



ICAR-IIHR



Newsletter



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Mechanization involves the use of tools and machinery in various operations. Mechanization has an important role to play in Agriculture and Horticulture where the farm operations are labour intensive and production process to be cost effective and labour friendly. Mechanization not only ensures savings in input costs for seeds, fertilizers and plant protection chemicals, but also ensures uniform crop stand and quality output, besides facilitating timely operations, reducing drudgery and effective savings in the labour costs. Tractor and other soil working machinery are commercially available and farmers are using such machinery for field operations. Mechanization is essentially required during seeding, planting/transplantation and harvesting of horticultural crops to obtain uniform quality and higher yields. ICAR-IIHR has developed variety of machines from seedling raising in nursery to sowing, planting, harvesting, grading and processing of different horticultural crops. ICAR-IIHR has pioneered the development of machinery for mechanization of mushroom spawn production, onion cultivation and raw mango processing. The Institute is constantly supporting the farmers, FPOs, state departments, NGOs SAUs and other ICAR Institutes through the supply of machines for various field and

processing operations. ICAR-IIHR, Bengaluru has facilitated establishment of 15 spawn production units in different states of the country. Machinery for different unit operations are being designed and developed at this Institute regularly to address issues related to farming and other allied sectors. The design is licensed to manufacturers who commercialize/ fabricate such machinery and supply to a large number of stakeholders. Department of Horticulture, Govt. of Karnataka has mechanized its 4 bio centers for spawn production based on the machinery designed by ICAR-IIHR. Under the Sujala-III component funded by the World Bank, ICAR-IIHR is supplying machinery for nursery and other field operations. FPOs from different districts of Karnataka are keen to use this machinery in various horticultural operations. Off late ICAR-IIHR has developed fresh fruit and vegetable vending vans having specially designed evaporative cooling system which keeps the fruits and vegetables fresh for 36-48 hours depending on the ambient conditions. The vending van has an integrated solar power system to run the electrical gadgets inside the van. HOPCOMS, Mysuru is one of the satisfied beneficiaries of this technology as it provided an ample scope to sell fruits and vegetables afresh to the customers in a convenient manner. ICAR-IIHR is distributing 20 of such vending vans soon to the Department of Horticulture, Government of Karnataka to cover 11 districts in this state.


M.R. Dinesh
Director





IN FOCUS

MACHINERY FOR ONION CULTIVATION

As per the NHB data for 2017-18, onion is the second largest grown vegetable in the country occupying an area of 13.2 lakh hectares followed by chilli. ICAR-IIHR has developed machinery for cultivation of onion in open field such as manual, animal and tractor driven

onion seeders, onion digger/ harvester, detopper and size grader. Mechanization in onion cultivation saved the cost of seeds and labour and increased the output quality. The Institute is in the process of developing chilli seeder, seedling transplanter and harvester to

reduce drudgery and cost of production through savings in input and labour costs.

The following machinery has been developed recently for mechanization of different unit operations.

NURSERY MACHINERY

Machine for growing media



Useful for growing media sieving, mixing and nursery bag filling.
Capacity – 700 bags/h
Power – 3.75 kW, 3 phase

Automatic protray dibbler cum seeder for vegetable nursery



Useful for sowing vegetable seeds in protrays
Capacity – 150 protrays/h
Power – 3.00 kW, 3 phase

MACHINERY FOR ONION CULTIVATION

Power operated onion seed extractor



Useful to extract onion seeds from onion umbels.
Capacity: 30 kg/h.
Power: 1.5 kW

Manual drawn onion seeder



Useful for direct sowing of onion seeds.
Field Capacity: 0.1 ha/h
Power: Manual

Animal drawn onion seeder



Useful for direct sowing of onion seeds. Saves up to 50 % labour and seed cost. Results in uniform crop stand in unit area. Gives better bulb size and yield.
Field Capacity: 0.4 ha/h
Power: Pair of bullocks

Tractor drawn onion seeder



This implement forms raised bed of 85-90 cm width and helps in sowing onion seeds on beds.
Field Capacity: 0.15 ha/h
power source: 35 hp tractor



Tractor operated onion digger cum wind rower



Useful for digging/harvesting the onion crop. Suitable for raised bed cultivation of onion crop.

