PART I - GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

KVK Address	Telephone		E mail	Web Address
Krishi Vigyan Kendra Babbur Farm Hiriyur-577 598 Chitradurga District Karnataka	08193-289160	08193-289160	kvkchitradurgahyr@gmail.com	www.kvkchitradurga.in

1.2 .Name and address of host organization with phone, fax and e-mail

Address	Telephone		E mail	Web Address
	Office	Fax		
University of Agricultural & Horticultural Sciences, Shimoga-560065 Karnataka	08182- 267001	08182-298008	vcuahs2014@gmail.com	www.uahs.in

1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Sarvajna B. Salimath	08193-289160	9480838201	kvkchitradurga@gmail.com sarvajnauasb@rediffmail.com

1.4. Year of sanction: 2000 under NATP, 2004 as full fledged KVK

1.5. Staff Position (as on 31st March 2016)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	M/F	Discipline	Highest Qualification (for PC, SMS and Prog. Asstt.)	Pay Scale	Basic pay	Date of joining KVK	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator /SMS	Dr. Sarvajna B. Salimath	Programme Coordinator /SMS	M	Soil Science & Agril. Chemistry	M.Sc, Ph.D.	15600-39100	21480+7000	01-09-2008	Permanent	Others
2	SMS	Dr. S. Onkarappa	SMS	M	Agril. Entomology	M.Sc, Ph.D.	15600-39100	19800+6000	17-07-2009	Permanent	Others
3	SMS	Mr. Prakash Kerure	SMS	M	Horticulture	M.Sc.	15600-39100	18320+6000	10-11-2011	Permanent	OBC
4	SMS	Dr. D.A.Sumana	SMS	F	Food Science & Nutrition	M.Sc (Agril. Micro biology) Ph.D	15600-39100	15600+6000	19-10-2012	Permanent	Others
5	SMS	Dr. Rudragouda F. Channagouda	SMS	M	Agronomy	Ph.D.	15600-39100	16920+6000	17-10-2013	Permanent	OBC
6	SMS	Mr.Gajendra T.H	SMS	M	Agril. Extension	M.Sc.	1560039100	16920+6000	06-12-2013	Permanent	OBC
7	Programme Assistant(Lab Tech.) /T-4	Ms. B.N. Geetha Kumari	Programme Assistant	F	Agriculture	B.Sc. (Agri.)	9300-34800	11460+4200	08-11-2010	Permanent	OBC
8	Programme Assistant (Computer)/ T-4	Miss Kavitha P.Naik	Programme Assistant	F	Computer Science	B.Sc. (Computer)	9300-34800	10130+4200	31-11-2013	Permanent	OBC
9	Programme Assistant/ Farm Manager	-	-	-	-	-	-	-	-	-	
10	Assistant	Mr. D. Gurumurthy	Accountant/ Superintendent	M	Assistant	BA	9300-34800	17200	01-01-2013	Permanent	Others
11	Jr. Stenographer	A. Rekha	Jr. Stenographer	F	Junior Stenographer	BA	5200-20200	12731	27-12-2013	Temporary	OBC
12	Driver	Mr. Mahaboob Patel	Driver	M	Tractor Driver	S.S.L.C.	5200-20200	17200	23-10-2008	Permanent	OBC
13	Driver	Mr. Bhadraiah	Driver	M	Jeep Driver	7th	5200-20200	10150	10-03-2014	Temporary	Others
14	Supporting staff	Mr. Basavaraju	Assistant Cook cum Care taker	M	Asst. Cook cum Caretaker	7th	5200-20200	11800	22-12-2008	Permanent	OBC
15	Supporting staff	G. Nagaraj	Messenger	M	Messenger	S.S.L.C	5200-20200	8400	04-12-2013	Temporary	ST

1.6. Total land with KVK (in ha) : 36.9 ha

S. No.	Item	Area (ha)
1	Under Buildings	08.00
2.	Under Demonstration Units	03.00
3.	Under Crops	22.30
4.	Orchard/Agro-forestry	03.60
5.	Others	-

1.7. Infrastructural Development:

A) Buildings

Sl. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2009	550	55.0 lakh	-	-	-
2.	Farmers Hostel	ICAR	December 2002	305	30.0 lakh	-	-	-
3.	Staff Quarters	-	-	-	-	-	-	-
4.	Demonstration Units	-	-	-	-	-	-	-
5	Compost Unit	ICOF	October 2009	77.25	1.5 lakh	-	-	-
6	Nursery	NHM	2009-10	-	3.0 lakh	-	-	-
7	Rain Water Harvesting System	ICAR	March 2008		9.70 lakh	-	-	
8	Threshing Floor	-	-	-	-	-	-	-
9	Farm Store house	-	-	-	-	-	-	-
10	Plant Health Clinic	NHM	June 2008	-	20 lakh	-	-	-
11	Vehicle & Implement Shed	ICAR	Sept 2011	-	2.65 lakh	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Bolero KA 16 A 457	2004	4,35,386	312587	Good Condition
Tractor	2007	466319	640	Good Condition
Two Wheeler (Hero Honda) KA 16 S 4401	2009	42,645	18319	Good Condition
Scooter (Honda Activa) KA 16 S 4415	2009	39,350	24547	Good Condition
TVS Victor KA04EF8139	2003	38,363	70663	Good Condition

C) Equipments & AV aids

Sl No.	Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1.	Dell Laptop	5/18/2015	44200	Good Condition
2.	Dell vostro desktop	5/8/2015	34000	Good Condition
3.	Printer H P 1020+	5/18/2015	7500	Good Condition
4.	Dell 21.5Monitor	5/18/2015	8500	Good Condition
5.	Sony pen drive 8GB	8/5/2015	620	Good Condition
6.	Digital conductivity meter C M 180 make Elico	11/13/2015	14885	Good Condition
7.	Display board	12/2/2015	37098	Good Condition
8.	Dell laptop	3/11/2015	45000	Good Condition
9.	H P Printer 1005 (All in one)	3/11/2015	28200	Good Condition
10.	Awestra digital hard disk	3/11/2015	4700	Good Condition
11.	APC 1.0 KVA UPS	3/11/2015	7500	Good Condition
12.	LCD projector	3/10/2016	33000	Good Condition
13.	H P 10220 laser jet printer	3/10/2016	8000	Good Condition
14.	Numeric UPS System	3/10/2016	2100	Good Condition
15.	Battery operated sprayer	3/11/2016	4409	Good Condition
16.	Power operated grass weeder	3/11/2016	25135	Good Condition
17.	Double wheel barrow	3/11/2016	7800	Good Condition

1.8. Details SAC meeting conducted in 2014-15

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	11-08-2014	49	7	Awareness on importance of pulses in nutritional security	Twenty Five Front Line Demonstrations were conducted during 2015-16 under NFSM (Bengal gram and Redgram)
				Conduct residue analysis in Pomegranate Fruits	The residue analysis in pomegranate will be carried out during 2016-17 under Promegranate project of UAHS , Shivamogga.
				FLD of proven technology need to be convincing Line depts. staff and farmers	Large scale demonstrations were conducted on ICM in Groundnut, Redgram, Onion, Hebbal Aware (HA-4) , Mango, Millets, Fodder, Cotton, Arecanut Banana, Pomegranate crops during 2014-15(19 FLD's and 2015-16(14 FLD's).
				Emphasize on large scale production of Vermi compost.	Large scale production of Vermi Compost is being taken up in the Farm and technology being scaled up with IFSD Farmers of Hiriyur & Callakere Taluka (12 farmers).
				Common training calendar may be prepared jointly by KVK and DATC Hiriyur.	The plan was prepared after discussing with ADA, DATC , Hiriyur and accordingly care was taken to avoid duplicity . Similarly action plan for 2016-17 is being shared with ADA, DATC.
				KVK must limit to training programmes to those related to FLD and OFT beside need based and selected sponsored programmes.	Trainings have been conducted based on the action plan prepared for 2015-16.(Totally 56 trainings related to FLD & OFT were conducted during 2015-16)
				Problems for taking up FLD/OFT should be identified through PRA of cluster villages. Work intensively in these villages for 2 to 3 years on the prioritized problems. Impact of	New cluster villages were identified through PRA technique. Success stories were documented and impact assessment will be initiated for KVK interventions. Poster presentation were made on assessment of Onion

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
				KVK interventions should be measured in terms of extent to which these problems are minimized	verities for Chitrdurga district at UAS, Dharwad
				Seek permission from ZPD and recruit Farm Manager on contract basis immediately. Simultaneously, initiate action to recruit on permanent.	Farm Manager on contract basis has been recruited during Dec 2015.
				Popularize double cross hybrid in sericulture through demonstration	FLD on double cross hybrid in sericulture was conducted in Hariyabbe cluster during 2014-15.
				Soil test based fertilizer recommendation may be taken as innovative activity	265 Soil Health Cards have been prepared during 2015-16 for two villages for Hiriyur & Challakere . International Soil Health Day was celebrated on 5th of Dec 2015 .
				Documentation and maintenance of district agriculture status and other activities	Data of agriculture status has been documented based on the reports of JDA, Chitradurga & Statistical department , Chitradurga
				Characteristics of Hebbal Avare HA-4 variety need to be assessed	FLD was implemented in Baramasagara Cluster (at Hampanur village) and different parameters were assessed. Seed production of HA-4 was taken up in the KVK Farm
				Conduct compressive demonstration on large scale with line department for wider spreading of the technology.	Large scale demonstrations were conducted on groundnut, Redgram, Bengalgram and Greengram in collaboration with agriculture department during 2014-15. During 2015-16 large scale demonstration were conducted in Challakere taluka. Technology was spread in collaboration with DoA, Challakere throughout the taluka .
				Popularize micro credit facility of NABARD and other nationalized banks.	Through our on campus trainings farmers are sensitized about NABARD linkage for micro finance.
				Sensitize farm women about scientific dairy	Front Line Demonstrations on different green fodder

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
				management practices	verities were taken up in Hiriyur Tq. and seeds of CoFS - 29 were given to adopted village dairy farmers of Shidlyanakote .
				Create awareness on DCH castor hybrid through large scale demonstration	Large scale demonstrations were conducted in KVK contact farmer's field during 2014-15 through IFS programme in 10 villages of Hiriyur taluka.
				Intensify the onion seed production through participatory approach	Around 22 q Arka Kalyan seed was produced through participatory seed production programme at Muddapaura cluster during 2014-15. During 2015-16 seed production of Bheema Super Varity is being taken up in Hosakundure village of Hosdurga Tq. (5 Farmers).
				Demonstrations/Training about drip irrigation in onion need to be conducted	OFT on onion was conducted using raised bed cultivation through drip irrigation. A demonstration was taken up at our Farm during 2015-16.
				Popularize the agricultural technologies through electronic media	Regularly sending agriculture information through SMS (Farmers Portal) and actively using mass media for technology dissemination in a wider scale.

