Rai, Rice Breeder, School of Crop Improvement,College of Post Graduate Studies,Central Agricultural University,Umiam (Barapani) Meghalaya9436336008mrai.cau@gmail.com
168.	Vadgaon	Dr. Khushal K. Barhate, Assistant Professor of Plant Breeding, . Agril. Research Station, Vadgaon, Maval Tal- Maval Dist-Pune).; Pin- 412 106 02114-235229 (O), Fax- 02114-235229 (F), 09422893539 (M), kkbarhate@yahoo.co.in, kkbarhate@gmail.com
169.	Varanasi	Prof. R.P.Singh; Rice Breeder I/C, AICRIP, Dept. of Genetics and Plant Breeding & Director, Institute of Agricultural Sciences, BHU, PIN-221005,Uttar Pradesh 0542-6702545 (O)08004930515, (R), 09451526933 (M) 0542-2369036 (F), ravi_piyush@rediffmail.com
170.	Vyara	Dr. Vipul P. Patel, Asst. Research Scientist (PB), Regional Rice Research Station, Navsari Agricultural University, Vyara, Dist. Tapi, Gujarat PIN-394650 02626-220212 (O) , 02637—651344 (R),08469417374 (M), 02626220212 (F), vppatel13@gmail.com, rrrsvyara@yahoo.in
171.	Vyttila	Dr. K. S. Shylaraj, Professor(Pl.Br), Dept .of Plant Breeding & Genetics , Rice Research Station (KAU), Vyttila, Cochin-682 019, 0484 2809963 (O), 9846789150 (M), 0484-2809963 (F) shylarajks@gmail.com, rrsvyttila@kau.in
172.	Vytilla	Dr. Veena Vighneswaran, Asst. Professor (PBG), 09447961586 (M), Dept .of Plant Breeding & Genetics , Rice Research Station (KAU), Vyttila, Cochin-682 019, 09447961586 (M),veenarars@gmail.com
173.	Wangbal	K.Sanaton Sharma Rice Research Station Wangbal, 795138 Thoubal, Manipur. 03848-222159, 9436033679 (M), rrswangbal@rediffmail.com
174.	Warangal	Shri N. Lingaiah,Scientist (Plant Breeding), Regl. Agril. Research Station (PJTSAU), mulugu Road, Warangal, PIN-506007,Telangana State .0870-2100236 (O),09949301819 (M), nlrashi80@gmail.com
175.	Warangal	Dr. K. N. Yamini, Scientist (PB) Regl. Agril. Research Station (PJTSAU), mulugu Road, Warangal, PIN-506007,Telangana State 0870-2443444 (R), 09848348064, yaminikn@yahoo.com
176.	Waraseoni	Dr. Uttam Bisen, Scientist (PB), Regional Agricultural Research Station, JNKVV, Waraseoni-481331, Balaghat, Madhya Pradesh.09424999321 (M) uk_bisen@rediffmail.com

PRIVATE COMPANIES – HYBRID RICE

Company	Name & Address
Advanta Limited	Dr. V. Satya Dev, Crop Research Lead - Hybrid Rice, Advanta Limited, Krishnama House, # 8-2-418, 3rd Floor, Road No -7, Banjara Hills, Hyderabad- 500 034; Ph: 040-66284000, Fax: 27890137, E-mail: satyadev@advantaseeds.com
	Dr. Sukhpal Singh, Principal Breeder – Rice; Ph: 040-66284000, Fax: 040-66284040, Mobile: 09989211318, Email: sukhpal.singh@advantaseeds.com
Ankur Seeds Pvt. Ltd	Shri R.M. Kashikar, Chairman & Research Director, Ankur Seeds Pvt. Ltd., 27, New Cotton Market Lay-out, Opp. Bus Station, NAGPUR - 440 018, Maharashtra; Ph: 0712-2725117, 2726148, Fax: 0712-2723455, E-mail: rmkashikar@ankuarseeds.com
	Dr V.P. Khedkar; Ph: 0712-2725117, 2726148, Fax: 0712-2723455, Mobie: 09850329757, E-mail: vpkhedikar@ankurseeds.com
Bayer Bio-Science Pvt Ltd	Dr. O.S. Kanwar, A.G.M. Crop Development – Rice, Bayer Bio-Science Pvt Ltd, Plot No:13, Survey No: P64/2, Software Units Layout, Madhapur, Hyderabad – 500 081, Telangana; Board:91-40-44110123/Direct: 44110249, Fax: 91-40-66841437, Mobile: +91-9849989752, E-Mail: omvirsingh.kanwar@bayer.com

Company	Name & Address
	Dr. Yogaraj Sharma, Board: 91-40-44110124/ Direct: 44110249, Fax: 91-40-6684 1437, Mobile: +91 98499 89753, E-Mail: yog.raj@bayer.com
Bioseed Research India Pvt Ltd	Dr. Paresh Varma, Director Research, Bioseed Research India, 234, B-Block, Kavuri Hills, Phase II, Hyderabad - 500 033; Ph: 040-67066666, Fax: 040-67066606, E-mail: paresh.verma@bioseed.com
	Dr. R. Vijaya Kumar, Principal Breeder (Rice); Ph: 09849742785, Ph: 040-67066666, Fax # 040-67066606, E-mail : vijay.kumar@bioseed.com
Bisco Bio-Sciences Pvt Ltd	Dr. Vinod Kumar Yadav, Breeding Cordinator - India, Bisco Bio-Sciences Pvt Ltd, Ashoka My Home Chambers, H.No. 1-8-201 to 203, Flat no. 208 & 209, S.P. Road, Secunderabad - 500 003, Telangana; Mobile: 07702888289, Tel: 040 30004050/60, Fax: 040 27841299, E-mail: vinodyadav@limagrain.in
	Dr. Manender Singh, Sr. Breeder-Paddy; Email: Manender.Singh@limagrain.in, Mob. +91-9100119466
Dantiwada Seed Private Ltd	Dr. S.N. Shukla, Vice President (R&D), Dantiwada Seed Private Ltd, # 211, Sakar V, B/H Natraj Cinema, Ashram Road, Ahmedabad - 380 009, Gujarat; Tel: 079-26583378, Fax: 079-26583379, Mobile: 09811893075, E-mail: shukla.shankarnath@gmail.com
Delta Agrigenetics Pvt.Ltd	Sri A.S.N. Reddy, Chief Executive Officer, Delta Agrigenetics Pvt. Ltd, Plot Nos: 99&100, Greenpark Avenue, NH-7 Road, Jeedimetla Village, Behind Surabhi Hotel, Hyderabad- 500055, Telangana; Email: asn@deltaseeds.in, Mob :09908900003
	Dr. R.N. Rao, Research Head; Mob: 0766002927 (O), 09492547300 (P), Email: rn@deltaseeds.in, rnrao14@yahoo.com
Ganga Kaveri Seeds Pvt. Ltd	Dr. N. Jagan Mohan Rao, Director Research, Division of Crop Research & Development, Ganga Kaveri Seeds Pvt. Ltd, # 1406, Babukhan Estate, Basheerbagh, Hyderabad - 500 001, Telangana; Mobile:09848772800
	Dr. B. Vidya Chandra, Mobile: 9652051568, Email: b.vidyachandra@gangakaveri.in
	Dr. Sai Murali, Ganga Kaveri Seeds Pvt. Ltd; Mobile: 7732062224
Indo-American Hybrid Seeds (I) Pvt. Ltd	Dr. S.N. Ratho, Indo-American Hybrid Seeds (I) Pvt. Ltd., Flat # 203, KJ Residency, Hydershkote (Near ZPHS), Golconda post office, Hyderbad - 500 008, Telangana. Ph: 08413-200086 (O); 040-20020975(R), E-mail : snratho@indamseeds.com
JK Agri Genetics Ltd	Dr. Suresh K Gupta, Vice President - R&D, JK Agri Genetics Ltd., 1-10-177, 4th Floor, Varun Towers, Begumpet, Hyderabad – 500 016; Ph: 66316858, Fax: 040-27764943, Mobile: +91 7799320007, E-mail: SureshGupta@jkseeds.net
	Dr. VN Kulkarni, Vice President - R&D; Tel: +91 (040) 66316858, Fax: +91 (040) 27764943, Cell: +91 7799315151, Email: vnkulkarni@jkseeds.net
	Dr. Nadiram Saha, JK Agri Genetics Ltd., 1-10-177, 4th Floor, Varun Towers, Begumpet, Hyderabad – 500 016
Kaveri Seed Company Ltd	Dr. G.S. Satish, Chief Operating Officer, Kaveri Seed Company Pvt. Ltd., 513-B, V Floor, Minerva Complex, S.D. Road, Secunderabad - 500 003; Email: satish.g@kaveriseeds.in
	Dr. N.P. Sarma; Ph: 27721457, 27899833, Fax: 27811237, E-mail: npsarma@gmail.com
	Dr. P. Santosh, Manager Rice Breeding; Mob: 9866076378, Email: santosh.p@kaveriseeds.in, paikarao_santosh@yahoo.co.in
Kesar Enterprises Limited	Dr Ramashray Singh, Breeder, Kesar Enterprises Limited, R&D Farm, Ravalkol, Medchal Mandal, Ranga Reddy Dist 501 401, Telangana; Mobile: 9490413293
Krishidhan Seeds Pvt Ltd	Dr. Ramesh Raut, Director (PR&D – SS&TS Dept.), Krishidhan Seeds Pvt Ltd, 7th Floor, Tower-15, Cybercity, Magarpatta City, Hadapsar, PUNE - 411 013, MS; E-mail: rameshraut@krishidhanseeds.com, Fax: 020 26712800, Tel: 020 26742600/01, Direct: 020 26742606, Mobile: 09422216514
	Dr Kuldeep Tyagi, Senior Scientist - Rice, Krishidhan Seeds Pvt Ltd, Ist Floor, Corporation Bank Building, MEDCHAL-501401 R.R. Dist. Telangana; Email: Kuldeep Tyagi@KrishidhanSeeds.com