Field Capacity: 0.25 ha/h.
Power: 45 hp tractor.

Power operated onion detopper



Useful in detopping of the harvested onion crop.
Capacity: 1 t/h.
Power : 3 kW

Power operated onion grader



Grades the common onions into three grades based on size.
Capacity: 1 t/h
Power : 1.5 kW

Fruit and Vegetable vending van



- ❖ Evaporatively cooled
- ❖ Capacity upto 300 kg
- ❖ Retains freshness up to 36 h
- ❖ Solar powered system of 600 W to run the evaporative cooling system and to operate weighing balance, TV, audio system, GPS and pump in side van.
- ❖ Arka high humidity boxes are used in this van for extending the shelf life of green leafy vegetables

Research Highlights

❖ Promising Mango hybrids:

H-14: It is a hybrid between Amrapali x Arka Anmol. The plants are medium vigorous, regular bearing, high yielding

(35-40 kg/plant of eight year old). The fruit weight ranges from 200-250 g and the fruit shape is similar to Alphonso. The pulp is firm and has deep orange colour similar to Amrapali with pulp

recovery (>70%), TSS(>22°B), acidity (0.12%), carotenoids (6 mg/100g FW) and flavonoids (3.44 mg/100g FW) and a shelf life of 8-10 days at room temperature.

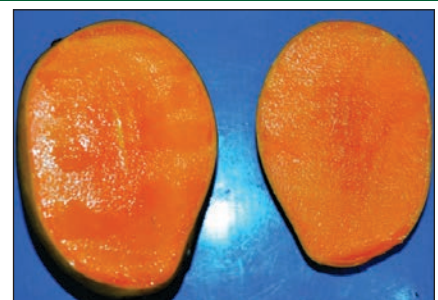


H-14 hybrid

R6P11: It is a promising hybrid between Amrapali x Vanraj. The plants are less vigorous, regular bearing, fruit weight ranges from 350-400 g, fruit shape similar to that of Alphonso and has red tinged peel, deep orange firm pulp with pulp recovery of >75%, TSS of 22°B and 0.1 % acidity.



Fruits of R6P11



Cut fruit of R6P11



Release of new varieties: On the occasion of ICAR-IIHR Foundation day, Hon'ble Secretary (DARE) & DG (ICAR) has released two F1 hybrids and one variety in vegetables that were identified by institute VTIC.

Arka Abhed (H-397): A tomato hybrid Arka Abhed with multiple disease resistance to Tomato Leaf Curl Disease (*Ty2+Ty3*), Bacterial wilt, early blight and Late blight (*Ph2 + Ph3*) was developed at IIHR. The plant is semi-

determinate with dark green foliage and produce firm, oblate round & medium large fruits (90-100 g). This hybrid is bred for fresh market and suitable for summer, *kharif* & *rabi* cultivation and yields 70-75 t/ha in 140-150 days.



Arka Abhed

Arka Athulya: F₁ hybrid of capsicum developed for powdery mildew tolerance with high yields. The plant is continuous in growth habit with dark green foliage, firm fruits, medium large size (100-120 g) and yields 45-50 t/ha in 140-150 days. Suitable for fresh green market and can be grown in both *kharif* & *rabi* season.



Arka Athulya



Arka Sukomal: French bean variety *Akra Sukomal* is a pole bean type variety developed for rust resistance with high yields. With indeterminate growth habit, first harvest can be realized within sixty days and yields up to 24 t/ha in 100 days. Pods are stringless, oval, green and long (23 cm) with ten pod weight upto 87 grams. Suitable for both *kharif* & *rabi* season.

Arka Sukomal

❖ **Biochemical components of dragon fruit:** Biochemical component of dragon fruits (*Hylocereus spp.*) were evaluated for ascorbic acid, total phenol, total flavonoids and antioxidative properties (DPPH scavenging activity and FRAP value). Among three (IIHR-B-DF-1, IIHR-B-DF-2 and IIHR-B-DF-3) accessions tested, IIHR-B-DF-3 possessed high content of ascorbic acid (64.7 mg/100g FW) total phenol (92.7mg GAE/100g FW), flavonoid (168µg QE/g FW) and higher DPPH scavenging activity (79% inhibition) and high FRAP value (2.55 mM Fe (II)/100g FW).