PART II - DETAILS OF DISTRICT

2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
1	Agriculture
2	Agriculture + Animal husbandry
3	Agriculture + Horticulture
4	Agriculture + Animal Husbandry+ Horticulture
5	Agriculture + Sericulture + Horticulture + Animal Husbandry

2.2 Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

S. No	Agro-climatic Zone	Characteristics
1	Central Dry Zone (Zone– IV) of Karnataka	Normal rain fall- 592 mm Max Temp- 38 Min Temp- 19.3 Hot semi arid Shallow and medium red and black soil

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in lakh ha
1	Red sandy loam with low rainfall	Soil are low in available nitrogen content, medium in phosphorus and potassium. Organic matter content is low and bulk density is moderate. Water holding capacity is less and soil depth is shallow natured.	1.96
2	Red sandy loam with medium rainfall	Available nutrients are medium in nature, micro nutrients like iron, copper, manganese are medium in nature. Molybdenum, boron and zinc are low. These soils are well drained and suitable for water logging sensitive crops, Low CEC.	1.36
3	Medium to deep black soils with medium rain fall	Soil depth is high (90 cm and above). These soil contain swelling and shrinking property because Montmorilinnite clay. These soils are suitable for cotton, maize, jowar, etc. Water holding capacity is more.	2.09

2.4. Area, Production and Productivity of major crops cultivated in the district

Crop	Area (ha)	Production (MT)	Productivity (kg/ha)
Maize	102692	90454	1353
Finger Millet	50728	62706	1005
Sorghum	16713	19295	879
Redgram	15115	4284	473
Greengram	4372	383	144
Chick pea	18801	4192	397
Groundnut	155732	33404	237
Sunflower	13050	17285	432
Castor	1944	846	883
Seasumum	4176	2196	656
Saf flower	523	2581	584
Cotton	16085	7054	829
Coconut	57110	9709	170
Banana	5790	160405	51000
Mango	3438	34380	1000
Sapota	1513	15130	1000
Sweet Orange	728	9734	1337
Papaya	940	72380	77000
Pomegranate	6911	62199	9000
Watermelon	228	7140	31316
Onion	17055	327541	19955
Tomato	2044	29808	21849
Chilli	1511	16621	11000
Brinjal	340	8840	26000
Chrysanthimum	530	7420	14000
Arecanut	21694	43388	2000

Source : Department of Agriculture & Horticulture , Chitradurga.

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April -14	42.3	38	19	60
May -14	106.8	37	27	70
June-14	64.5	33	20	81.5
July-14	33.4	32	19	79.5
August-14	78.9	34	20	83
September-14	139.3	34	19	77.5
October-14	116.4	33	17	69.5
November-14	52.7	31	15	76
December -14	1.4	37	16	61
January-15	0.6	36	14	62.5
February-15	0	37	14	42.5
March-15	10.5	38	15	52.5

*Source: JDA office, DoA, Chitradurga

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
Cattle			
Crossbred	34806	6 LPD	10 LPD
Indigenous	239931	1.5 LPD	2 LPD
Buffalo	151895	2 LPD	3 LPD
Sheep	924231		
Crossbred	-	Meat	20 Kg / Animal
Indigenous	-	Wool	1 kg / year
Goats	226696	16 Kg/ Animal	18 KG/ Animal
Pigs	2810		
Crossbred	-	60 Kg/ Animal	80 Kg/ Animal
Indigenous	-	40 Kg/ Animal	60 Kg/ Animal
Rabbits	1465		
poultry	161175		
Hens	-		
Desi	-	60-80 eggs / year	100 eggs / year
Improved	-	280 eggs / year	280 eggs / year
Ducks	18		
Turkey and others			
Fish	7920	-	-

Source: *Department of Animal Husbandry*

District profile has been Updated for 2014-15 : No

2.7Details of Operational area / Villages

Sl.No	Taluk	Name of the block	Name of the village	How long the village is covered under operational area of the KVK (specify the years)	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Hosadurga	Kasaba	Hosakunduru	2 Years	Onion	lack of Seed production, use of local varieties	Seed / Plant Production
2.	Chitradurga	Bharamasagar	Hampanuru	2 Years	Field Bean	Mono cropping, poor soil health	Cropping system
3.	Hiriyur	Kasaba	Hemadala	2 Years	Chrysanthemum	Flower malformation, poor quality, less yield	Integrated Crop Management
4.	Hiriyur	Dharamapura	Hariyabbe Palya	2 Years	Watermelon	fruit splitting and bud necrosis virus	Integrated Nutrient Management
5.	Hiriyur	Dharmapura	Sidlyyanakote	1 Year	Finger millet, fodder crops, groundnut	Non availability of high yield variety Imbalanced nutrient management	Varietal Evaluation
6.	Challakere	Parasurampura	Bommanakunte	2 Years	Groundnut	Non availability of high yielding varieties Non application of micronutrients Improper pest management	Integrated Crop Management
7.	Hosadurga	Kasab RSK, Hosadurga	Chikkamanahalli	1 Year	Foxtail millet	Non availability of high yielding varieties Non availability of good quality fodder varieties	Varietal Evaluation
8.	Molakalmuru	Rampura	Chikunti	1 Year	FoxtaI millet	Non availability of stress resistant variety	Varietal Evaluation
9.	Hiriyur	Hiriyur	Mayasandra	1 Year	Redgram	Sterility mosaic disease pod borer	Integrated Crop Management
10.	Challakere	Challakere	Sanikere	1 Year	Chickpea	Pod borer Wilt	Integrated Crop Management
11.	Holalkere	Ramagiri	Gundasamudra	1 Year	Arecanut	Spindle bug, scales, mites, bud rot	Integrated Crop Management
12.	Hiriyur	Eeshwaragere	Alur	1 Year	Banana, Areca nut, Coconut, Finger millet, onion	Low bunch yields, fruit cracking and leaf spot disease	Integrated Nutrient Management
13.	Hiriyur	Eeshwaragere	T Nagenahally	1 Year	Cotton, onion, pomegranate, banana, finger millet	Low cotton yields due to salt affected soils	Integrated Crop Management

2.8 Priority thrust areas

Sl. No	Thrust area
1.	Improved Variety and Hybrids
2.	Salt affected soils & wastelands Management
3.	Water Management
4.	Soil and water conservation
5.	Nutrient Management
6.	Integrated Pest and Disease Management
7.	Post Harvest and Value Addition
8.	Farm Mechanization Techniques
9.	Crop diversification
10.	Animal nutrition
11.	Market Intelligence

PART III - TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
1	1	2	2	15	14	106	101

Seed Production (q.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Onion (farmers participation)-10	8	Drumstick-2500	800
COFS-29 ---0	0.20	Sapota-1000	0

Live stock, poultry strains and finger lings		Bio-Products(q)	
7		8	
Target	Achievement	Target	Achievement
-	-	Pseudomonas-15	0
-	-	Trichoderma-5	0

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
57	67	1830	2749	266	2179	548149	251282

3.B1. Abstract of interventions undertaken based on thrust areas identified for the district as given in Sl. No. 2.7

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions										
				Title of OFT	Title of FLD	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
1	Varietal Evaluation	Foxtail Millet	Non availability of stress resistant variety	Assessment of foxtail millet varieties for higher yield	-	4	1	1	8	20 kg	-	-	3	Biofertilizer-6 kg $ZnSO_4$ -16 kg
2	Integrated Nutrient Management	Banana	Low bunch yields, fruit cracking and leaf spot disease	-	Improved Management practices for higher yield in Banana	1	-	-	6	-	-	-	6	Banana special -48 kg, Azospirilliu m-5 kg, PSB- 5 kg
3	Integrated Crop Management	Groundnut.	Non availability of high yielding varieties Non application of micronutrients Improper pest management	-	Integrated Crop Management in Groundnut.	7	-	2	-	150 kg	-	-	6	Biofertilizers -15 kg Captan -2.5 kg Chloropyrip hos -5.0 l $ZnSo_{4-}$ 20 kg

4	Demonstration of fodder module	Fodder	Non availability of high yielding varieties Non availability of good quality fodder varieties	-	Technology demonstration module in fodder crops .	4	-	1	4	15 kg	-	-	5	Biofertilizers -15 kg $ZnSo_{4-}$ 20 kg
5	Integrated Crop Management	Arecanut	Spindle bug, scales, mites, bud rot	-	Integrated crop management in Arecanut	2	1	1	3	--	-	-	5	Trichoderma – 10Kg, Dimethoate – 5lt., Dicofol 5lt., Mancozeb – 5Kg
6	Integrated Crop Management	Chrysanthemum	Flower malformation, poor quality, less yield	-	Integrated Crop Management in Chrysanthemum	1	-	-	4	-	-	-	5	Zincsulphate -20 kg, Borax - 5 kg, Trichoderma –20kg,PSP-20kg, Pseudomonas – 20Kg,
7	Cropping system	Avere	Monocropping, poor soil health	-	Demonstration of Hebbal Avere-4 as an intercrop in Areca nut	-	-	-	2	60kg	-	-	5	-
8	Integrated Nutrient Management	Watermelon	fruit splitting and bud necrosis virus	-	ICM in Watermelon	-	-	-	-	-	-	-	5	Arka vegetable special - 30kg, Trichoderma – 5Kg,PSB-5kg, Azospirillium-5 kg