Company	Name & Address
Mahindra & Mahindra Ltd	Dr. Ponnusamy Umashankar, Head: R&D, Mahindra Mahindra Ltd, Agribusiness, H. No.: 02-076/3/302, 3rdFloor, Sai Baba Complex, Pet Basheerabad, Qudbullapur Mandal, Secunderabad-500055, Telangana; Mobile: +91-9701611152, Email: Ponnusamy.umashankar@mahindra.com,
	Dr. Virupaxagouda Patil, Crop Breeder: Rice; Email: Patil.virupaxagouda@mahindra.com, Mobile: +91-9553384891
Mahyco	Dr. K. Govinda Raj, Principal Advisor, Mahyco, Maharashtra Hybrid Seeds Co. Ltd., National Highway No. 7, Hyderabad–Nagpur Road, Village : Kallakal, Mandal : Toopran, Dist., Medak – 502 336, Telangana; E-mail: govindaraj.k@mahyco.com, Mobile: 9642000533
	Dr. Raman, Email: cjv.raman@mahyco.com
Makhteshim-Agan India Pvt. Ltd	Dr. Vivek Shukla, Senior Manager- Breeding and Coordination, Makhteshim-Agan India Pvt. Ltd., 5th Floor, A Block, Q-City, Nanakramaguda, Gachibowli, HYDERABAD - 500 032, Telangana; Fax: +91 40 4036 1301, Cell: 91 965 277 5577, E-mail: vivek.s@ma-india.com
Metahelix Life Sciences Pvt. Limited	Dr. M.J. Vasudeva Rao, President – Ag. Technologies, Metahelix Life Sciences Pvt. Limited, Plot No. 3, KIADB 4th Phase, Bommasandra, Bangalore – 560 099, Karnataka; Tel: 080-7870236, 7836086; Fax: 080-7836084, E-mail: vasrao@meta-helix.com
	Dr. B.P. Ravi Kumar, Sr. Rice Breeder; Email: ravi.kumar@meta-helix.com
Namdhari Seeds Pvt. Ltd	Dr. N. Anand, Director-Research, Namdhari Seeds Pvt. Ltd., Sri Sai Arcade, No. 8, 12th Cross, 1st Phase, Ideal Homes Township, Rajarajeshwari Nagar, Bangalore – 560 098, Karnataka; Ph: 080-28602167/69, Fax: 080-28602168, Mobile: 9845310057
	Dr. V.K. Jayaramaiah, Senior Breeder; Ph: 080-28602167/69, Fax: 080-28602168, Tel: 09845471271/72, Mobile: 9845641651, E-mail: jayaramaiah@namdhariseeds.com
Nath Bio-Genes (I) Ltd	Dr. S.U. Baig, Director - Technical, Nath Bio-Genes (I) Ltd., Nath House, Nath Road, P.B. No. 318, Aurangabad - 431 005, Maharashtra; Ph: 2376314-17, 2376686, 2376687, Fax: 0240-2376188, E-mail: baig@nathseeds.com
Nirmal Seeds Pvt. Ltd	Dr. I.S. Halakude, Research Manager, Nirmal Seeds Pvt. Ltd., Bhadgaon Road, Pachora - 424 201, Dist. Jalgaon, Maharashtra; Tel: 02596-244366/244396, Fax: 02596-244045, E-mail: ishalakude@nirmalseedsindia.com,
	Mr. A. B. Birajdar, Plant Breeder (Paddy); Phone:(02596) 244366, 244396 Mobile :09545556852, Fax:(02596) 244045, E-mail:abbirajdar@nirmalseedsindia.com, birajdar.aneel@rediffmail.com
Nu Genes Pvt Ltd	Dr. K. Raghupathi Reddy, Director - Research, Nu Genes Pvt Ltd., Plot No. 18, 1st Floor, NCL Enclave, Jeedimetla, NH-7, Medchal Road, Secunderabad - 500 055, Telangana; Ph: 040-27165569, Mobile: 9989623122, E-mail: nityaseeds@yahoo.com, raghukotla15@gmail.com
Nuziveedu Seeds Limited	Dr. C. Ramakrishna, Vice President (R&D), Nuziveedu Seeds Limited, 7C, Surya Towers, S.P. Road, Secunderabad - 500 003, TS; Phone: 040-27898008, 55334300, Fax: 040-55321500, E-mail: rk_chintapalli@rediffmail.com,
	Dr. U. Prasada Rao, Phone: 040-27898008, 55334300, Fax: 040-55321500 Email: upraoudayagiri@yahoo.co.in
	Dr. S. Rama Krishna, Sr. Rice Breeder; Email: suraramakrishna@gmail.com, Mob: 9581412503
PAN Seeds Private Limited	Dr. Alok Marodia, Director, Pan Seeds Private Limited, Suite 15, 2nd floor, 2, N.C.Dutta Sarani, Kolkata - 700 001; Mob. +91-98300 59473, E.mail: aloke@panseeds.in
	Dr Surajit Chanda, R&D Manager; Tel: 91332210-2180/6825, 2230-0754, Fax: 2210-7849, E-mai: rd@panseeds.in, Mobile: 09474364776
Pioneer Overseas Corporation	Dr. C.H.M. Vijayakumar, Rice Research Coordinator (South Asia), Pioneer Overseas Corporation (India Branch), 3rd & 4th Floor, Babukhans' Millennium Centre, 6-3-1099/1100, Raj Bhavan Road, Somajiguda, Hyderabad - 500 082, Telangana; Tel: 040-2337 2891; Fax 040-2337 2898, Mobile: 9000988903, E-mail: vijayakumar.CHM@pioneer.com
Prabhat Agri Biotech Ltd	Dr. P. Sankar Rao, Prabhat Agri Biotech Ltd, #8-2-227/45, 1st Floor, UBI Colony, Road No. 3, Banjara Hills, Hyderabad - 500 034; Mobile: 9581412481, Ph:040-23606616
Pravardhan Seeds Pvt. Ltd	Dr. V.N. Deshpande, Pravardhan Seeds Pvt Ltd, #8-2-227/45, Ground Floor, UBI Colony, Road No. 3, Banjara Hills, Hyderabad-500034; Mobile: 9581412481, Ph: 040-23541503