IIHR-B-DF-1



IIHR-B-DF-2



IIHR-B-DF-3

❖ **Assessment of antioxidative properties in aonla:** A total of 10 cultivars of aonla (*Embllica officinalis* G.), viz., Kanchan, Krishna, NA-6, NA-7, NA-9, NA-10, Francis, Chakaiya, Banarasi and Anand-2, were evaluated for their antioxidant properties. The varietal collection exhibited a good range of variation with respect to total phenol content (101- 118 mg GAE/100 g FW), flavonoid content (41.72-87.27 mg QE/100 g FW) and scavenging activity (38.46- 61.54%). Among the cultivars Banaras showed highest phenol content whereas,

NA-9 showed maximum flavonoid content and scavenging activity.

❖ **Grafting of tomato on brinjal root stock:** Grafting of tomato on brinjal root stock has been identified as a technology for overcoming flooding stress (excess moisture) in tomato. Grafted plants of tomato Arka Rakshak on Arka Neelkant root stock maintained almost 70% yield even after 6 days of flooding. All the ungrafted plants died in the flooding treatment.



Grafted Plants



Un-grafted Plants

❖ **Integrated management of *Tuta absoluta* on tomato in polyhouse:** An IPM module was standardised especially for the management of *T. absoluta* under polyhouse conditions. Tomato moth, *Tuta absoluta* is an invasive pest, reported from India in 2014 and presently spread to majority of the tomato growing states and regions of the country. It causes extensive damage (even up to 100 per cent) to the tomato crop, particularly under polyhouse conditions. The IPM module includes use of incandescent yellow bulb 60 W@ one bulb/150 m², pheromone trap/300 m², need based spray of spinosad 45 SC @ 0.25 ml/l or flubendiamide 480 SC @ 0.20 ml/l in rotation at 2-3 weeks interval. Coinciding with the peak emergence of *Tuta* adults, deltamethrin 2.5 EC @ 1 ml/l has to be sprayed. Due to IPM practice, the incidence of fruit damage by *T. absoluta* was reduced to 5-6 per cent against 35-56 per cent in control, under green house conditions. Similarly,

number of live mines/plants ranged from 2.6-6.5 in IPM plots as against 9.2-12.8 in control. Number of eggs laid by *Tuta* were also significantly lower in IPM plots (0-2 eggs/Leaf) when compared to non-IPM plots (up to 30 eggs/Leaf). Light trap based IPM can be an effective and eco-friendly approach for the management of *T. absoluta* under greenhouse conditions.





❖ **Breeding for powdery mildew resistance in bitter gourd:** Powdery mildew caused by *Podosphaera xanthii* is a devastating fungal disease in bitter gourd growing areas of India inflicting more than 70 per cent losses. Resistance sources were identified among 31 genotypes of *Momordica charantia*, *M. charantia* var. *muricata* and *M. balsamina* based on screening under natural field and artificial epiphytotic condition at seedling stage. The genotypes, IIHR-80-1-2 and IIHR-80-1-

3 (*M. balsamina*) were free from disease, whereas, the resistant genotype, IIHR-144-1 (*M. charantia* var. *muricata*) showed mild symptoms with PDI of 1.81 and 4.28 under natural and artificial screening, respectively. PDI under natural field screening (adult plant) was highly correlated ($r=0.824^{**}$) with the artificial screening (seedling stage) under controlled conditions, proving the efficiency of artificial screening. The highest apparent infection rate (r) was recorded in the susceptible genotype,

Arka Harit (1.29), whereas, it was the least in the resistant genotypes, IIHR-80-1-2 and IIHR-80-1-3 (0.00). Powdery mildew resistance in IIHR-144-1 is governed by dominant inhibitory epistasis and this is probably the first report of dominant inheritance of powdery mildew of bitter gourd in the world. The newly identified resistant sources may be used for developing powdery mildew resistant bitter gourd varieties/hybrids.