9	Human Nutrition	Vegetables	High cost of vegetables, non availability of pesticide free vegetables	-	Terrace gardening for Nutrition security of urban population	-	-	-	-	Veg seed kit- 3	-	-	3	No-, Fiber pot-20 No's Protray-3 No's
10	Seed / Plant Production	Onion	lack of Seed production, use of local varieties	-	Farmers Participatory Seed Production in Onion	6	0	1	9	5kg	-	-	5	-
11	Integrated pest managenent	Pomegranate	Bacterial blight disease	-	Bacterial blight Management in Pomegranate	1	1	-	-	-	-	-	5	Trichoderma – 10Kg,, Pseudomonas – 10Kg, Neemcake-75Kg, Micronutrients – 2500gm
NFSM														
12	Introduction of variety and ICM- ML-365	Finger millet	Non availability of high yield variety Imbalanced nutrient managemen t	-	Introduction of variety and ICM-ML-365	6	-	1	5	50 kg	-	-	11	Biofertilizers -30 kg $ZnSo_{4-}$ 40 kg
13	Integrate d Crop Manage ment	Cotton	Low cotton yields due to salt affected soils	-	Integrated Crop Management of Bt Cotton under sodic soils	3	-	1	4	-	-	-	13	Planofix-3.25 l,Imidachlop rid-3.25 l,potssium Nitrate-26 kg, MgSo4-26 kg, Boron-13 kg, PSB-13 kg, -

14	Integrated Crop Management	Red Gram	Sterility mosaic disease pod borer	-	Integrated Crop Management - BRG-2	2	1	1	2	60 Kg	-	-	Rhizobium 10 Kg PSB – 10 Kg Pheromone traps- 100Nos NPV 1300 ml, Emamectin benzoate – 2400gm
15	Integrated Crop Management	Chickpea	Pod borer Wilt	-	Integrated Crop Management - JG -11	2	2	1	4	630 Kg	-	-	-	Trichoderma – 25Kg, PSB – 50Kg, Rhizobium – 10 Kg, 19:19:19 – 25Kg, Pheromone traps – 100Nos., Emamectin benzoate – 2500gm , Renaxypyr 2100ml, Chloropyriphos – 700ml

3.B2. Details of technology used during reporting period

S.No	Title of Technology	Source of technology	Crop/enterprise	No.of programmes conducted			
				OFT	FLD	Training	Others (Specify)
1	2	3	4	5	6	7	8
1	Assessment of foxtail millet varieties for higher yield	UAS Raichur UAS Dharwad	Foxtail Millet	-	1	6	Field Day
2	Improved Management practices for higher yield in Banana	*IIHR Bengaluru*	Banana	-	1	1	Field day
3	Integrated Crop Management in Groundnut.	UAS Bengaluru	Groundnut.	-	1	9	Field day
4	Technology demonstration module in fodder crops .	*UAS Bengaluru, TNAU*	Fodder	-	1	5	Field Day
5	Integrated crop management in Arecanut	*UAS Bengaluru*	Arecanut	-	1	3	Filed Day
6	Integrated Crop Management in Chrysanthemum	UHS Bagalkot	Chrysanthemum	-	1	1	Filed Day
7	Demonstration of Hebbal Avere-4 as an intercrop in Areca nut	*UAS Bengaluru*	Avere	-	1	0	Filed Day
8	ICM in Watermelon	IIHR, Bengaluru	Watermelon	-	1	0	Filed Day
9	Terrace gardening for Nutrition security of urban population		Vegetables	-	1	0	
10	Farmers Participatory Seed Production in Onion	*DOGR, Pune*	Onion	-	1	7	Field Day -
11	Bacterial blight Managem-ent in Pomegranate	NRC Pomegranate, Solapur	Pomegranate	-	1	2	-
12	Introduction of variety and ICM-ML-365	*UAS , Bengaluru*	Finger millet	-	1	7	Filed Day
13	Integrated Crop Management of Bt Cotton under sodic soils	UAS Bengaluru	Cotton	-	1	4	-
14	Integrated Crop Management-BRG-2	*UAS Bengaluru*	Red Gram	-	1	4	Field Day -
15	Integrated Crop Management- JG - 11	*UAS Bengaluru*	Chickpea	-	1	5	Field Day

3.B2 contd..

No. of farmers covered															
OFT				**FLD**				**Training**				**Others (Specify)**			
General		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**		**General**		**SC/ST**	
M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
2	0	0	0					41	12	19	8	45	21	19	6
				5	0	1	0	15	6	2	0	-	-	-	-
				5	1	0	0	130	20	35	15	130	28	32	15
				4	0	2	0	66	20	18	16	29	12	16	11
				4	0	1	0	51	12	10	6	38	16	9	15
				4	0	1	0	2	1	1	1	16	2	11	4
				5	0	0	0	-	-	-	-	22	18	12	16
				3	0	2	0	-	-	-	-	25	8	32	1
				0	3	0	0	-	-	-	-	-	-	-	-
				5	0	0	0	80	26	63	24	76	16	29	11
				5	0	0	0	28	12	30	21	-	-	-	-
				10	0	1	0	52	16	46	12	26	22	26	11
				10	2	1	0	45	16	14	9	16	4	3	1
				7	3	0	0	60	22	44	18	41	12	18	0
				13	0	12	0	72	21	36	13	38	6	22	9

PART IV - On Farm Trial

4.A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Millets	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation	1										1
Total	1										**1**

4.A2. Abstract on the number of technologies refined in respect of crops : Nil

4.A3. Abstract on the number of technologies assessed in respect of livestock enterprises : Nil

4.A4. Abstract on the number of technologies refined in respect of livestock enterprises : Nil

4.B. Achievements on technologies Assessed and Refined

4.B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Foxtail millet	Assessment of foxtail millet varieties for higher yield	3	3	3.6
		Total	3	3	3.6

4.B.2. Technologies Refined under various Crops : Nil

4.B.3. Technologies assessed under Livestock and other enterprises: Nil

4.B.4. Technologies Refined under Livestock and other enterprises : Nil

4.C1. Results of Technologies Assessed

Results of On Farm Trial

OFT 1: Varietal Assessment in groundnut For Higher Yield

<table>
<tr><th>Crop/ enterprise</th><th>Farming situation</th><th>Problem definition</th><th>Title of OFT</th><th>No. of trials</th><th>Technology Assessed</th><th>Parameters of assessment</th><th>Data on the parameter</th><th>Results of assessment</th><th>Feedback from the farmer</th><th>Any refinement needed</th><th>Justification for refinement</th></tr>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr>
<tr><td>Foxtail millet</td><td>Rain fed</td><td>Non availability of high yielding varieties Existing varieties susceptible to pest and diseases</td><td>Assessment of foxtail millet varieties for higher yield</td><td>3</td><td>Varietal Evaluation</td><td>1.Yield (q/ha)

2. Panicle length (cm)

3. plant height (cm)</td><td>
<table>
<tr><th>Varieties</th><th>Plant height (cm)</th><th>Panicle length(cm)</th><th>Weight/ Panical(g)</th><th>Seed Weight per panicle (g)</th><th>Yield (q/ha)</th><th>Fodder yield (q/ha)</th><th>% yield increased over check</th></tr>
<tr><td>Farmers practices</td><td>73.0</td><td>17.0</td><td>8.7</td><td>5.8</td><td>9.7</td><td>21.8</td><td>-</td></tr>
<tr><td>HMT-100-1</td><td>76.2</td><td>18.2</td><td>9.6</td><td>6.4</td><td>11.4</td><td>25.3</td><td>-</td></tr>
<tr><td>SIA-2644</td><td>100.2</td><td>22.0</td><td>11.8</td><td>7.5</td><td>14.4</td><td>28.7</td><td>48.5</td></tr>
</table>
</td><td>SIA-2644 recorded a higher yield over local & HMT 100-1</td><td>1. High yielding

2.Less incidence of pest and diseases

3.Good quality fodder</td><td>-</td><td>-</td></tr>
</table>

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Farmer practice	Local	9.7	q/ha	13433	2.24
HMT-100-1	UASD	11.5	q/ha	16830	2.44
SIA -2644	UASR	14.4	q/ha	22744	2.73

4.C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details

1	**Title of Technology Assessed:**	Assessment of foxtail millet varieties for higher yield
2	**Problem Definition**	Non availability of high yielding varieties Non availability of good quality fodder varieties Existing varieties are susceptible to stress condition
3	**Details of technologies selected for assessment:**	1. Introduction of new variety-SIA-2644 2. Seed rate -7-10 kg/ha 3.FYM :6.25 t/ha, Biofertilizer- Azospirillum, PSB, Trichoderma 4 g/ kg seeds 4. Application of micronutrients (10 kg $ZnSo_4$ and 4 kg borax 5. 40 :40 :N:P kg/ha
4	**Source of technology**	UAS Raichur , UAS Dharwad
5	**Production system and thematic area**	Rainfed and assessment of varieties
6	**Performance of the Technology with performance indicators**	

Varieties	Plant height (cm)	Panicle length(cm)	Weight/ Panical(g)	Seed Weight per panicle (g)	Yield (q/ha)	Fodder yield (q/ha)	% yield increased over check	Net returns (Rs/ha)	B:C ratio
Farmers practices	73.0	17.0	8.7	5.8	9.7	21.8	-	13433	2.24
HMT-100-1	76.2	18.2	9.6	6.4	11.4	25.3	-	16830	2.44
SIA-2644	100.2	22.0	11.8	7.5	14.4	28.7	48.5	22744	2.73

7	**Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques**	1. High yielding 2.Less incidence of pest and diseases 3.Good quality fodder
8	**Final recommendation for micro level situation**	SIA-2644 recorded better yield over local variety
9	**Constraints identified and feedback for research**	Develop drought resistant variety
10	**Process of farmers participation and their reaction**	Farmers expressed that SIA-2644 super variety and performing well w.r.t to yield, drought resistant and good quality fodder variety

4.D1. Results of Technologies Refined : Nil

4.D.2. Details of each On Farm Trial for refinement to be furnished in the following format separately as per the following details: Nil