Company	Name & Address
Rasi Seeds (P) Ltd	Dr. Ish Kumar, President - Crop Research, Rasi Seeds (P) Ltd. Hyderabad Office: Sri Sai Silica, Plot No. 1-98/K#19, Krithica Layout, Near Nisum Technologies, Arunodaya Colony, Madhapur - 500 081, Hyderabad; Ph: 04282-241007, 242007, 40024725, Mobile: +91 90002 77764, Fax: 04282-242558, E-mail: ishkumar@rasiseeds.com
	Dr. Jaya Prakash, Rasi Seeds (P) Ltd; Email: jayaprakash.t@rasiseeds.com, Mob: 8008101038
RJ Biotech Limited	Dr. Raghavendra Joshi, Director, RJ Biotech Ltd, Siddharth Arcade, Railway Station Road, Aurangabad - 431 005, Maharashtra; Tel: 0240-2354912 to 17, Fax: 0240-2332111, E-mail: info@rjbiotech.om, Website: rjbiotech.com
	Dr. Narendra Kulakarni, Principal Scientist & Chief (R&D), RJ Biotech Ltd, H.No.1-7-309/46A, B.K.Guda, SR Nagar, Hyderabad – 500 038; Mobile: 09490756015 Email: dr.narendrakulkarni@rjbiotech.com
Rohini Seeds Pvt Ltd	Research Coordinator, Rohini Seeds Pvt Ltd, Plot No. 6, Shakthi Nagar, Radio Colony, Near Chinthalkunta Check Post, L.B. Nagar, Hyderabad; Tel: 040 24128075
Sampoorna Seeds	Mr. Y. Ramesh, Sampoorna Seeds, 15/465, Gosha Hospital Road, Adoni - 518 301, A.P; Ph: 08512-252493, Fax: 08512-251793/254675, Cell: 9848121240/9440251345
Savannah Seeds Pvt Ltd	Dr. Ilyas Ahmed, Senior Manager (R&D), Savannah Seeds Pvt Ltd, H.No. 12-2-823/A/128/1, Santosh Nagar Colony, Mehdipatnam, Hyderabad - 500 028; Savannah Seeds Pvt Ltd, #904, Tower B, Signature Towers, NH-8, South City-1, Gurgaon - 122 001; Tel: 0124-4859200, Fax: 0124 4589201, Mobile: 09985596416, Email:iahmed@savannahseeds.com, ilyas9000@yahoo.com
Seed Works India Private Limited	Dr. Balaji Nukal, Managing Director, Seed Works India Private Limited, 437, Avenue 4, Banjara Hills, Hyderabad - 500 034; Ph: 040-23356354, Fax: 040-23356359, Mobile: 98494534535, E-mail: bnukal@prodigy.net, Web : www.seedworksindia.com
	Dr. Jagadeesha Gouda, Sr. Plant Breeder – Rice; Ph: 040-23356534, 23356355, Fax: 040-23356359, E-mail: jgowda@seedworks.com
Shakthi Seeds Pvt. Ltd	Dr. S. Rajeeva Reddy, Director, Shakthi Seeds Pvt. Ltd, 3-6-439/A, Himayathnagar, Hyderabad-500029; Ph: 040-27632373/ 27634390, 27562020(O), E-mail: shakthiseeds@gmail.com
	Dr. Fiaj Mohammad, Shakthi Seeds Pvt. Ltd, Ph: 040-55504646, Fax: 040-27634390, Cell: 09848920554, E-mail: faiz_km@rediffmail.com
Siri Seeds (India) Pvt Ltd	Mr. K. Rakesh Reddy, Director Marketing, Siri Seeds (India) Pvt Ltd, # 505, 5th Floor, 6-3-1099/1100, Babukhan's Millenium Centre, Raj Bhavan Road, Somajiguda, Hyderabad - 500 082; Tel: 040 66630762, Fax: 040 23412670, Mobile: 7702966681, E-mail: koripally.rakesh@gmail.com
Super Agri Seeds Pvt Ltd	Mr. Ravi Srinivas, Chairman & Managing Director, Super Agri Seeds Pvt Ltd, 5th Floor, Akash Ganga, #8-3-1503, Plot no. 144, Srinagar Colony, Hyderabad – 500 073; Mobile:9959226811, Email: info@superseeds.in
Syngenta Foundation	Dr. Partha R Das Gupta, Ph D, Principal Advisor - Agronomy, Syngenta Foundation for Sustainable Agriculture, C/o Syngenta India Limited, Orbit House, 2F1 Garstin Place, Kolkata 700 001, India
Syngenta India Limited	Dr. S. Sundar, Head of Rice Breeding, Syngenta India Limited , Survey No. 660 & 661, Nuthankal Village, Medchal Mandal, RR Dist 501401, Telangana State; E-mail: sundar.s@syngenta.com, Mob: +91-8008072390, Tel: +91-8418304500, Fax: +91-8418304595
Tierra Seed Science Pvt Ltd	Dr. V.S. Arun Kumar Sama, Sr. Scientist (Molecular Breeding), Tierra Seed Science Pvt Ltd, Malaxmi Courtyard, Khajaguda, Golconda Post, Hyderabad - 500008; Phone: +91 20 2729 3037, Fax: +91 40 3099 5274, Email: arun@tierraseedscience.com
TriMurti Plant Sciences Pvt Ltd	Dr. S.K. Ghosh, Vice President & Head (R&D), TriMurti Plant Sciences Pvt Ltd, # 101, MGR Estates, Dwarakapuri Colony, Panjagutta, Hyderabad - 500 082; Tel: 040 30611989, Fax: 040 2335567, Mobile: 83746333388, E-mail: ghosh@trimurti.in
	Dr. Amit Shukla, Sr. Rice Breeder; Email: ashukla@trimurti.in, Mob: 8374933388
Vikky's Agrisciences Pvt. Ltd	Dr. Y. Yogeswara Rao, Executive Director, Vikky's Agrisciences Pvt. Ltd, Plot No. 5, Sagar Society, Road No. 2, Banjara Hills, Hyderabad 500 034; Ph: 040-23550251/52, Fax: 040-23550253, Mobile: 9642311120, E-mail: yogesawarao.vikkys@gmail.com
VNR Seeds Pvt. Ltd	Dr. K.C. Upadhaya, Head R&D, VNR Seeds Pvt. Ltd., First floor, Ratnagiri, Opp: RajKumar college, G.E. Road, Raipur - 492 001, (C.G); Mobile: 08008261509, E-mail: kc_upadhyay@yahoo.com.au, kc@vnrseeds.com

WEATHER DATA – KHARIF 2015

ALMORA							
Latitude :	29^0 56' N		Longitude:	79^0 40' E		Elevation :	1250
Soil type:	Clay lome		Soil pH :	6.5		Soil texture :	Clay
	May	June	July	Aug.	Sep.	Oct.	**Total / Range**
No. of Rainy days	02	09	17	16	04	01	49
Total Rainfall (mm)	3.4	200.5	118.8	92.8	12.1	40.0	467.6
Avg. Max. Temp. ('^{0}C)	32.6	31.1	28.2	29.1	30.8	28.2	32.6-28.2
Avg. Mini. Temp. ('^{0}C)	12.9	16.3	20.6	21.3	18.6	10.9	20.6-10.9
Avg. Sunshine hours	7.55	5.59	3.36	4.43	7.28	7.42	6.33

BANKURA							
Latitude:	**23° 25' N**		**Longitude:**	**87°10' E**		**Elevation (m):**	**84 m**
Soil type:	**Red Lateritic**		**Soil pH:**	**5.6**		**Soil texture:**	**Sandy loam**
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total/Range**
No. of Rainy days	20	8	8	Nil	Nil	Nil	46
Total Rainfall (mm)	459.60	195.12	129.0	1.4	Nil	0.2	0.2
Avg. Max. Temp. ('^{0}C)	32.95	33.80	35.4	34.59	32.28	27.06	35.4-27.06
Avg. Mini. Temp. ('^{0}C)	25.14	26.03	25.5	23.45	18.68	14.16	14.16-26.03
Avg. wind velocity							

BHUBANESWAR							
Latitude :	20^0 15' N		Longitude:	85^0 20' E		Elevation :	25.9 msl
Soil type:	Sandy		Soil pH :	5.9		Soil texture :	Sandy loam
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	18	16	12	7	3	3	59
Total Rainfall (mm)	223.5	297.8	121	75.5	8.3	14.8	740.9
Avg. Max. Temp. ('^{0}C)	32.4	33.0	33.0	33.0	31.2	29.1	33.0-29.1
Avg. Mini. Temp. ('^{0}C)	25.0	25.0	25.0	23.5	20.0	17.5	17.5-20.0
Avg. wind velocity	4.8	4.5	3.8	2.2	2.4	3.0	3.45

BRAHMAVAR							
Latitude :	13^0 25' N		Longitude:	75^0 45' E:		Elevation	10 msl
Soil type:	Laterite		Soil pH :	5.5		Soil texture	Textured
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
Rainy day	27	23	12	7	6		75
Total Rainfall (mm)	1207.6	543.6	340.7	169	43.4		2304.3
Avg. Max. Temp. ('^{0}C)	28.53	29.01	29.44	33.05	35.40	35.03	35.40-28.53
Avg. Mini. Temp. ('^{0}C)	21.86	23.42	21.68	20.14	18.87	19.12	18.87-23.42
Avg. Sunshine hours	2.35	3.89	2.53	7.03	6.66	8.71	6.00

CANNING							
Latitude	**22^0 15' N**		**Longitude**	**88^0 40' E**		**Elevation (m)**	
Soil type	**Coastal saline**		**Soil pH**	**6.5**		**Soil texture**	
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total Range**
No. of Rainy days	15	28	15	11	2	0	71
Total Rainfall (mm)	274.2	834.4	372.8	172.2	21.5	1.4	1676.5
Avg. Max. Temp. ('^{0}C)	33.7	31.6	32.3	31.5	32.3	29.2	33.7
Avg. Mini. Temp. ('^{0}C)	26.8	25.8	26.8	25.4	24.7	19.1	26.8
* Solar radiation (**MJ/m2/day**)							
* Avg. Sunshine hours	4.5	1.4	3.7	4.4	6.1	6.9	4.5
* Avg. wind velocity (**KMPH**)	9.9	6.5	7.7	5.3	3.3	2.5	5.86

CHATHA							
Latitude :	**32⁰ 40' N**		**Longitude:**	**74⁰ 48'E**		**Elevation :**	**293**
Soil type:			**Soil pH :**	**7.0**		**Soil texture :**	**Clay loam**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	3	13	9	3	5	1	34
Total Rainfall (mm)	111.9	413.1	169.2	136.4	33.4	3.8	867.8
Avg. Max. Temp. ('⁰C)	35.4	34.5	33.8	33.5	31.3	27.6	35.4-27.6
Avg. Mini. Temp. ('⁰C)	25.0	25.3	25.2	21.9	17.5	10.7	10.7-25.3
Avg. wind velocity	4.2	2.4	2.2	1.4	1.4	0.8	2.0

CHAKDAHA							
Latitude :	**22⁰ 52' N**		**Longitude:**	**88⁰ 24' E**		**Elevation :**	**8.62 msl**
Soil type:	**Clay Loam**		**Soil pH :**	**7.3**		**Soil texture :**	**Alluvium**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov.**	**Total / Range**
No. of Rainy days	12	23	9	12	1	0	57
Total Rainfall (mm)	215.2	633.9	215.1	217.9	8.8	0.0	1290.9

CHINSURAH							
Latitude :	**22⁰ 52' N**		**Longitude:**	**88⁰ 24' E**		**Elevation :**	**8.62 msl**
Soil type:	**Clay Loam**		**Soil pH :**	**7.3**		**Soil texture :**	**Alluvium**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov.**	**Total / Range**
No. of Rainy days	17	29	16	13	6	0	81
Total Rainfall (mm)	284.0	761.0	303.6	179.2	29.6	0	1557.4
Avg. Max. Temp. ('⁰C)	33.1	31.8	32.5	33.1	32.4	30.1	33.1-30.1
Avg. Mini. Temp. ('⁰C)	26.5	25.4	26.70	26.0	23.4	17.7	17.7-26.70
Avg. Sunshine hours	5.63	2.84	5.22	5.70	7.77	7.43	5.765