IIHR- 80-1-2 (Resistant)



Arka Harit (Highly susceptible)



IIHR- 144-1 (Resistant)

❖ **Non-parametric based statistical approach:** A non-parametric based statistical approach was evolved for identifying stable lines simultaneously based on yield and its attributing traits, evaluated over seasons in okra & aster crops. Index was arrived at for providing suitable weights to the traits based on the respective traits stability in performance across season, not only for the traits lacking in check but also for all other promising traits for which it is bred. This approach facilitates the varietal identification program in selecting highly ranked lines across all the evaluated traits. The efficacy of the approach was demonstrated using Okra and Aster experimental data evaluated at ICAR-IIHR experimental fields during last three years.

New initiatives

In order to introgress genes resistant to *Tuta absoluta* in tomato, BC1F1 & F2 progenies derived from the inter specific cross *Solanum lycopersicum* L. (TLBER-38-7-4-27) x *S. pennellii* LA 1940 were raised in polyhouse for screening against *T. absoluta*.



Inter-specific F₁ hybrid



(TLBER-38-7-4-27) x *S. pennellii* LA 1940



News and Events

Krishi Kalyan Abhiyan Programme

Ministry of Agriculture and Farmers' welfare implemented Krishi Kalyan Abhiyan programme from 1st June to 15th August in 111 aspirational districts across the country identified by Niti Aayog. Central Horticultural Experiment Station, Bhubaneswar, successfully implemented the programme. This programme was headed by Dr. G. C. Acharya, Head I/C, CHES who is also in-charge officer for the district Rayagada. Under this

programme, 25 villages were selected in Rayagada district to carry out specific activities in the scheduled time frame as notified by the Ministry. The activities include: distribution of soil health cards, distribution of pulses, oilseeds and rice minikits, distribution of horticultural/forest plants, making of NADEP pits, eradication of PPR, bovine vaccination, AI, training programmes on specific topics and distribution of farm implements. Visit to different villages were organized in consultation with KVK, Rayagada and different activities were undertaken with help of district

officials from line department. Training on vermi composting, kitchen gardening, bee keeping, mushroom and village specific topics were conducted where officials from CHES, KVK, and State Govt Departments were present.



Activities under Krishi Kalyan Abhiyan 2018 programme

Relief materials mobilisation and Animal health camp for the flood affected areas of Kodagu district

ICAR-Krishi Vigyan Kendra, Kodagu in coordination with Puthari FPO (Farmer's Producers organization) mobilised flood relief materials for the flood affected people of Kodagu, during the period 17th to 23rd August 2018. Due to torrential and heavy rainfall, the Kodagu district was severely affected and there was heavy loss of property and livelihood. ICAR-KVK, Kodagu took an initiative to reach out to the flood affected people of Kodagu and with the help of Puthari FPO, the institute has provided relief materials collected from different parts of state to the relief camps operated by the district administration. KVK, Gonikoppal, along with department of A.H & VS, Somwarpet, conducted an animal health camp where animal feed was distributed at

Haleri and Kandanakolli villages of Somwarpet taluk, Kodagu. In this camp about 195 animals belonging to 134 farmers were checked and suitable treatment was given. Dr. Suresh S.C SMS (Livestock) of KVK, Gonikoppal, Dr. Thammaiah, DD (In charge) dept. of A.H & VS Madikeri and Dr. Shinde, CVO, VD Madhapura attended the programme.

FET Training Programme

108th Foundation Course for Agricultural Research Service (FOCARS) Phase II Field, Experience Training (FET) was organised at KVK, Hirehalli. The following trainees were posted at our centre. Viz., Shivakumar KT, Ramaya shree Devi GS, Lokesh Kumar BM, Anindita Paul, Deepak Vishwanth Pawar and Bhargavi HA. The programme was coordinated by Dr. Loganandhan N, Principal Scientist and Head. K.N. Jagadish and Prasanth J M Subject Matter