PART V - FRONTLINE DEMONSTRATIONS

5.A. Summary of FLDs implemented during 2015-16

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ ST	Others	Total	
1	Fruit crops	Irrigated	Kharif	Banana	Putta Bale	-	ICM in Banana	Split application of Major nutrients Foliar application of micronutrients (Banana Special after 5th month till harvest) Foliar application of Potassium sulphate @ 2% for bunches â€¢ Bunch feeding with ammonium sulphate and Potassium nitrate â€¢ Water Management â€¢ Pest and disease management	2	2.4	1	5	6	-
2	Oilseed	Limited irrigation	Kharif	Groundnut	KCG-6	-	Integrated Crop Management	1. Introduction new variety (KCG-6), 2. Biofertilizers- Azospirillum & PSB , Biopesticide- Trichoderma 3. Use of micronutrients (10 kg ZnSO4 and 2kg boron) 4. RDF-25:50:25 kg NPK+ 7.5 t FYM/ha 5. Gypsum : 500 kg /ha	2	2	-	6	6	-

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ ST	Others	Total	
3	Fodder crops	Limited irrigation	Kharif	Mixed fodder crops -	COFS-29 ,South African tall, local	-	Fodder Crops	1.Introduction of new fodder varieties 2.Biofertilizers-Azospirillum and PSB, Biopesticide-Trichoderma, Recommended RDF application	2	2	2	4	6	-
4	Plantation crops	Irrigated	Kharif	Arecanut	Bheemasamudra Local -	-	Integrated Crop Management	Trichoderma viridae -- 2 kg , Dimethoate 30 EC--1.5 l. , Dicofol 18.5 EC---1.0 l, Mancozeb 75 WP----1 kg/Acer FYM- 20 kg, Urea- 100 gm, DAP- 200 gm , MOP-200 gm, MgSO4- 100gm, ZnSO4- 50gm , Borax-25 gm, gypsum-1 kg per plan	2	2	1	4	5	-
5	Flower Crops	Irrigated	Kharif	Chrysanthemum	Chandani local	-	ICM	Balanced application of nutrients (RDF), FYM: 10 t/ha ,Soil application of Zinc Sulphate @ 10 kg/ha, Borax @ 4 kg/h and FYM enrichment with Tricho derma, PSB, Pseudomonas @ 4kg/t of FYM	2	2	1	4	5	-
6	Pulses	Limited irrigation	Rabi	Field Bean	HA-4	-	Cropping Systems	Demonstration of Balanced application of nutrients (RDF), FYM: 25 t/ha and intercropping as hebbal avre-4 at an spacing of 30 X 15 cm in areca garden	2	2	0	5	5	-

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ ST	Others	Total	
7	Fruit crops	Irrigated	Summer	Watermelon	Kiran	-	ICM	Demonstration of balanced application of nutrients (RDF), FYM: 25 t/ha, Soil application of Trichoderma, PSB, Pseudomonas through enriching with FYM @ 4 kg/t, micronutrient application of Arka vegetable special @ 6kg/acre.	2	2	2	3	5	-
8	Vegetables	Terrace gardening for Nutrition security of urban population	Kharif	Vegetable crops	-	-	Human nutrition	Leafy Vegetables	5	3	-	-	3	
9	Vegetable crops	Irrigated	Kharif	Onion	Bhima Super	Nil	Seed/Plant Production	Demonstration of breeder seeds @ 1 kg / acre , Balanced application of nutrients (RDF), FYM: 25 t/ha ,Soil application of Trichoderma, PSB, Pseudomonas @ 4kg/t of FYM, Selection of seed bulbs, seed bulbs treatment with copperoxychloride @ 3g/l, Keeping bee hives @ 1/acre for high seed yield	2	2	0	5	5	-

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ ST	Others	Total	
10	Fruit crops	Irrigated	Kharif	Pomegranate	Bhagava	-	Integrated Disease Management	N:P:K- 400:200:200 ,PP Chemicals ,Pseudomonas fluorescens- 4kg, Trichoderma viridae @ 2kg VAM @ 2kg, Neem cake @13kg, Micronutrients--0.5kg	2	2	0	5	5	-
11	Millets	Limited irrigation	Kharif	Finger millet	ML-365	-	Variety Introduction	1.Introduction of new variety ML-365 2.Biofertilizers- Azospirillum and PSB, Biopesticide-Trichoderma 3.Micronutrients (10 kg ZnSo4) 3.RDF-50:40:25 NPK/ha +FYM- 7.5 t/ha	4	.4	1	9	10	-
12	Fibre crops	Limited Irrigated	Kharif	Cotton	Bt	-	Integrated Crop Management	RDF 150:75:75 Foliar application of KNO3 10 g/l, MgSO4 10g/l,B 1g/l, Planofix 0.25 ml/l, Imida Chloprid 0.5 ml/l, carbendizim 2g/l, Nipping ,Zinc application @ 10 kg/ha and Gypsum application based on GR.	4	5.20	1	12	13	-
13	Pulses	Rainfed	Kharif	Pigeonpea	BRG-2	-	Integrated Crop Management	1. Biofertilizers- Rhizobium & PSB Biopesticide- Trichoderma 2. Use of micronutrients (15 kg ZnSO4) 3. RDF- 25:50:25 kg NPK+ 7.5 t FYM/ha 4. Gypsum : 150	4	4	0	10	10	-

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ ST	Others	Total	
								kg /ha 5. IPM Practices						
14	Pulses	Rainfed	Rabi	Chickpea	JG-11	-	Integrated Crop Management	Trichoderma, Rhizobium, PSB,Pheromone traps,Lures, NPV, PP Chemicals, RDF-13:25:25 kg NPK+ 7.5 t FYM/ha	10	10	12	13	25	

5.A. 1. Soil fertility status of FLDs plots during 2015-16

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
1	Fruit crops	Irrigated	Kharif	Banana	Putta Bale	-	ICM in Banana	Split application of Major nutrients Foliar application of micronutrients (Banana Special after 5th month till harvest) Foliar application of Potassium sulphate @ 2% for bunches â€¢ Bunch feeding with ammonium sulphate and Potassium nitrate â€¢ Water Management â€¢ Pest and disease management	Kharif	Low	Low	Medium	Banana
2	Oilseed	Limited irrigation	Kharif	Groundnut	KCG-6	-	Integrated Crop Management	1. Introduction new variety (KCG-6), 2. Biofertilizers-Azospirillum & PSB ,	Kharif	Low	Medium	Medium	Foxtail millet

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
								Biopesticide- Trichoderma 3. Use of micronutrients (10 kg ZnSO4 and 2kg boron) 4. RDF-25:50:25 kg NPK+ 7.5 t FYM/ha 5. Gypsum : 500 kg /ha					
3	Fodder crops	Limited irrigation	Kharif	Mixed fodder crops -	COFS-29 ,South African tall, local	-	Fodder Crops	1.Introduction of new fodder varieties 2.Biofertilizers- Azospirillum and PSB, Biopesticide-Trichoderma, Recommended RDF application	Kharif	Low	Medium	Medium	Fodder crops
4	Plantation crops	Irrigated	Kharif	Arecanut	Bheemasamudra Local -	-	Integrated Crop Management	Trichoderma viridae -- 2 kg Dimethoate 30 EC--1.5 l. , Dicofol 18.5 EC---1.0 l, Mancozeb 75 WP----1 kg/Acer FYM- 20 kg, Urea-100 gm, DAP- 200 gm , MOP-200 gm, MgSO4-100gm, ZnSO4- 50gm , Borax-25 gm, gypsum-1 kg per plan	Kharif	Low	Medium	Medium	Arecanut
5	Flower Crops	Irrigated	Kharif	Chrysanthemum	Chandani local	-	ICM	Balanced application of nutrients (RDF), FYM: 10 t/ha ,Soil application of Zinc Sulphate @ 10 kg/ha, Borax @ 4 kg/h and FYM enrichment with Trichoderma, PSB, Pseudomonas @ 4kg/t of FYM	Kharif	Medium	Medium	High	Ragi
6	Pulses	Limited irrigation	Rabi	Field Bean	HA-4	-	Cropping Systems	Demonstration of Balanced application of nutrients	Rabi	Mediu	Mediu	High	No Crop

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
								(RDF), FYM: 25 t/ha and intercropping as hebbal avre-4 at an spacing of 30 X 15 cm in areca garden		m	m		
7	Fruit crops	Irrigated	Summer	Water melon	Kiran	-	ICM	Demonstration of balanced application of nutrients (RDF), FYM: 25 t/ha, Soil application of Trichoderma, PSB, Pseudomonas through enriching with FYM @ 4 kg/t, micronutrient application of Arka vegetable special @ 6kg/acre.	Summer	Medium	Medium	High	Ragi
8	Vegetable crops	Terrace gardening for Nutrition security of urban population	All season	Green leafy vegetables	Arka series	-	Human Nutrition	Terrace gardening	All season	-	-	-	-
9	Vegetable crops	Irrigated	Kharif	Onion	Bhima Super	Nil	Seed/Plant Production	Demonstration of breeder seeds @ 1 kg / acre , Balanced application of nutrients (RDF), FYM: 25 t/ha ,Soil application of Trichoderma, PSB, Pseudomonas @ 4kg/t of FYM, Selection of seed bulbs, seed bulbs treatment with copperoxychloride @ 3g/l, Keeping bee hives @ 1/acre for high seed yield	Kharif	Medium	Medium	High	Ragi

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
10	Fruit crops	Irrigated	Kharif	Pomegranate	Bhagava	-	Integrated Disease Management	N:P:K- 400:200:200 ,PP Chemicals ,Pseudomonas fluorescens- 4kg, Trichoderma viridae @ 2kg VAM @ 2kg, Neem cake @13kg, Micronutrients--0.5kg	Kharif	Low	Low	Medium	Onion
11	Millets	Limited irrigation	Kharif	Finger millet	ML-365	-	Variety Introduction	1.Introduction of new variety ML-365 2.Biofertilizers-Azospirillum and PSB, Biopesticide-Trichoderma 3.Micronutrients (10 kg ZnSo4) 3.RDF-50:40:25 NPK/ha +FYM- 7.5 t/ha	Kharif	Low	Medium	Low	Chickpea
12	Fibre crops	Limited Irrigated	Kharif	Cotton	Bt	-	Integrated Crop Management	RDF 150:75:75 Foliar application of KNO3 10 g/l, MgSO4 10g/l,B 1g/l, Planofix 0.25 ml/l, Imida Chloprid 0.5 ml/l, carbendizim 2g/l, Nipping ,Zinc application @ 10 kg/ha and Gypsum application based on GR.	Kharif	Low	Medium	Medium	Cotton
13	Pulses	Rainfed	Kharif	Pigeonpea	BRG-2	-	Integrated Crop Management	1. Biofertilizers- Rhizobium & PSB Biopesticide-Trichoderma 2. Use of micronutrients (15 kg ZnSO4) 3. RDF-25:50:25 kg NPK+ 7.5 t FYM/ha 4. Gypsum : 150 kg /ha 5. IPM Practices	Kharif	Low	Low	Medium	Cotton