COIMBATORE							
Latitude	**11° N**	**Longitude:**	**7° E**			**Elevation (m):**	**426.72 m**
Soil type	**Clay**	**7.8**	**7.8**			**Soil Texture:**	**Heavy**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov.**	**Total / Range**
No. of Rainy days	12	4	7	9	5	20	57
Total Rainfall (mm)	47.1	5.1	28.1	66.2	65.2	191.3	403
Avg. Max. Temp. ('⁰C)	32.31	32.2	32.3	33.0	31.64	28.60	32.31-28.60
Avg. Mini. Temp. ('⁰C)	23.73	22.9	23.2	23.8	23.27	21.97	23.73-21.97
* Solar radiation (cal/cm²/day)							
Avg. Sunshine hours	5.9	6.9	7.5	7.7	7.4	3.9	6.55
Avg. wind velocity	9.6	8.7	7.8	8.3	5.1	4.1	7.2

NRRI - CUTTACK							
Latitude :	**20.5° N**		**Longitude:**	**86.0⁰ N**		**Elevation :**	**23.48 m**
Soil type:	**Clay Loam**		**Soil pH :**			**Soil Texture:**	
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov.**	**Total / Range**
No. of Rainy days	12	18	16	12	7	2	67
Total Rainfall (mm)	225.2	352.1	278.3	270.3	24.1	12.8	1162.8
Avg. Max. Temp. ('⁰C)	33.75	32.0	31.7	31.6	32.6	29.9	33.75-29.9
Avg. Mini. Temp. ('⁰C)	26.06	25.8	24.7	26.3	24.9	20.4	20.4-26.3
Avg. Sunshine hours	4.77	1.8	3.7	3.7	6.4	6.4	4.46
Avg. wind velocity	6.46	4.6	5.0	3.9	2.0	2.0	3.99

GHAGHRAGHAT									
Latitude :	**27⁰ 50' N**			**Longitude:**		**81⁰ 20' E**	**Elevation :**		**112 msl**
Soil type:	**Sandy loam**						**Soil texture :**		
	May	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	02	04	14	15	03	-	-	01	39
Total Rainfall (mm)	9.4	102.2	297.9	295.2	74.4	-	-	5.8	784.9
Avg. Max. Temp. ('⁰C)	34.30	42.63	33.58	30.48	29.38	29.75	26.15	20.67	42.63-20.67
Avg. Mini. Temp. ('⁰C)	14.84	19.40	14.88	12.77	14.01	18.83	12.58	7.1	7.1-12.58

GOA							
Latitude :	15^0 33'20"		Longitude:	73^0 53' 53"		Elevation :	3msl
Soil type:	Silty Clay		Soil pH :	5.6		Soil texture:	Silty Clay
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	26	29	28	16	9	3	111
Total Rainfall (mm)	837.9	934.3	512.9	255.2	55.2	0.00	2595.5
Avg. Max. Temp. ('^{0}C)	31.4	30.0	30.1	31.0	34.4	35.0	35.0-30.0
Avg. Mini. Temp. ('^{0}C)	23.5	23.1	23.4	23.7	23.9	22.7	22.7-23.1
Avg. Sunshine hours	3.3	3.6	3.2	5.2	6.8	7.0	4.85
Avg. wind velocity	6.0	5.0	4.0	3.3	3.4	3.7	4.233333

GUDALUR							
Latitude :	11.5^0 N		Longitude:	76.5^0 E		Elevation :	1300 m
Soil type:	Clay		Soil pH :	4.5		Soil texture:	Sandy
	June	**July**	**August**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	19	22	13	10	10	3	77
Total Rainfall (mm)	201.4	257	266.6	128.8	110.4	15.2	979.4
Avg. Max. Temp. ('^{0}C)	25.15	25.44	25.96	26.12	24.70	28.13	28.13-24.70
Avg. Mini. Temp. ('^{0}C)	16.12	16.04	16.24	16	15.9	15.21	15.9-16.24

HAZARIBAG							
Latitude :	23^{0}59' N		Longitude:	82^0 25' E		Elevation :	614 msl
Soil type:	Sandy loam		Soil pH :	5.7		Soil texture :	Sandy loam
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of rainy days	9	18	11	3	1	0	42
Total rainfall (mm)	210	40	69	135	107	93	654
Avg. Max. Temp. ('^{0}C)	35.8	30.3	30.2	31.4	30.5	27.6	35.8-27.6
Avg. Mini. Temp. ('^{0}C)	22.3	21.4	21.8	21.1	15.8	10.7	10.7-22.3
Avg. Sunshine hours	6.0	3.3	5.0	7.0	8.0	8.0	6.216667
* Avg. wind velocity	5.42	5.15	5.0	4.05	2.06	1.72	3.9

HATHWARA							
Latitude :	**23^0 20' N**		**Longitude:**	**86^0 25' E**		**Elevation :**	**255**
Soil type:	**Lateritic**		**Soil pH :**	**5.7**		**Soil texture :**	**Loamy**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	15	19	11	5	1	0	51
Total Rainfall (mm)	221.2	529.7	179.5	76.0	6.9	0	1013.3
Avg. Max. Temp. ('^{0}C)	34.8	31.2	32.1	33.6	33.2	30.7	34.8-30.7
Avg. Mini. Temp. ('^{0}C)	25.7	24.6	25.1	24.5	22.2	17.2	25.7
Avg. Sunshine hours	5.1	3.8	5.5	6.6	7.4	7.6	6
Avg. wind velocity (Km/h)	2 km/hr	2.4 km/hr	3.3 km/hr	2.4 km/hr	1.7 km/hr	1.3 km/hr	2.18

JABALPUR							
Latitude :	**23.90^0 N**		**Longitude:**	**: 79.58^0 E**		**Elevation :**	
Soil type:	**Medium black**		**Soil pH :**	**7.5**		**Soil texture :**	
	June	**July**	**August**	**September**	**October**	**November**	**Total / Range**
No. of rainy days	08	16	12	07	01	00	44
Total rainfall (mm)	100.0	413.2	366.6	109.4	40.0	0.0	1029.2
Avg. Max. Temp. ('^{0}C)	37.7	31.6	30.9	32.4	33.4	30.3	37.7-30.3
Avg. Mini. Temp. ('^{0}C)	26.2	24.2	23.8	23.0	18.4	15.2	15.2-26.2
Avg. Sunshine hours	6.2	4.9	4.7	7.2	8.1	7.0	6.35
Avg. wind velocity (Km/h)	6.7	6.6	5.8	4.1	2.6	2.0	4.633333

JAGTIAL							
Latitude :			Longitude:			Elevation :	
Soil type:			Soil pH :			Soil texture:	
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	6.0	11.0	7.0	1.0	0.0	0.0	25
Total Rainfall (mm)	92.6	116.9	205.7	18.0	0.0	0.0	433.2
Avg. Max. Temp. (^{0}C)	34.7	32.3	34.0	43.8	33.2	32.5	43.8-32.3
Avg. Mini. Temp. (^{0}C)	26.2	24.2	24.7	27.1	17.4	16.4	16.4-27.1
Avg. Sunshine hours	5.4	3.4	5.3	7.3	6.6	16.4	7.4
Avg. wind velocity (Km/h)	7.8	5.8	2.9	1.0	1.2	2.0	3.45

JAGDALPUR							
Latitude :	**27°24'N**		**Longitude:**	**Elevation (m):**		**Elevation :**	**178msl**
Soil type:			**Soil pH :**	**Soil pH: 10.3**		**Soil texture :**	**Clay loam**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of rainy days	17	15	15	14	1	0	62
Total Rainfall (mm)	466.1	156.3	347.0	337.2	20.7	16.5	1343.8
Avg. Max. Temp. (^{0}C)	30.4	30.5	29.3	30.4	31.8	29.6	31.8-29.3
Avg. Mini. Temp. (^{0}C)	24.4	24.8	24.2	23.8	20.7	16.5	16.524.8
Avg. Sunshine hours	2.1	2.4	1.9	4.2	7.3	6.4	24.3
Avg. wind velocity (km/h)	6.7	6.2	5.3	4.0	2.5	3.5	4.7

JEYPORE							
Latitude :	**23.90^0 N**		**Longitude:**	**: 79.58^0 E**		**Elevation :**	
Soil type:	**Medium black**		**Soil pH :**	**7.5**		**Soil texture :**	
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of rainy days	21	19	22	15	2	4	83
Total rainfall (mm)	359.5	141.4	411.2	552.5	19.8	11.7	1496.1

KANPUR							
Latitude :	27°24'N		Longitude:	Elevation (m):		Elevation :	178msl
Soil type:			Soil pH :	Soil pH: 10.3		Soil texture :	Clay loam
	June	**July**	**August**	**September**	**October**	**November**	**Total / Range**
No. of rainy days	2	9	7.0	4.0	2	0	24
Total Rainfall (mm)	48.9	79.9	123.8	99.0	19.3	0.2	371.1
Avg. Max. Temp. (^{0}C)	39.4	34.4	34.2	35.3	33.6	30.1	39.4-30.1
Avg. Mini. Temp. (^{0}C)	25.5	24.1	23.5	22.0	16.8	11.6	11.6-25.5
Avg. Sunshine hours	7.7	5.6	4.1	7.8	7.5	6.0	6.45
Avg. wind velocity (Km/h)	8.2	8.8	6.6	5.9	3.2	3.4	6.016667