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Season and year	Status of soil			Previous crop grown
										N	P	K	
14	Pulses	Rainfed	Rabi	Chickpea	JG-11	-	Integrated Crop Management	Trichoderma, Rhizobium, PSB,Pheromone traps,Lures, NPV, PP Chemicals, RDF-13:25:25 kg NPK+ 7.5 t FYM/ha	Rabi	Low	Low	Medium	Onion

5.B. Results of Frontline Demonstrations

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Banana	Improved Management practices for higher yield in Banana	Putta Bale	-	Irrigated	6	2.4													
Groundnut	Integrated Crop Management in Groundnut.	KCG-6	-	Limited irrigation	6	2	21.55	16.25	18.84	13.61	38.5	28750	75949	47199	2.63	24454	54856	30402	2.25
Mixed fodder crops -	Technology demonstration module in fodder crops .	COFS-29 ,South African tall, local	-	Limited irrigation	6	2	487	458	468	372	25.9	12867	28092	15225	2.22	11731	22320	10589	1.92

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Arecanut	Integrated crop management in Arecanut	Bheemasamudra Local-	-	Irrigated	5	2	30.6	13.8	21.66	16	33.27	144500	606200	461700	4.12	132500	448000	315500	3.32
Chrysanthemum	Integrated Crop Management in Chrysanthemum	Chandani local	-	Irrigated	5	2	820	770	636	504	26.19	198400	954000	755600	3.8	195440	756100	560660	3.06
Field Bean	Demonstration of Hebbal Avere-4 as an intercrop in Areca nut	HA-4	-	Limited irrigation	5	2	810	690	738	0	-	42750	147600	104850	3.4	0	0	0	0
Watermelon	ICM in Watermelon	Kiran	-	Irrigated	5	2	4340	3620	4012	3548	11.6	75164	240720	165556	3.16	74254	212880	138626	2.84
	Terrace gardening for Nutrition security of urban population		-																
Onion	Farmers Participatory Seed Production in Onion	Bhima Super	-	Irrigated	5	2	490	390	422	3000 (bulb yield)	-	174400	777000	602600	4.4	95000	350000	255000	3.6

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)				% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
							Demo			Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
							H	L	A										
Pomegranate	Bacterial blight Management in Pome granate	Bhagava	-	Irrigated	5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Finger millet	Introduction of variety and ICM-ML-365	ML-365	-	Limited irrigation	10	4	32.1	26.5	28.9	22.5	28.6	20123	47718	27595	2.38	17718	37109	19390	2.10
Cotton	Integrated Crop Management of Bt Cotton under sodic soils	Bt	-	Limited Irrigated	13	5.20	178	41	89.77	67	33.09	47990	130775	82786	2.74	42730	98226	55496	2.33
Pigeon pea	Integrated Crop Management- BRG-2	BRG-2	-	Rainfed	10	4	11.9	6.9	8.76	6.802	28.79	22550	62990	40440	2.72	21400	48960	27560	2.2
Chickpea	Integrated Crop Management- JG -11	JG-11	-	Rainfed	25	10	12.3	7.8	9.80	7.87	24.51	14230	45080	30850	3.20	14200	36206	22006	2.55

5.B.2. Livestock and related enterprises : Nil

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

5.B.3. Fisheries: Nil

5.B.4. Other enterprises : nil

5.B.5. Farm implements and machinery

5.B.6. Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	9	581	
2	Farmers Training	32	4601	
3	Media coverage	36	-	
4	Training for extension functionaries	8	394	
5	Others (Please specify)	-	-	

PART VI – DEMONSTRATIONS ON CROP HYBRIDS

Demonstration details on crop hybrids : Nil

PART VII. TRAINING

7.A. Training of Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Cropping Systems	14	206	56	262	167	23	190	373	79	452
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	19	1	20	22	10	32	41	11	52
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management										
Integrated nutrient management	4	85	17	102	2	0	2	87	17	104
Nutrient use efficiency	-	-	-	-	-	-	-	-	-	-
Livestock Production and Management										
Dairy Management	-	-	-	-	-	-	-	-	-	-
Home Science/Women empowerment										
Value addition	2	13	29	42	2	0	2	15	29	44
Women empowerment	1	0	48	48	0	0	0	0	48	48
Women and child care	-	-	-	-	-	-	-	-	-	-
Plant Protection										
Integrated Pest Management	3	91	8	99	0	0	0	91	8	99
Integrated Pest and Disease Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Capacity Building and Group Dynamics										
Entrepreneurial development of farmers/youths	5	70	8	78	45	3	48	115	11	126
Agro-forestry										
Nursery management	1	11	0	11	5	0	5	16	0	16
Market intelligence	-	-	-	-	-	-	-	-	-	-
TOTAL	**32**	**495**	**167**	**662**	**243**	**36**	**279**	**738**	**203**	**941**

7.B Training of Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Cropping Systems	9	277	17	294	71	4	75	348	21	369
a) Nursery raising	1	7	0	7	37	2	38	44	2	46
b) Fruits	1	50	0	50	0	0	0	50	0	50
c)Vegetable Crops	3	75	1	76	26	24	50	101	25	126
Soil Health and Fertility Management										
Soil fertility management	4	323	56	379	1	0	1	324	56	380
Home Science/Women empowerment										
Women empowerment	2	3	42	45	0	0	0	3	42	45
Plant Protection										
Integrated Pest & Disease Management	6	231	29	260	12	0	12	243	29	272
Capacity Building and Group Dynamics										
Entrepreneurial development of farmers/youths	2	63	0	63	17	0	17	80	0	80
TOTAL	**28**	**1029**	**145**	**1174**	**164**	**30**	**193**	**1193**	**175**	**1368**

7.C. Training for Rural Youths including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	11	1	12	15	0	15	26	1	27
Entrepreneurship through Farm Mechanization	2	50	0	50	27	0	27	77	0	77
TOTAL	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

7.D. Training for Rural Youths including sponsored training programmes (off campus): Nil

7.E. Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	131	11	142	0	0	0	131	11	142
Integrated Pest Management	5	187	24	211	0	0	0	187	24	211
Total	**7**	**318**	**35**	**353**	**0**	**0**	**0**	**318**	**35**	**353**

7.F. Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated diseases Management	1	12	2	14	0	0	0	12	2	14
Total	**1**	**12**	**2**	**14**	**0**	**0**	**0**	**12**	**2**	**14**

7.G. Sponsored training programmes conducted

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
12	**Agricultural Extension**										
12.b.	Others										
	Entrepreneurial development of farmers/youths	2	50	0	50	27	0	27	77	0	77
	Nursery management	1	11	1	12	15	0	15	26	1	27
	Total	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

Details of sponsoring agencies involved

1. Panchayath Raj & Rural Development (GoK)
2. Coconut Development Board
3. Department of Horticulture, Chitradurga
4. Department of Agriculture,Chitradurga

7.H. Details of Vocational Training Programmes carried out by KVKs for rural youth

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
5	**Agricultural Extension**										
5.b.	Others (pl.specify)										
	Entrepreneurial development of farmers/youths	2	50	0	50	27	0	27	77	0	77
	Nursery management	1	11	1	12	15	0	15	26	1	27
	Grand Total	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

PART VIII – EXTENSION ACTIVITIES

Extension Programmes (including extension activities undertaken in FLD programmes)

Nature of Extension Programme	No. of Programmes	No. of Participants (General)			No. of Participants SC / ST			No.of extension personnel		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	9	226	31	257	196	65	261	36	6	42
Advisory Services (Over phone)	1206	1765	-	1765	-	-	-	154	-	154
Kisan Gosti	7	90	20	110	-	-	-	35	7	42
Exhibition	7	209833	23400	233233	-	-	-	160	140	300
Film Show	1	-	-	-	-	-	-	-	-	
Method Demonstrations	10	330	75	405	-	-	-	23	-	23
Farmers Seminar		-	-	-	-	-	-	-	-	
Workshop	3	960	610	1570	-	-	-	42	10	52
Group meetings	12	200	66	-	-	-	-	19	1	20
Lectures delivered as resource persons	81	1880	374	2254	-	-	-	-	-	
Newspaper coverage	52	-	-	-	-	-	-	-	-	
Radio talks	38	-	-	-	-	-	-	-	-	
Popular articles	9	-	-	-	-	-	-	-	-	
Extension Literature	3	-	-	-	-	-	-	-	-	
Advisory Services	4100	3500	600	-	-	-	-	-	-	
Scientific visit to farmers field	143	420	90	510	-	-	-	59	5	64
Farmers visit to KVK	5	3885	1200	5085	-	-	-	299	88	387
Diagnostic visits	18	72	2					31	5	36
Exposure visits	7	150	8	158	-	-	-	14	-	14
Animal Health Camp	1	42	12	54	-	-	-	7	-	7
Agri mobile clinic	109	-	-	-	-	-		-	-	-
Krishi mela	2									
Farmers Scientist interaction	15	17	0	0	0	0	0	6	-	6
Important days celebrated										
1. Vanamahostava Day	1	12	10	22	0	0	0	12	10	22
2. Independence Day	1	30	15	45	0	0	0	30	15	45
3. Soil Health Day	1	71	30	106	0	0	0	20	15	35
4. International Yoga Day	1	40	35	75	0	0	0	5	2	7
5. Farmers day	1	40	6	46	0	0	0	8	1	9
6. International Women's Day	1	15	50	65	0	0	0	6	12	20
Total										

PART IX – PRODUCTION OF SEED, PLANT AND LIVESTOCK MATERIALS

9.A. Production of seeds by the KVKs

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers to whom provided
Vegetables	Onion	Arka Kalyan	-	8	Farmers Participation	-
Fodder crops	Fodder Sorghum	COFS-29		0.20	20000	6
			Total	**8.20**		

9.B. Production of planting materials by the KVKs:

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Vegetables	Drumstick	Bhagya		800	9600	2
			Total			

9.C. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Agents	Trichoderma	-	-	-
	Pseudomonas (Powder)	-	-	-
	Total	-	-	-

9.D. Production of livestock materials: Nil

PART X – PUBLICATION, SUCCESS STORY, SWTL, TECHNOLOGY WEEK AND DROUGHT MITIGATION

10. A. Literature Developed/Published (with full title, author & reference)

Item	Title	Authors name	Number
Research papers			
1	Impact of Organic Nutrient Management Practices on yield, quality parameters, Energy use efficiency and Energy productivity of Cotton	Rudragouda.F. Channagouda	1
2	Impact of organic farming practices on soil microbial population in cotton	Rudragouda .F. Channagouda H.B.Babalad and Praksh Kerure	1
3	Effect of organic manures, green manures and liquid organic manure on yield, economics, energy use efficiency and energy productivity in cotton	Rudragouda.F. Channagouda, H.B. Babalad and P.S. Ajjappalavara	1
4	Organic farming practices on yield and yield parameters of cotton	Rudragouda F.Channagouda, Thimmanna and Nataraj	1
5	Extension of cotton growth under organic production system	Rudragouda F.Channagouda, Thimmanna and Nataraj	1
6	Performance of cotton under organic production system	R.FChannagoudar, H.B.Babalad, R.K Patil,	1
7	Effect of organic manures, green leaf manures, liquid organic manures and micronutrients on yield and economics of cotton	R.FChannagoudar, H.B.Babalad and Denishkumar S.P	1
8	Impact of organic farming practices on quality parameters of cotton	R.FChannagoudar and H.B.Babalad	1
9	Effect of organic farming practices on soil properties and beneficial soil micro organism	R.F.Channagouda, H.B.Babalad and S.B. Salimath	1
10	Performance of groundnut genotypes in central Dry zone	R.F.Channagouda, S.B. Salimath and D. Chandrappa	1

Item	Title	Authors name	Number
	of Karnataka		
Technical reports	ZREP, Monthly, quarterly, Half yearly, Action Plan, Annual Report, NFSM Report, Monthly reports to DE office.		
Technical bulletins			
Popular articles	Improved Agronomic practices for groundnut production. Negila Miditha-June Integratedfarming system-Dari Deepa,Negila Miditha- Improved Agronomic practices for groundnut production. Negila Miditha-October 24-25 Nutrient management in pomegranate. Negila Miditha-December 12-13	**Rudragoud F Channagouda**, , Gajendra T H ,S.B Salimath and D.Chandrappa Gajendra T H, **Rudragoud F Channagouda**, ,S.B Salimath and D.Chandrappa **Rudragoud F Channagouda**,S.B Salimath, Prakash Kerure and S. Onkarappa S.B Salimath, S. Onkarappa ,**Rudragoud F Channagouda and** Prakash Kerure	
Extension literature			
aflets/Folders	"ಮಣ್ಣು ಆರೋಗ್ಯ ಮತ್ತು ಮಣ್ಣು ಪರೀಕ್ಷೆ ಆಧಾರಿತ ಗೊಬ್ಬರಗಳ ಪ್ರೂರೈಕೆ"	Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure, Dr. Rudragouda F. Channagouda	1000
	ಕೃಷಿಯಲ್ಲಿ ಜೈವಿಕ ಗೊಬ್ಬರಗಳ ಪಾತ್ರ	Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure, Dr. Rudragouda F. Channagouda	1000
	ಕಾಂಪೋಸ್ಟ್ ತಯಾರಿಸುವ ವಿಧಾನಗಳು	Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure, Dr. Rudragouda F. Channagouda	1000
	ಪ್ರಾಯೋಗಿಕ ತಾಕಿನಲ್ಲಿ ಶೇಂಗಾ ಬೆಳೆಯ ತಳಿಗಳ ವಿಶ್ಲೇಷಣೆ ಮತ್ತು ಅನುಸರಿಸಿದ ಸುಧಾರಿತ ಬೇಸಾಯ ಕ್ರಮಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	1000
	ವಿವಿಧ ಬೆಳೆಗಳಲ್ಲಿ ಬರುವ ಕಳೆಗಳ ನಿಯಂತ್ರಣ	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	1000
	Totagarike belegalalli hasirumane tantrikate	Dr Gajendra, Dr Prakash Kerure	1000

Item	Title	Authors name	Number
	ಸಾವಯವ ಕೃಷಿ ಮಹತ್ವ, ತತ್ವಗಳು ಹಾಗೂ ಉತ್ಪಾದನಾ ಪದ್ಧತಿಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	1000
	ರಾಗಿಯಲ್ಲಿ ತಳಿಗಳ ಪರಿಚಯ ಮತ್ತು ಸುಧಾರಿತ ಬೇಸಾಯ ಕ್ರಮಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	1000
	"Posakamshagala nirvhaneyelli Sookshma Jeevanugala Patra"	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	1000
g) Training Manuals:			
	Mevina belegala smagra utptana tantrikategalu Ragiylli taligala parichaya mtftu smagra utptana tantrikategalu Jaivika bijopacharagala mahatva Navani alli Sudharita besayakramagalu Senga belaya samagra bele nirvane Hatti yalli samagra poshakasgala nirvane Sayava krishi mahatva,tatavagallu mattu utpadana paddatigalu Job oriented training programmes in horticultural crops Improved Production practices in agriculture and Horticultural crop.	Rudragouda F Channagouda, Sudharani N, Gajendra T H, Salimath, Onkarappa mattu Prakash Kerure Rudragouda F Channagouda, , Gajendra T H, Salimath, Onkarappa ,Prakash Kerur, mattu Sudharani Rudragouda F Channagouda, , Gajendra T H, Salimath, Onkarappa ,Prakash Kerur, mattu Sudharani Rudragouda F Channagouda, , Gajendra T H, Salimath, Onkarappa ,Prakash Kerur, mattu Sudharani Rudragouda F Channagouda, , Gajendra T H, Salimath, Onkarappa ,Prakash Kerur, mattu Sudharani S.B Salimath, , Onkarappa, , , Rudragouda F Channagouda , Gajendra T H Prakash Kerur, mattu Sudharani Rudragouda F Channagouda, , Gajendra T H, Salimath, Onkarappa ,Prakash Kerur, mattu Sudharani Prakash Kerur , Rudragoud.F. Channagouda, S. Onkarappa and S.B salimath Rudragouda F Channagouda, Prakash Kerur,, Salimath,	

Item	Title	Authors name	Number
		Onkarappa and Sumanna,	
Poster preparation – (Digital photo print)			
	ಬಾಳೆ ಬೆಳೆಯಲ್ಲಿ ಲಘು ಪೋಷಕಾಂಶಗಳ ಬಳಕೆ	Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure, Dr. Rudragouda F. Channagouda	2
	ಮೇವಿನ ಬೆಳಗಳ ಉತ್ಪಾದನಾ ತಾಂತ್ರಿಕತೆಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ಹಸಿರು ಮೇವಿನ ಗಿಡ/ಮರಗಳು ಉತ್ಪಾದನಾ ತಾಂತ್ರಿಕತೆಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ಶೇಂಗಾ ಬೆಳೆಯ ಉತ್ಪಾದನಾ ತಾಂತ್ರಿಕತೆಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ಗೋವಿನ ಜೋಳದ ಉತ್ಪಾದನಾ ತಾಂತ್ರಿಕತೆಗಳು	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B . Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ನವಣೆ	Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ಏರುಮಡಿ ಪದ್ಧತಿಯಲ್ಲಿ ಈರುಳ್ಳಿ ನಾಟಿ ಬೇಸಾಯ	Mr. Prakash Kerure, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Dr. Rudragouda F. Channagouda	2
	ಈರುಳ್ಳಿ ಬೀಜೋತ್ಪಾದನೆ ತಾಂತ್ರಿಕತೆಗಳು	Mr. Prakash Kerure, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Dr. Rudragouda F. Channagouda	2
	ದಾಳಿಂಬೆ ಬೆಳೆಯಲ್ಲಿ ಹೇನುಗಳ ಹತೋಟಿ ಕ್ರಮಗಳು	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ಕಾಯಿಯಲ್ಲಿ ದುಂಡಾಣು ಅಂಗಮಾರಿ ರೋಗದ ವಿವಿಧ ಹಂತಗಳ ಲಕ್ಷಣಗಳು	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ಬೆಳೆಯ ಎಲೆ, ಟೊಂಗೆ ಮತ್ತು ಕಾಂಡದಲ್ಲಿ ರೋಗದ ಲಕ್ಷಣಗಳು	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ದುಂಡಾಣು ಅಂಗಮಾರಿ ರೋಗದ ಸಮಗ್ರ ನಿರ್ವಹಣಾ	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda,	2

Item	Title	Authors name	Number
	ಕ್ರಮಗಳು	Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	
	ದಾಳಿಂಬೆ ಬೆಳೆಯಲ್ಲಿ ನುಸಿಗಳ ಬಾಧೆ	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ಬೆಳೆಯ ಬೇರುಗಳಲ್ಲಿ ಜಂತುಹುಳುವಿನ ಬಾಧೆ	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ಬೆಳೆಯಲ್ಲಿ ಕಾಂಡಕೊರಕ ಹುಳುವಿನ ನಿರ್ವಹಣೆ	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆಯಲ್ಲಿ ಥ್ರಿಪ್ಸ್ ಹುಳುಗಳ ಹತೋಟಿ ಕ್ರಮಗಳು	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
	ದಾಳಿಂಬೆ ಬೆಳೆಯಲ್ಲಿ ಸೊರಗು ರೋಗ	Dr. S. Onkarappa ,Dr. Rudragouda F. Channagouda, Dr. Sarvajna B. Salimath, Dr. S. Onkarappa, Mr. Prakash Kerure	2
Booklet	Soil health and fertilizer recommendation.	S.B Salimath, Geetakumari,Rudragoud F Channa gouda S. Onkarappa, Prakash Kerure, D. Chandrappa and A.D Suman	
Newsletter nil			

10.B. Details of Electronic Media Produced: Nil

10.C. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

DATA SHEET FOR SUCCESS STORIES

Year: 2015-16

Title of the Success Story: Varietal Assessment in Onion for Higher Productivity and Quality

URL Name : Prakash Kerure, D. Chandrappa, Sarvajna Salimath, Rudragouda F. Channagouda, S. Onkarappa and Gajendra T.H.