KATHALGERE							
Latitude :	13^0 13' N		Longitude:	76^0 15' E		Elevation :	561.6
Soil type:	Silty loam		Soil pH :	5.86		Soil texture :	
	Month 1	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**	**Total / Range**
No. of rainy days	**5**	**14**	**12**	**13**	**9**	**4**	57
Total Rainfall (mm)	**19.2**	**90.4**	**85.4**	**71.1**	**188.0**	**47.3**	501.4
Avg. Max. Temp. (^{0}C)	**28.6**	**33.0**	**31.0**	**30.0**	**32.0**	**33.0**	33.0-28.6
Avg. Mini. Temp. (^{0}C)	**23.4**	**22.0**	**22.0**	**22.0**	**21.0**	**21.0**	21.0-23.4

KARJAT							
Latitude :	**18^0 55' N**		**Longitude:**	**73^0 18' E**		**Elevation :**	**51 msl**
Soil type:	**Medium black**		**Soil pH :**	**6.2**		**Soil texture :**	**Clay loam**
	June	**July**	**August**	**September**	**October**	**November**	**Total / Range**
No. of Rainy days	16	24	28	14	7	1	90
Total Rainfall (mm)	835.6	807.5	387	398.5	108	11	2547.6
Avg. Max. Temp (^{0}C)	33.2	30.6	30.3	32.3	35.0	35.0	35.0-30.3
Avg. Mini Temp (^{0}C)	24.5	23.8	23.0	22.4	22.2	18.6	18.6-24.5
Avg. Sunshine hours	5	2.1	0.8	3.2	5.4	7.5	4

KHUDWANI							
Latitude :	**34 ^{0} N**		**Longitude:**	**74 ^{0} E**		**Elevation :**	**1560 msl**
Soil type:	**Clay loam**		**Soil pH :**	**Neutral**		**Soil texture :**	**pH**
	May	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Total / Range**
No. of rainy days	9	11	15	8	5	6	54
Total Rainfall (mm)	64.2	125.6	268.6	174.6	75.4	92.3	800.72
Avg. Max. Temp. ('^{0}C)	23.8	25.2	29.0	29.8	26.3	20.9	29.8-20.9
Avg. Mini. Temp. ('^{0}C)	8.9	12.1	17.5	16.3	10.1	5.6	5.6-17.5
Avg. Sunshine hours	8.3	7.1	6.5	7.2	7.7	5.9	7.11666
Avg. wind velocity (Km/h)	3.1	2.5	1.8	1.4	1.6	1.4	1.966667

KAUL							
Latitude :	**29^0 51' N**		**Longitude:**	**76^0 41' E**		**Elevation :**	**241 msl**
Soil type:	**Clay loam**		**Soil pH :**	**7.8**		**Soil texture :**	**Clayloma**
	May	**June**	**July**	**Aug**	**Sep**	**Oct**	**Total / Range**
No. of Rainy days	9	11	15	8	5	6	54
Total Rainfall (mm)	64.2	125.6	268.6	174.6	75.4	92.3	800.7
Avg. Max. Temp. ('^{0}C)	23.8	25.2	29.0	29.8	26.3	20.9	29.8-20.9
Avg. Mini .Temp. ('^{0}C)	8.9	12.1	17.5	16.3	10.1	5.6	5.6-17.5
Avg. Sunshine hours	8.3	7.1	6.5	7.2	7.7	5.9	7.116667
Avg. wind velocity (Km/h)	3.1	2.5	1.8	1.4	1.6	1.4	1.966667

KURUMBAPET							
Latitude :	***11^0 45' N***		**Longitude:**	**79^0 35' E**		**Elevation :**	**26 msl**
Soil type:	***Clay loam***		**Soil pH :**	**8.2**		**Soil texture :**	**Clay loam**
	August	**September**	**October**	**November**	**December**		**Total / Range**
No. of rainy days	13	5	14	25	10		67
Total rainfall (mm)	162.4	77.4	71.5	807.6	674.4		1793.3
Avg. Max. Temp. ('^{0}C)	35.7	35.2	34.0	29.5	29		
Avg. Mini Temp. ('^{0}C)	26.1	26.4	24.8	23.5	23.4		
Avg. Sunshine hours							
Avg. wind velocity (Km/h)	04	04	03	05	05		

LUDHIANA								
Latitude :	**30^{0}54' N**		**Longitude:**	**75^0 48' E**		**Elevation :**		**247 msl**
Soil type:	**Loamy Sand**		**Soil pH :**	**7.7**		**Soil texture :**		
	June	**July**	**August**	**September**	**October**	**November**		**Total / Range**
No. of Rainy Days	6	11	7	5	0	0		29
Total rainfall (mm)	17.90	256.30	165.60	88.25	0	0		528.05
Avg. Max. Temp. ('^{0}C)	37.6	33.5	33.3	33.2	31.3	26.9		37.6-26.9
Avg. Mini Temp. ('^{0}C)	26	27.2	26.5	24.2	19	12.6		12.6-27.2
Avg. Sunshine hours	8.67	5.81	6.05	8.00	7.44	4.81		6
Avg. wind velocity	6.53	6.43	3.90	3.02	2.62	1.93		4

MALAN							
Latitude :	**32^0 1' N**		**Longitude:**	**76^0 20' E**		**Elevation :**	**950 m**
Soil type:	**Silty clay**		**Soil pH :**	**5.6- 5.8**		**Soil texture :**	**Silty clay loam**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	8	26	22	8	2	3	69
Total Rainfall (mm)	55.1	602.9	484.3	77.2	28.0	13.0	1260.5
Avg. Max. Temp. ('^{0}C)	33.8	31.9	31.8	31.5	29.4	27.2	33.8-27.2
Avg. Mini .Temp. ('^{0}C)	18.2	17.9	17.9	17.1	14.8	11.9	11.9-18.2

MANDYA							
Latitude	**12.45^0- 13.57^0 N**		**Longitude**	**76.48^0- 78.24^0 E**		**Elevation (m):**	**695**
Soil type	**Red**		**Soil pH**	**6.5- 7.5**		**Soil texture:**	**Sandy loam**
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	0	6	5	3	9	2	25
Total Rainfall (mm)	1.2	67.8	82.6	47.0	168.6	7.2	374.4
Avg. Max. Temp. ('^{0}C)	30.7	30.4	29.6	29.5	29.4	29.0	30.7-29.0
Avg. Mini. Temp.('^{0}C)	19.2	19.2	18.5	19.4	15.3	15	15-19.4
Avg. Sunshine hours	4.6	4.8	5.1	5.1	1.4	4.6	4.26

MASODHA							
Latitude	**16.38^o N**		**Longitude :**	**81.44^o E**		**Soil Ec:**	**0.93**
Soil type	**Black alluvial clay**		**Soil pH:**	**6.5- 7.5**		**Soil Texture:**	**Delta alluvial**
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	8	14	11	1	0	0	34
Total Rainfall (mm)	74	205	136	6	0	0	421
Avg. Max. Temp. ('^{0}C)	38	34	33	33	32	29	38-29
Avg. Mini. Temp. ('^{0}C)	27	26	26	24	19	12	12-27

MARUTERU							
Latitude	**16.38^o N**		**Longitude :**	**81.44^o E**		**Soil Ec:**	**0.93**
Soil type	**Black alluvial clay**		**Soil pH:**	**6.5- 7.5**		**Soil Texture:**	**Delta alluvial**
	July	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	6	16	9	6	6		43
Total Rainfall (mm)	120.6	339.8	217.4	152.6	135.4	2.2	968
Avg. Max. Temp. ('^{0}C)	33.85	31.19	31.16	31.54	29		33.85-29
Avg. Mini. Temp. ('^{0}C)	27.77	26.96	26.53	26.03	22.16		22.16-27.77
Avg. Sunshine hours	5.48	4.11	3.4	3.29	2.88	2.77	3.65
Avg. wind velocity (Km/h)	8.78	6.69	4.40	1.82	5.24	2.63	4.92

MONCOMPU							
Latitude :	**9^0 5' N**		**Longitude:**	**76^0 27' E**		**Elevation :**	**2- 3 below msl**
Soil type:	**Alluvialclay**		**Soil pH :**	**5.5- 6.5**		**Soil texture :**	**Silty Clay**
	Month 1	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**	**Total / Range**
No. of Rainy days	22	14	17	19	13	10	95
Total Rainfall (mm)	237.6	217.2	197.5	554.5	120.8	110.2	1437.8
Avg. Max. Temp. ('^{0}C)	30.7	31.3	31.9	31.5	32	32.66	32.66-30.7
Avg. Mini. Temp. ('^{0}C)	24.5	24.2	24.8	24.67	25.28	23.79	23.79-25.28
Avg. Sunshine hours	4.1	6.5	4.36	4.36	3.61	5	4.655
Avg. wind velocity	2.8	3.2	2.8	2.8	2.9	2.4	2.816667

MUGAD							
Latitude :			**Longitude :**			**Elevation :**	**982 MSL**
Soil type:	**Sandy Clay Loam**		**Soil pH :**	**5.8**		**Soil texture :**	**Clay soils**
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total/Range**
No. of Rainy days	174	64	66.4	111.8	116.8	1.8	534.8
Total Rainfall (mm)	17	13	13	6	9	0	58