Details of Success Story :

1. **Backgound:** Onion [*Allium cepa* L.] is one of the most important commercial vegetable crops of India. It is mainly grown in Maharashtra, Gujarat, Uttar Pradesh, Orissa, Karnataka, Tamilnadu, Madhya Pradesh, Andhra Pradesh and Bihar (Bindu and Bindu, 2015). It is also one of the important vegetable crops of Chitradurga district. It is cultivated in an area of 17,044 ha with total production of 3,40,030 MT and average productivity of 19.95 t/ha (Anon,2014). Since, farmers of Chitradurga district of Karnataka mainly were growing local onion varieties *viz*., Satara Gurva and Bellary Red, which are of low yield due to impurity, susceptible to purple blotch disease, bulb splitting and rotting in storage. In view of this need, the present on-farm testing (OFT) conducted was took up at farmers field to assess the suitable high yielding improved variety for local condition with good horticultural characteristics and sustainable productivity

2. **Intervention Process:** The investigation was carried out at ICAR-Krishi Vigyan Kendra, Chitradurga during *Kharif* 2012-2013 and 2013-2014 respectively to study the "Assessment of onion varieties for higher yield" in central dry zone of Chitradurga district. The study comprised four onion varieties *viz.*, (T1) Bhima Super, (T2) Arka Kalyan, (T3) Satara Gurva and (T4) Bellary Red (Fig.1). Seeds were sown in nursery during the middle of June. Forty five days old healthy seedlings of each variety were transplanted in beds of 1.2 m X 1.2 m at spacing of 15 x 10 cm during the first week of August. Recommended cultural practices were followed to raise the crops successfully. The observations were recorded for Plant height, Number of leaves per plant, Days to 50% neck fall, Bulb color, percent of sprout bulbs, percent of rotten bulbs in storage and yield (t/ha).

3. Intervention Technology:

Technology Assessed	Source of Technology
Satara Gurva	Farmers Practice
Bellary Red	Farmers Practice
Arka Kalyan	IIHR, Bangalore
Bhima Super	DOGR, Pune

4. Impact Horizontal Spread: The Bhima super variety was spread over 150 acre in Chitradurga during 2015-16.

5. Impact Economic Gains:

Technology Assessed	Source of Technology	Net Return (Rs. / ha)	B:C Ratio
Satara Gurva	Farmers Practice	3,56,122.00	5.4
Bellary Red	Farmers Practice	3,71,122.00	5.6
Arka Kalyan	IIHR, Bangalore	3,88,122.00	5.6
Bhima Super	DOGR, Pune	4,43,622.00	6.3

6. Impact on Employment Generation: The Bhima Super was superior in bulb yield consistently in two seasons among the tested varieties and also is suitable for late *Kharif* of Chitradurga district. Farmers expressed that the Bhima Super variety was superior in yield, color, size, good keeping qualities and market value. More 50 farmers of Hosukundur Village of Hosadurga Tq. alone were interested to take up seed production activity in their fields.

10.D. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year: Nil

10.E. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Pomegranate	Placing of rotten banana in the pomegranate orchard	To attract fruit fly
2	Drip irrigated crops	Placing of water bowls nearby drip/ micro irrigation pipes	To avoid damage by the squirrels and rodents.

10.F. Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women: PRA tools: Problem tree and transect.
- Rural Youth : PRA tools

10.G. Field activities

i. Number of villages adopted :2

ii. No. of farm families selected: 543

iii. No. of survey/PRA conducted: 2. Transect walk, Seasonality and Problem analysis. Detailed survey of individual farmers.

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Established

1. Year of establishment : January 2006
2. List of equipments purchased with amount :nil

Details of samples analyzed so far since establishment of SWTL:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	10997	9482	5958	368490
Water Samples	9988	8935	5693	671560
Total	20985	18417	11651	1040050

Details of samples analyzed during the 2015-16 :

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	1929	1702	1146	96450
Water Samples	1807	1660	1110	180700
Total	**3736**	**3362**	**2256**	**277150**

10.I. Technology Week celebration during 2014-15 Yes/No, :No

10. J. Interventions on drought mitigation (if the KVK included in this special programme): Contingent Crop plan shared with extension officials during bi and tri monthly meetings.

PART XI. IMPACT

11.A. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./ºÀ)	After (Rs./ha)
Seed production technology	5	32	255000	602600
Importance of Hebbal Avera as inter crop in Arecanut	5	-	0	104850
Integrated Nutrient Management Chrysanthemum	5	26.19	560660	755600
Management of fruit cracking in watermelon	5	19	138626	165556
Management of salt affected soil & Folier application of Potassium& Magnesium in Bt-Cotton	13	33.09	55496	82786
Seed Treatment & Seed production of finger millet variety ML-365	10	28.6	19390	27595
Production Technology		29		
Balanced feeding of green fodder	6	26	10589	15225
Seed treatment, Pheromone traps instillation,identification of Disease & pest in early stage	Red gram	22	48960	63000
Seed treatment, Pheromone traps instillation,identification of Disease & pest in early stage	Chickpea	35	36206	45080
enriching of compost , identification of bugs , scales , mites & bud rot disease & use of insecticides , Acaricides & fungicides	Arecanut	31	448000	606200

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

11.B. Cases of large scale adoption

Case study:

11.C. Details of impact analysis of KVK activities carried out during the reporting period:

PART XII - LINKAGES

12.A. Functional linkage with different organizations

Name of organization	Nature of linkage
Department of Agriculture, Chitradurga	Conduct of collaborative extension programmes like field day, interaction meets, trainings, joint diagnostic surveys, pest surveillance, etc
Department of Horticulture, Chitradurga	Conduct of collaborative extension programmes, interaction meets, trainings, joint diagnostic surveys, production of vegetable seeds, etc.
AIR Chitradurga	Technology dissemination
CDB	Training
RDPR	Trainig
ATMA DoA Chitradurga	Assessment of onion and groundnut varieties.
NABARD	FPO trainings

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

12.B. List Externally Funded Projects / schemes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Role of KVK	Date/ Month of initiation	Funding agency	Amount (Rs.)
IFS	Implementing	4/1/2015	RKVY	950000
Krishi Bhagya Scheme	Implementing	4/1/2015	KSDA	250000
Village Adoption	Implementing (Narayanapura)	4/1/2015	UAHS(S)	100000
Village Adoption	Implementing (S.D. Kote)	4/1/2015	UAHS(S)	100000
NFSM	Implementing	4/1/2016	ICAR	75000

12.C. Details of linkage with ATMA

a) Is ATMA implemented in your district :No

12.D. Give details of programmes implemented under National Horticultural Mission: Nil :

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any
1	Disease Forecast	IMD Pune for weather forecast	70193	32361(Contractual services)	
2	Field visits	Pest and disease Surveyaance with DoA		31616 stationary	-
3	Trainings	Resource persons in Dept. Trainings and seminars		-	-
		TOTAL	**70193**	**63977**	

12.E. Nature of linkage with National Fisheries Development Board : Nil

12.F. Details of linkage with RKVY : Nil

12. G Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2014	11	2560	0
May	16	4500	8
June	25	5250	12
July	38	8300	11
August		0	0
September	2	9100	4
October	2	9100	1
November		0	0
December	1	9100	0
January 2015	8	9700	8
February	3	10200	2
March 2015	3	10200	5
Total for the year 2014-15	**109**	**78010**	**51**

PART XIII- PERFORMANCE OF INFRASTRUCTURE IN KVK

13.A. Performance of demonstration units (other than instructional farm):

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Breed	Produce	Qty.	Cost of inputs	Gross income	
1	IFS	2015-16	1	-	-	-	22000	35000	

13.B. Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.(q)	Cost of inputs	Gross income	
Cereals (Foxtail millet)	15-6-2015	22-9-2015	2	HMT 100-1	Commercial seed	6			
Pulses (Chickpea)	18-10-2015	2-2-2016	2	JG 11	TL	5			

13.C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,):Nil

13.D. Performance of instructional farm (livestock and fisheries production) :Nil

13.E. Utilization of hostel facilities: Accommodation available (No. of beds): 25 beds

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2014	10	1	no short fall
May 2014	-	-	-
June 2014	-	-	-
July 2014	-	-	-
August 2014	-	-	-
September 2014	-	-	-
October 2014	-	-	-
November 2014	-	-	-
December 2014	-	-	-
January 2015	-	-	-
February 2015	10	1	-
March 2015	6	4	-
TOTAL	**26**	**6**	-

13.F. Database management

S. No	Database target	Database created
1	Farmers database	Created
2	SMS farmers database	Created
3	Soil and water testing	Created
4	Crop wise farmers	Created
5	Soil water analysis data	Created

13.G. Details on Rain Water Harvesting Structure and micro-irrigation system: Nil

PART XIV - FINANCIAL PERFORMANCE

14.A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
Current	Canara Bank	Hiriyur	867	KVK General	0867101024602	572015302	CNRB0000867
Current	Canara Bank	Hiriyur	867	Revolving fund	0867101024962	572015302	CNRB0000867

14.B. Utilization of KVK funds during the year 2015-16 (Rs. in lakh)