NAVASARI							
Latitude :	**22 ^{0} 48'**		**Longitude :**	**71 ^{0} 3'**		**Elevation :**	**32.4 msl**
Soil type:	**Medium black**		**Soil pH :**	**7.84**		**Soil texture :**	**Sandy Clay Loam**
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	11.0	11.0	4.0	11.0	0.0	0.0	37
Total Rainfall (mm)	379.5	321.0	65.0	440.0	3.0	0.0	1208.5
Avg. Max. Temp. (^{0}C)	35.0	32.0	30.7	30.6	31.0	34.1	35.0-30.6
Avg. Mini .Temp . (^{0}C)	26.4	25.7	26.2	25.3	23.4	20.3	20.3-26.4
Avg. Sunshine hours	10.0	5.4	3.2	4.5	5.3	7.3	5.95
Avg. wind velocity (Km/h)	9.1	10.5	6.9	4.7	3.1	2.9	6.2

NAWAGAM							
Latitude :	**22 ^{0} 48'**		**Longitude :**	**71 ^{0} 3'**		**Elevation :**	**32.4 msl**
Soil type:	**Medium black**		**Soil pH :**	**7.84**		**Soil texture :**	**Sandy Clay Loam**
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total/Range**
No. of Rainy days	6	6	2	4	0	0	18
Total Rainfall (mm)	100.6	200.8	17	55.0	0	0	373.4
Avg. Max. Temp. (^{0}C)	35.9	34.0	32.4	33.4	35.7	33.7	35.9-32.4
Avg. Mini .Temp . (^{0}C)	26.5	26.4	25.7	25.2	21.8	16.9	26.5-16.9
Avg. Sunshine hours	7.3	3.4	5.7	7.8	9.3	8.4	6.983
Avg. wind velocity (Km/h)	7.7	9.9	5.2	4.0	2.4	3.3	5.416

NAGINA							
Latitude :	**29^0 28' N**		**Longitude:**	**78^0 32' E**		**Elevation :**	**450 msl**
Soil type:	**Sandy loam**		**Soil pH :**	**7.5**		**Soil texture :**	**Silty clay loam**
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	09	09	09	01	01	01	30
Total Rainfall (mm)	303.0	435.2	134.0	90.0	3.0	4.0	969.2
Avg. Max. Temp. (^{0}C)	35.9	10.1	32.0	32.8	31.1	27.2	35.9-10.1
Avg. Mini .Temp . (^{0}C)	24.6	25.9	25.3	23.5	17.0	11.0	25.9-11.0
Avg. Sunshine hours	8.2	5.8	5.9	8.0	7.9	7.1	7.15
Avg. wind velocity (Km/h)	4.9	4.5	3.6	2.9	2.0	1.9	3.3

PANTNAGAR							
Latitude :	29^0 N		Longitude:	79^{0}3' East		Elevation :	243.84 m
Soil type:	Clay loam		Soil pH :	8.06		Soil texture :	Clay loam
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of rainy days	5	19	18	2	1	1	46
Total Rainfall (mm)	332.6	380.6	335.7	112	5	2	1167.9
Avg. Max. Temp. (^{0}C)	37	32.5	31.9	33.4	31.5	28.1	37-28.1
Avg. Mini .Temp . (^{0}C)	24.9	25.8	25.4	23.8	18.1	12.2	12.2-25.8
Avg. Sunshine hours	7.1	5.2	4.5	7.7	7.3	6.5	6.38
Avg. wind velocity (Km/h)	8	6.6	5.1	4.5	2.7	2.4	4.88

PATNA -ICAR							
Latitude :	10^0 N		Longitude:	76° E		Elevation :	25 msl
Soil type:	Sandy loam		Soil pH :	5.3		Soil texture :	Sandy loam
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	04	12	11	03	01	00	31
Total Rainfall (mm)	62.7	296.6	260.9	29.0	7.40	00	656.6
Avg. Max. Temp. (^{0}C)	37.04	32.18	32.85	33.58	32.69	29.26	37.04-29.26
Avg. Mini. Temp. (^{0}C)	27.81	26.73	26.67	26.20	21.7	16.49	16.49-27.81
Avg. Sunshine hours/day	6.02	4.56	3.49	6.42	6.65	1.51	4.775
Avg.wind velocity	8.68	23.81	5.50	5.74	2.90	2.95	2.95

PONNAMPET									
Latitude :	9°21' N		Longitude	78°22' E		Elevation :	39.83 msl		
Soil type:	Black		Soil pH :	8.0		Soil texture :	Clay loam		
	May	**June**	**July**	**Aug**	**Sep**	**Oct**			**Total**
No. of rainy days	12	20	14	16	12	6			80
Total rainfall (mm)	232	1039	211.4	166	182	101.7			1932.1

POMBAY							
Latitude :	29^0 N		Longitud:	$79^03'$ East		Elevation :	243.84 m
Soil type:	Clay loam		Soil pH :	8.06		Soil texture :	Clay loam
	May	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Total / Range**
No. of rainy days	9	11	15	8	5	6	54
Total Rainfall (mm)	64.2	125.6	268.6	174.6	75.4	92.3	800.7
Avg. Max. Temp. (^{0}C)	23.8	25.2	29.0	29.8	26.3	20.9	29.8-20.9
Avg. Mini .Temp . (^{0}C)	8.9	12.1	17.5	16.3	10.1	5.6	5.6-17.5
Avg. Sunshine hours	8.3	7.1	6.5	7.2	7.7	5.9	7.116667
Avg. wind velocity (Km/h)	3.1	2.5	1.8	1.4	1.6	1.4	1.966667

PHONDAGHAT							
Latitude :	**$25^059'$ N**		**Longitude:**	**$85^040'$E**		**Elevation :**	**51.84 M**
Soil type:	**Sandy loam**		**Soil pH :**	**8.2**		**Soil texture :**	**Light**
	May	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**
No. of Rainy days	2	21	28	28	14	8	4
Total Rainfall (mm)	43.0	852.6	589.0	540.5	315.6	127.4	32.8

RADHANAGARI							
Latitude :	**21^0 16' N**		**Longitude:**	**80^0 36' E**		**Elevation :**	
Soil type:	**Alfisoil**		**Soil pH :**			**Soil texture :**	**Clayes**
	Month 1	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**	**Total / Range**
No. of Rainy days	1	16	21	25	6	3	72
Total Rainfall (mm)	19.17	404.01	215.32	215.15	47.5	54.34	955.49

RAGOLU							
Latitude :	21^0 16' N		Longitude:	80^0 36' E		Elevation :	
Soil type:	Alfisoil		Soil pH :			Soil texture :	Clayes
	July	**Aug**	**sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of Rainy days	6	10	11	2	3	1	33
Total Rainfall (mm)	34.5	129.9	182.4	36.2	56.2	4.2	443.4
Avg. Max. Temp. (^{0}C)	34.72	32.95	32.31	33.54	30.45	30.27	34.72-30.27
Avg. Mini. Temp. (^{0}C)	29.50	29.43	28.43	28.17	23.76	22.85	22.85-29.50

RAIPUR							
Latitude :	**21^0 16' N**		**Longitude:**	**80^0 36' E**		**Elevation :**	
Soil type:	**Alfisoil**		**Soil pH :**			**Soil texture :**	**Clayes**
	JUNE	**July**	**Aug**	**sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	11	10	12	7	0	0	40
Total Rainfall (mm)	271.6	173.2	267.4	219.6	0	0	931.8
Avg. Max. Temp. (^{0}C)	36.0	31.9	31.3	32.2	33.3	31.3	36.0-31.3
Avg. Mini. Temp. (^{0}C)	26.0	25.3	25.2	25.2	22.3	17.2	17.2-26.0
Avg. Sunshine hours	5.1	3.6	3.6	5.8	7.9	8.0	5.666
Avg. wind velocity	8.4	8.4	7.0	4.4	2.7	2.8	5.61

RAJOURI							
Latitude :			**Longitude:**			**Elevation :**	**960**
Soil type:	**Clay loam**		**Soil pH :**			**Soil texture :**	
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	19	07	05	05	02	01	39
Total Rainfall (mm)	444.1	96.0	118.6	87.2	25.0	30.2	801.1
Avg. Max. Temp. (^{0}C)	29.4	30.5	30.7	27.4	22.3	18.8	30.7-18.8
Avg. Mini. Temp. (^{0}C)	15.5	20.9	16.1	12.7	6.5	2.7	2.7-20.9

SABOUR							
Latitude :	**25° 15'40" N**		**Longitude:**	**87°2' 40" E**		**Elevation :**	**46M**
Soil type:	**Light**		**Soil pH :**	**7.28**		**Soil texture**	**Sandy Loam**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	10	21	17	12	2	-	62
Total Rainfall (mm)	176.5	271.7	353.3	243.7	11.4	-	1056.6
Avg. Max. Temp. ('^{0}C)	35.0	32.4	32.2	32.7	28.4	28.7	35.0-28.4
Avg. Mini. Temp. ('^{0}C)	25.8	25.2	25.6	24.8	14.6	15.1	15.1-25.8
Avg. wind velocity (Km/Hr)	7.7	6.1	4.1	2.0	1.0	1.0	3.65

SAKOLI							
Latitude:	**20^0 04'01 N**		**Longitude:**	**79^0 59'17 E**		**Elevation (m):**	**243 Mt**
Soil type:	**Lateritic**		**Soil pH :**	**6.57 - 7.02**		**Soil texture:**	**Clay loam**
	Month 1	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**	**Total / Range**
No. of Rainy days	9	13	16	7	0		45
Total Rainfall (mm)	231.7	231	453	222.2	0		1137.9

SIRSI							
Latitude :	**26^{0}35' N**		**Longitude:**	**99^0 10' E**		**Elevation :**	**99.4 msl**
Soil type:	**Old alluvial**		**Soil pH :**	**5.4**		**Soil texture :**	**Clay loam**
	June 15	**July 15**	**Aug 15**	**Sep 15**	**Oct 15**	**Nov 15**	**Total / Range**
No. of Rainy days	645.8	233.9	235	142	54.8	68.8	1380.3
Total Rainfall (mm)	29.0	27.3	27.1	28.6	31.0	29.8	172.8
Avg. Max. Temp. ('^{0}C)	20.9	21.8	21.1	20.9	19.7	18.6	21.8-18.6
Avg. Mini. Temp. ('^{0}C)	85	85	86	84	78	76	76-86
Relative Humidiuty (%)	6.5	6.2	5.2	4.3	2.4	4.3	
Avg. Sunshine hours	7.0	8.0	6.1	4.0	3.3	5.2	5.6
Avg. wind velocity (km/hr)	250	279	262	249	158	107	217.5
Wind direction	-166	-55	-36	-14	20	23	
ET (mm)							

TIRUR							
Latitude :	78^{0}56' N		Longitude:	13^0 7' E		Elevation :	39.47 msl
Soil type:	Enceptisol		Soil pH :	7.0- 8.5		Soil texture :	Sandy clay loam
	July	**Aug**	**Sep**	**Oct**	**Nov**		**Total / Range**
No. of Rainy days	5	14	7	11	22		59
Total Rainfall (mm)	35	304	266	173	892		1670
Avg. Max. Temp. ('^{0}C)	37	37	36	34	29		37-29
Avg. Mini. Temp. ('^{0}C)	26	25	25	24	21		21-26
Solar radiation (CAL/CM^2)							
* Avg. wind velocity	4.10	3.43	2.94	3.80	4.21		1732

TITABAR							
Latitude :	**26^{0}35' N**		**Longitude:**	**99^0 10' E**		**Elevation :**	**99.4 msl**
Soil type:	**Old alluvial**		**Soil pH :**	**5.4**		**Soil texture :**	**Clay loam**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	12	17	18	3	3		53
Total Rainfall (mm)	193	205	116	96	32.5		642.5
Avg. Max. Temp. ('^{0}C)	32.6	33	32.4	31.5	28.9		32.6-28.9
Avg. Mini. Temp. ('^{0}C)	24.3	24.5	24.2	22.3	17.5		17.5-24.5
Avg. Sunshine hours							

VADGAON							
Latitude :	20^0 10'N		Longitude:	73° 20'		Elevation :	69
Soil type:	Medium Black		Soil pH :	7.5		Soil texture :	Clayey
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	10	17	10	7	4	2	50
Total Rainfall (mm)	297.2	268.8	100.6	166.0	173.80	103.20	1109.6
VYARA							

Latitude :	**20^0 10'N**		**Longitude:**	**73^o 20'**		**Elevation :**	**69**
Soil type:	**Medium Black**		**Soil pH :**	**7.5**		**Soil texture :**	**Clayey**
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days	06	11	03	04	00	0.0	24
Total Rainfall (mm)	227.5	275	33	240	00	00	775.5
Avg. Max. Temp. (^{0}C)	34.5	32.2	31.5	31.5	34.5	35.7	35.7-31.5
Avg. Mini. Temp. (^{0}C)	25.4	25.3	24.8	25.6	22.3	20.5	20.5-25.6
Avg. Sunshine hours	3.1	1.6	2.4	3.6	7.2	7.9	4.3
Avg. wind velocity	7.6	9.0	5.9	4.9	3.7	4.9	6

VARANASI							
Latitude	25^0 20' N		Longitude	23^0 03'E		Elevation (m)	75.7
Soil type	Medium		Soil pH	7.2		Soil texture	Sandy loam
	June	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Total / Range**
No. of Rainy days							
Total Rainfall (mm)	194.0	318.4	507.9	7.4	21.8	0.0	1049.5
Avg. Max. Temp. (^{0}C)	39.5	33.9	33.7	35.3	34.0	30.2	39.5-30.2
Avg. Mini. Temp. (^{0}C)	28.3	27.1	26.8	26.4	21.1	17.6	17.6-28.3
Avg. Sunshine hours							

WANGBAL							
Latitude :	17.58^0 N		Longitude:	17.28^0 N 7.5-8^0		Elevation :	881 MSL
Soil type:	sandy loam		Soil pH :	7.5- 8		Soil texture :	sandy
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total / Range**
No. of rainy days	18	15	5	6	3		47
Total rainfall (mm)	199.2	149.0	81.4	55.6	6.8		492
Avg. Maximum Temperature (°C)	33	35	34	34	29		35-29
Avg. Minimum Temperature (°C)	23	24	22	16	10		10-24

WARANGAL							
Latitude :	17.58^0 N		Longitude:	17.28^0 N 7.5-8^0		Elevation :	881 MSL
Soil type:	sandy loam		Soil pH :	7.5- 8		Soil texture :	sandy
	July	**Aug.**	**Sep.**	**Oct.**	**Nov.**	**Dec.**	**Total / Range**
No. of rainy days	8	10	14	2	nil	Nil	34
Total rainfall (mm)	56.8	168.2	321.6	6.6	nil	Nil	553.2
Avg. Maximum Temperature (°C)	31.0	28	29.0	29.2	28.0	25.0	31.0-
Avg. Minimum Temperature (°C)	24.0	21.0	23.0	22.7	19.0	16.0	
Avg. Sunshine hours	7.40	4.49	4.61	8.00	6.95	7.28	

WARASEONI							
Latitude :	17.58^0 N		Longitude:	17.28^0 N 7.5-8^0		Elevation :	881 MSL
Soil type:	sandy loam		Soil pH :	7.5- 8		Soil texture :	sandy
	June	**July**	**Aug.**	**Sep.**	**Oct.**	**Nov.**	**Total / Range.**
No. of rainy days	11	10	17	8			46
Total rainfall (mm)	142.1	228.4	345.2	137.9			853.6

Trials Sent and Data Receipt

Funded Locations - 2015

Region	*State*	Location	Trials Sent	Data receipt	Failed/late receipt
Zone 1-Hills	*Himachal Pradesh*	Malan	6	6	
	Jammu Kashmir	Khudwani	4	4	
Zone II-Northern	*Uttarakhand*	Pantnagar	11	11	
	Punjab	Ludhiana	17	17	
	Haryana	Kaul	11	10	
	Uttar Pradesh	Nagina	2	2	
		Kanpur	7	7	
	Jammu Kashmir	Chatha	5	5	
	Rajasthan	Kota	1	1	
Zone III-Eastern	*Odisha*	Jeypore	9	9	
		Chiplima	4	-	
	Bihar	Patna	6	6	
		Pusa	11	11	
	Jharkhand	Ranchi	14	12	
	West Bengal	Bankura	2	2	
		Chinsurah	26	24	
	Uttar Pradesh	Masodha	23	18	
		Ghaghraghat	5	5	
		Varanasi	13	12	
Zone IV-North Eastern	*Assam*	Titabar	8	7	
	Manipur	Wangbal	1	1	
	Tripura	Arundhutinagar	6	6	
Zone V- Central	*Madhya Pradesh*	Rewa	12	4	
	Chhattisgarh	Raipur	17	17	
		Jagadalpur	10	10	
	Maharashtra	Sakoli	10	10	
Zone VI- Western	*Maharashtra*	Karjat	12	12	
	Gujarat	Nawagam	18	18	
		Navsari	17	17	
Zone VII-Southern	*Andhra Pradesh*	Maruteru	16	16	
	Telangana	Rajendranagar	5	5	
		Warangal	10	9	
	Tamil Nadu	Aduthurai	12	12	
		Coimbatore	17	17	
	Kerala	Moncompu	8	8	
		Pattambi	6	6	
	Karnataka	Mandya	17	17	
		Mugad	9	7	
		Brahmavar	6	6	
		Ponnampet	4	4	
		Gangavati	9	9	
	Puducherry	Kurumbapet	4	4	
		Total	**411**	**384**	

Voluntary Locations-2015

Region	*State*	Location	Trials Sent	Data receipt	Failed/late receipt
Zone 1-Hills	*Jammu & Kashmir*	Rajouri	4	4	
		Bandipore (Khudwani)	4	-	
		Pombay (Khudwani)	4	2	
		Wadura (Khudwani)	4	-	
		Shalimar (Khudwani)	4	2	
	Himachal Pradesh	Katrain	2	-	
		Palampur	2	2	
	Uttarakhand	Almora	6	6	
		Bageswar (Almora)	6	2	
		Ranichouri	2	-	
		Majhera	2	-	
	Meghalaya	Umiam-ICAR	6	4	2
		CAU, Umiam	4	4	
	Sikkim	Gangtok	2	2	
	West Bengal	Kalimpong	2	2	
	Andhra Pradesh	Chintapalli	2	2	
	Tamil Nadu	Gudalur	2	2	
	Karnataka	Sirsi	2	2	
Zone II-North Western	*Delhi*	IARI- New Delhi	3	3	
	Punjab	Gurdaspur	2	2	
		Rauni	2	2	
		Kapurthala	4	4	
	Haryana	Karnal (CSSRI)	6	4	
		Jind (CSSRI)	2	2	
		Kurukshetra (CSSRI)	2	-	
		Panipat (CSSRI)	2	2	
		Rohtak (CSSRI)	2	-	
		Gautam Buda Nagar (CSSRI)	2	2	
	Uttar Pradesh	Modipuram (Meerut)	6	-	
	Rajasthan	Banswara	4	-	
Zone III-Eastern	*Orissa*	Bhubaneswar	17	16	
		NRRI (Cuttack)	31	23	
	Bihar	Patna-ICAR	15	13	
		Sabour	13	11	
	Jharkhand	Hazaribagh	4	2	
	West Bengal	Chakdha	7	1	
		Pundhibari	5	5	
		Canning	2	2	
		Hathwara	9	7	
		Kolkata	8	5	
	Uttar Pradesh	Lucknow	2	2	
		Gorakhpur	11	7	
		Aligagh (CSSRI)	2	-	
Zone IV- North Eastern	*Assam*	North Lakhimpur	3	2	
		Gerua	8	6	
		Karimganj	4	1	
	Manipur	Lamphelpat	4	4	