S.No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	65.74		65.37
2	Traveling allowances	1.00		1.38
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.52		1.9
B	POL, repair of vehicles, tractor and equipments	1.50	1st 4334747	2.24
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	0.50		0.60
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.50		0.28
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	2.00		2.06
F	NFSM (FLD)	0		0.59
G	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	0.05		0.03
H	Training of extension functionaries	0		0
I	Maintenance of buildings	0.25		0.73
J	Extension Activities	0	2^{nd} 2175000	0.44
k	Library	0.05		0.06
l	FFS	0.05		0.19
K	IFS	0		0.42
TOTAL (A)		**73.16**		**76.31**
B. Non-Recurring Contingencies				
1	**Works**			1.77
2	**Equipments including SWTL & Furniture**	2.00		1.42
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	-		
4	**Library** (Purchase of assets like books & journals)	-		
TOTAL (B)		2.00		3.20
C. REVOLVING FUND				
GRAND TOTAL (A)		**75.16**	**6509747**	**79.52**

14.C. Status of revolving fund (Rs. in lakh) for the three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2013 to March 2014	7.15	12.11	8.15	11.11
April 2014 to March 2015	11.11	6.52	5.51	12.12
April 2015 to March 2016	12.12	6.54	4.11	15.31

15. Details of HRD activities attended by KVK staff during 2013-14:Nil

SUMMARY FOR 2015-16

I. TECHNOLOGY ASSESSMENT

II. Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Varietal Evaluation	Foxtail Millet	Assessment of foxtail millet varieties for higher yield	2

Summary of technologies assessed under livestock: NIL
Summary of technologies assessed under various enterprises: NIL
Summary of technologies assessed under home science: NIL

II. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops: NIL
Summary of technologies assessed under refinement of various livestock : NIL
Summary of technologies refined under various enterprises : NIL
Summary of technologies refined under Home Science : NIL

III. FRONTLINE DEMONSTRATION

Crops

Crop	Thematic area	Name of the technology demonstrated	No. of KVKs	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
						Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Banana	ICM in Banana	Improved Management practices for higher yield in Banana	1	6	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Groundnut	Integrated Crop Management	Integrated Crop Management in Groundnut.	1	6	2	18.84	13.61	38.5	-	-	28750	75949	47199	2.63	24454	54856	30402	2.25
Mixed fodder crops -	Demonstration of Fodder module	Technology demonstration module in fodder crops .		6	2	468	372	25.9	-	-	12867	28092	15225	2.22	11731	22320	10589	1.92
Arecanut	Integrated Crop Management	Integrated crop management in Arecanut		5	2	21.66	16	33.27	-	-	144500	606200	461700	4.12	132500	448000	315500	3.32
Chrysanthemum	ICM	Integrated Crop Management in Chrysanthemum		5	2	636	504	26.19	-	-	198400	954000	755600	3.8	195440	756100	560660	3.06
Field Bean	Cropping Systems	Demonstration of Hebbal Avere-4 as an intercrop in Areca nut		5	2	738	0	-	-	-	42750	147600	104850	3.4	0	0	0	0
Watermelon	ICM	ICM in Watermelon		5	2	4012	3548	11.6	-	-	75164	240720	165556	3.16	74254	212880	138626	2.84

		Terrace gardening for Nutrition security of urban population							-	-							
Onion	Seed/Plant Production	Farmers Participatory Seed Production in Onion		5	2	422	3000(bulb yield)	-	-	-	174400	777000	602600	4.4	95000	35000	255000	3.6
Pomegranate	Integrated Disease Management	Bacterial blight Management in Pomegranate		5	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Finger millet	Variety Introduction	Introduction of variety and ICM- ML-365		10	4	28.9	22.5	28.6	-	-	20123	47718	27595	2.38	17718	37109	19390	2.10
Cotton	Integrated Crop Management	Integrated Crop Management of Bt Cotton under sodic soils		13	5.20	89.77	67	33.09	-	-	47990	130775	82786	2.74	42730	98226	55496	2.33
Pigeonpea	Integrated Crop Management	Integrated Crop Management-BRG-2		10	4	8.76	6.802	28.79	-	-	22550	62990	40440	2.72	21400	48960	27560	2.2
Chickpea	Integrated Crop Management	Integrated Crop Management-JG -11		25	10	9.80	7.87	24.51	-	-	14230	45080	30850	3.20	14200	36206	22006	2.55

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Livestock :NIL
Fisheries : NIL
Other enterprises
Women empowerment: Nil
Farm implements and machinery : Nil
Other enterprises
Demonstration details on crop hybrids :Nil

IV. Training Programme

Training for Farmers and Farm Women including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop Production										
Cropping Systems	14	206	56	262	167	23	190	373	79	452
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	2	19	1	20	22	10	32	41	11	52
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Soil Health and Fertility Management										
Integrated nutrient management	4	85	17	102	2	0	2	87	17	104
Nutrient use efficiency	-	-	-	-	-	-	-	-	-	-
Livestock Production and Management										
Dairy Management	-	-	-	-	-	-	-	-	-	-
Home Science/Women empowerment										
Value addition	2	13	29	42	2	0	2	15	29	44
Women empowerment	1	0	48	48	0	0	0	0	48	48
Women and child care	-	-	-	-	-	-	-	-	-	-
Plant Protection										
Integrated Pest Management	3	91	8	99	0	0	0	91	8	99
Integrated Pest and Disease Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Capacity Building and Group Dynamics										
Entrepreneurial development of farmers/youths	5	70	8	78	45	3	48	115	11	126
Agro-forestry										
Nursery management	1	11	0	11	5	0	5	16	0	16

Market intelligence	-	-	-	-	-	-	-	-	-	-
TOTAL	**32**	**495**	**167**	**662**	**243**	**36**	**279**	**738**	**203**	**941**

Training for Farmers and Farm Women including sponsored training programmes (Off campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Crop Production										
Cropping Systems	9	277	17	294	71	4	75	348	21	369
a) Nursery raising	1	7	0	7	37	2	38	44	2	46
b) Fruits	1	50	0	50	0	0	0	50	0	50
c)Vegetable Crops	3	75	1	76	26	24	50	101	25	126
Soil Health and Fertility Management										
Soil fertility management	4	323	56	379	1	0	1	324	56	380
Home Science/Women empowerment										
Women empowerment	2	3	42	45	0	0	0	3	42	45
Plant Protection										
Integrated Pest & Disease Management	6	231	29	260	12	0	12	243	29	272
Capacity Building and Group Dynamics										
Entrepreneurial development of farmers/youths	2	63	0	63	17	0	17	80	0	80
TOTAL	**28**	**1029**	**145**	**1174**	**164**	**30**	**193**	**1193**	**175**	**1368**

Training for Rural Youths including sponsored training programmes (on campus)

Area of training	**No. of Courses**	**No. of Participants**								
		General			**SC/ST**			**Grand Total**		
		Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Nursery Management of Horticulture crops	1	11	1	12	15	0	15	26	1	27
Entrepreneurship through Farm Mechanization	2	50	0	50	27	0	27	77	0	77
TOTAL	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

Training for Rural Youths including sponsored training programmes (off campus): Nil

Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	131	11	142	0	0	0	131	11	142
Integrated Pest Management	5	187	24	211	0	0	0	187	24	211
Total	**7**	**318**	**35**	**353**	0	0	0	**318**	**35**	**353**

Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated diseases Management	1	12	2	14	**0**	**0**	**0**	12	2	14
Total	**1**	**12**	**2**	**14**	**0**	**0**	**0**	**12**	**2**	**14**

Sponsored training programmes

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
12	**Agricultural Extension**										
12.b.	Others										
	Entrepreneurial development of farmers/youths	2	50	0	50	27	0	27	77	0	77
	Nursery management	1	11	1	12	15	0	15	26	1	27
	Total	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

Details of Vocational Training Programmes carried out for rural youth

S.No.	Area of training	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
5	**Agricultural Extension**										
5.b.	Others (pl.specify)										
	Entrepreneurial development of farmers/youths	2	50	0	50	27	0	27	77	0	77
	Nursery management	1	11	1	12	15	0	15	26	1	27
	Grand Total	**3**	**61**	**1**	**62**	**42**	**0**	**42**	**103**	**1**	**104**

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Field Day	9	299	42	341
Advisory Services (Over phone)	1206	1919	154	2073
Kisan Gosti	7	152	42	194
Exhibition	7	233533	300	233833
Film Show	1	0	0	0
Method Demonstrations	10	428	23	451
Workshop	3	1622	52	1674
Group meetings	12	20	20	40
Lectures delivered as resource persons	81	2254	0	2254
Newspaper coverage	52	0	0	0
Radio talks	38	0	0	0
Popular articles	9	0	0	0
Extension Literature	3	0	0	0
Advisory Services	4100	0	0	0
Scientific visit to farmers field	143	574	64	638
Farmers visit to KVK	5	5472	387	5859
Diagnostic visits	18	36	36	72
Exposure visits	7	172	14	186
Animal Health Camp	1	61	7	68
Agri mobile clinic	109	0	0	0
Krishi mela	3	300000	85	385000
Farmers Scientist interaction	15	6	6	12
Important days celebrated				
1. Vanamahostava Day	1	44	22	66
2. Independence Day	1	90	45	135
3. Soil Health Day	1	141	35	176
4. International Yoga Day	1	82	7	89
5. Farmers day	1	55	9	64
6. International Women's Day	1	85	20	105
Total	**5844**	**247045**	**1285**	**248330**

Details of other extension programmes

Particulars	Number
Electronic Media	0
Extension Literature	34
News Letter	1
News paper coverage	44
Technical Reports	8
Radio Talks	7
TV Talks	0
Animal health amps (Number of animals treated)	320
Total	**414**

VI. PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Name of the variety (if hybrid pl. specify)	Quantity of seed (q)	Value (Rs)	Number of farmers
Vegetables	Onion	Arka Kalyan	8	Farmers Participation	-
Fodder crops	Fodder Sorghum	COFS-29	0.20	20000	6

Production of planting materials by the KVKs: Nil

Production of Bio-Products: Nil

Production of livestock and related enterprise materials: Nil

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2013-14

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	1929	1702	1146	96450
Water	1807	1660	1110	180700
Total	**3736**	**3362**	**2256**	**277150**

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted :Nil

IX. NEWSLETTER

Number of issues of newsletter published :Nil

X. RESEARCH PAPER PUBLISHED

Number of research paper published
10 No's

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	**No. of Demonstration s**	**No. of plant materials produced**	**Visit by farmers (No.)**	**Visit by officials (No.)**
2	**1**	**-**	82	40

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