Region	*State*	Location	Trials Sent	Data receipt	Failed/late receipt
		Imphal (CAU)	1	-	
	Tripura	Lembucherra	1	1	
Zone V- Central	*Madhya Pradesh*	Waraseoni	4	4	
		Jabalpur	5	5	
	Chhattisgarh	Bilaspur	11	6	
		Ambikapur	10	7	
	Maharashtra	Sindewahi	2	2	
Zone VI- Western	*Maharashtra*	Panvel	2	2	
		Radhanagari	2	2	
		Shirgaon	7	7	
		Vadagaon	3	3	
		Pondaghat	2	2	
		Parbhani	3	-	
		Igatpuri	3	-	
	Gujarat	Derol	4	4	
	Goa	Goa	2	2	
Zone VII-Southern	*Andaman & Nicobar*	Port Blair	2	1	
	Andhra Pradesh	Machilipatnam	2	2	
		Ragolu	7	7	
		Bapatla	4	1	
		Nellore	5	4	
		Nandyal	1	1	
	Telangana	IIRR	3	3	
		Kunaram	3	3	
		Jagital	5	1	
		Rudrur	6	4	
		Kampasagar	2	-	
	Tamil Nadu	Paramakudi	1	-	
		Trichy	2	-	
		Annamalainagar	2	1	
		Tirur	1	1	
	Kerala	Vytilla	2	2	
	Karnataka	Sirsi	10	8	
		Mudigere	3	3	
		Kathalgere	4	4	
		Bengaluru	6	-	
	Puducherry	Karaikal	8	5	
		Total	**383**	**262**	**2**

Hybrid Rice (IHRT) Kharif-2015 Trials Sent and Data Received

Zone	State	Location	No. of Trials allotted	No. of Trials conducted as per Data received	No & Reasons for the failure of the experiment
Funded Locations					
Zone I Hilly Areas	Himachal Pradesh	Malan	1	1	0
Zone II Northern	Jammu & Kashmir	Chatha	1	1	0
	Haryana	Kaul	2	2	0
	Punjab	Ludhiana	2	2	0
	Uttarakhand	Pantnagar	2	2	0
Zone III Eastern	West Bengal	Chinsurah	3	3	0
	Odisha	Chiplima	2	2	0
	Uttar Pradesh	Masodha	3	3	0
	Jharkhand	Ranchi	3	3	0
Zone IV North	Tripura	Arundhatinagar	3	2	1 IHRT-Early

Zone	State	Location	No. of Trials allotted	No. of Trials conducted as per Data received	No & Reasons for the failure of the experiment
Eastern					(Bird Damage)
	Assam	Titabar	3	3	0
Zone V Central	Chhattisgarh	Raipur	3	3	0
	Maharashtra	Sakoli	2	2	0
Zone VI Western	Maharashtra	Karjat	3	3	0
	Gujarat	Navsari	3	3	0
		Nawagam	3	3	0
Zone VII Southern	Tamilnadu	Aduthurai	2	2	0
		Coimbatore	3	3	0
	Andhra Pradesh	Maruteru	3	3	0
	Karnataka	Brahmavar	3	3	0
		Mandya	3	3	0
		Mugad	1	0	1 (Late Receipt)
	Telangana	IIRR (DRR)	3	3	0
		Warangal	3	3	0
Total			**60**	**58**	**2**
Voluntary Locations					
Zone III Eastern	Uttar Pradesh	Allahabad	3	3	0
	Odisha	Bhubaneswar	2	2	0
		Cuttack (NRRI)	2	2	0
	Jharkhand	Hazaribagh	1	1	0
Zone V Central	Madya Pradesh	Jabalpur	3	3	0
	Maharashtra	Sindewahi	3	3	0
Zone VI Western	Gujarat	Dabhoi	3	3	0
	Maharashtra	Radhanagari	1	1	0
		Shirgaon	1	1	0
		Vadgaon	1	1	0
Zone-VII Southern	Andhra Pradesh	Bapatla	1	1	0
	Tamil Nadu	Gudalur	1	1	0
	Telangana	Jagtial	1	0	1
	Puducherry	Karaikal	2	1	1 (IHRT-MS) Late Receipt
	Karnataka	Sirsi	1	1	0
Total			**26**	**24**	**2**

Private Sector Location

Zone	State	Location	Name of the Seed Company	No. of Trials allotted	No. of Trials conducted as per Data received
Zone II Northern	Haryana	Sonepat	Savannah Seeds	1	1
Zone III Eastern	Uttar Pradesh	Barabanki	Bioseed Pvt. Ltd	3	3
		Barabanki	JK. Agri Genetics Limited	2	2
		Lucknow	Nuziveedu Seeds Pvt. Ltd	1	1
	West Bengal	Kolkatta	PAN Seeds Pvt. Ltd	1	1
Zone V Central	Chhattisgarh	Raipur	Advanta (I) Ltd	3	3
Zone VI Western	Maharashtra	Nagpur	Ankur Seeds Pvt. Ltd	3	3
Zone VII Southern	Telangana	Hyderabad	Bayer Bio-Science Pvt. Ltd	3	3
		Hyderabad	MAHYCO	3	3
		Hyderabad	Rasi Seeds Pvt. Ltd.	1	1
Total				**21**	**21**

ABBREVIATIONS

ABP	Ambikapur	JDP	Jagadalpur	PDG	Phondaghat
ADT	Aduthurai	JGL	Jagtial	PLG	Palghar
ALG	Aligarh	JND	Jind	PLM	Palampur
ALH	Allahabad	JRP	Jharanapani	PNB	Pundibhari
ALM	Allmora-ICAR	JYP	Jeypore	PNP	Ponnampet
AML	Annamalainagar	KBP	Kurumbapet	PNT	Pantnagar
AMS	Ambasamudram	KHD	Khudwani	PNV	Panvel
ARD	Arundhutinagar	KJT	Karjat	POB	Port Blair
BBN	Bhubaneswar	KLP	Kalimpong	PPT	Panipat
BDP	Bandipore	KLS	Kolasib	PRK	Paramakudi
BGL	Bengaluru	KMP	Kampasagar	PSA	Pusa
BGS	Bageshwar	KNM	Kunaram	PTB	Pattambi
BLP	Bilaspur	KNP	Kanpur	PTN	Patna
BNK	Bankura	KOL	Kolkata	PTN	Patna-ICAR
BNS	Banswara	KPT	Kapurthala	RCI	Ranchi
BPT	Bapatla	KRK	Karaikal	RDN	Radhanagari
BRD	Bardoli	KRL	Karnal(CSSRI)	RDR	Rudrur
BRM	Brahmavar	KTA	Kota	REW	Rewa
CBT	Coimbatore	KTG	Kathalgere	RGL	Ragolu
CHN	Chinsurah	KTR	Katrain	RHK	Rohtak
CHP	Chiplima	KUK	Kurukshetra	RJR	Rajouri
CHT	Chatha	KUL	Kaul	RNG	Ranichouri
CKD	Chakdha (Mohanpur)	LCK	Lucknow	RNR	Rajendranagar
CNG	Canning-ICAR	LDN	Ludhiana	RPR	Raipur
CTK	NRRI-Cuttak (ICAR)	LGL	Langol	RUN	Rauni
CTP	Chintapalli	LMB	Lembucherra	SBR	Sabour
DBI	Dabhoi	LPP	Lamphalpat	SHL	Shalimar
DNT	Danti	MDG	Mudigere	SHR	Shirgaon
DRL	Derol	MDP	Modipuram	SKL	Sakoli
DUK	Dhaulakhan	MGD	Mugad	SND	Sindewahi
GBN	Gautam Buddha Nagar	MJH	Majhera	SRS	Sirsi
GDL	Gudalur	MLN	Malan	TLJ	Tuljapur
GDP	Gurdaspur	MNC	Moncompu	TRR	Tirur
GER	Gerua-ICAR	MND	Mandya	TRY	Trichy
GGT	Ghaghraghat	MPM	Machilipatnam	TTB	Titabar
GNV	Gangavati	MSD	Masodha	UMM	Barapani (Umiam)
GOA	Goa	MTO	Motto	USG	Upper Shillong
GRK	CRD-Gorakhpur	MTU	Maruteru	VDG	Vadagaon
GSB	Gosaba	NGN	Nagina	VRN	Varanasi
GTK	Gangtok	NLP	North Lakhimpur	VTL	Vytilla
HTW	Hathwara	NLR	Nellore	VYR	Vyara
HZB	Hazaribagh	NND	Nandyal	WBL	Wangbal
IAR	IARI-New Delhi	NVS	Navsari	WDR	Wadura
IGP	Igatpuri	NWG	Nawagam	WGL	Warangal
IMP	Imphal (CAU)	PBN	Parbhani	WRS	Waraseoni
JBP	Jabalpur	PBY	Pombay		

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