FET Training Programme

Specialist, ICAR- KVK, Hirehalli, Tumakuru, FET local facilitator to facilitate activities of scientist trainees and to enable them to complete their 21 Day training programme from 21st August to 10th September 2018. Mission of the training was "To provide an opportunity to the scientist trainees to focus research efforts on field realities and needs of stakeholders by employing participatory rural appraisal methodology"

DAESI Graduation Day at KVK, Gonikoppal

ICAR-Krishi Vigyan Kendra, Gonikoppal conducted Graduation Day of 1st Batch of Diploma in Agricultural Extension Services for Input Dealers (DAESI) on 4th August 2018. Dr. M R Dinesh, Director, IIHR and Chief guest on the occasion distributed the certificates. Dr. Pennobalishwamy, State Nodal Officer, SAMETI, Bengaluru, Dr. C.K. Narayana, Chairman, RPME, IIHR, and Dr. Shivakumar, Joint Director of Agriculture, Kodagu were also present on the occasion. Dr. Saju George, Senior Scientist & Head welcomed all the delegates and participants to the function. The one year Diploma Course programme was coordinated by Mr. Prabhakar, SMS (Horticulture).



2nd Batch of DAESI Inauguration

ICAR-KVK Gonikoppal started the 2nd batch of DAESI on 28th August 2018. Forty input dealers joined for this programme. Dr. Pennobaliswamy, State nodal officer, DAESI, who was the Chief Guest on this occasion, spoke about the importance of this course and its contribution to the farmers. Dr. Saju George, Head, welcomed the new batch and Mr. Veerendra Kumar (SMS Plant Protection) coordinated the programme.



Second Batch of DAESI Inauguration

Release of "Shankara" Jackfruit- Farmer's variety

"Shankara" Jackfruit Farmer's variety was released by Dr. Trilochan Mohapatra, Hon'ble secretary, DARE and DG, ICAR during the celebration of the "Foundation Day Celebrations of ICAR-IIHR-2018" on 4th and 5th September 2018, at the ICAR-Indian Institute of Horticultural Research, Hessaraghatta, Bengaluru. The farmer Mr. Shankaraiah, from Chowdlapura Village, Tumkur Karnataka, was awarded for "Custodian of Shankara-Jackfruit Farmers Variety with Attractive Coppery Red Flakes".



Release of "Shankara" Jackfruit variety



Coppery red jackfruit bulbs

Hindi Week celebration

Central Horticultural Experiment Station (ICAR-IIHR), Bhubaneswar, celebrated 'Hindi Week' from 14th – 22nd September, 2018 to promote Hindi in office activities. Sh. Vinod Kumar, Retd. IFS officer of Odisha Forest Development Corp. Ltd. inaugurated the hindi week and highlighted the significance of Hindi in National integration and development of society. During the Hindi Week various competitions like Hindi reading, dictation, extempore, essay, quiz and antakshari were organized. The valedictory function was graced by Sh. Shravan Kumar, Executive Engineer, CPWD. In his address, Sh. Kumar emphasised on the importance of language in linking society and people of the country. The programme was co-ordinated by Dr. (Mrs.) Meenu Kumari, scientist and Chairperson, Hindi cell. Hindi Week was also organized at Central Horticultural Experiment Station (CHES), ICAR-IIHR, Chettalli, Kodagu from September 17-22, 2018. The chief guest of the programme, Mr. Manoj, distributed prizes to winners of various competitions.



Hindi Week celebration at CHES, Chettalli



Prize distribution

Swachhata Hi Seva (SHS) Programmes

Central Horticultural Experiment Station, bhuvanewar carried out various programmes under Swachhata Hi Seva



Activities under Swachhata Hi Seva programme at CHES, Chettalli

2018 from 15th September to 2nd October 2018. Cleanliness activity inside the campus, awareness programmes and lectures, door-to-door campaign were organized to sensitize people on the benefits of Swachhata. Student awareness programme on cleanliness and drawing competition were organized in nearby schools. Awareness campaign was also held in one of the adopted villages “Balipatna” of Puri district under MGMG programme. Swachhata Hi Seva (SHS) 2018 programme was also held at CHES, Chettalli from 15th September to 2nd October 2018. ICAR- KVK, Gonikoppal, Kodagu also conducted the Swachhata Hi Seva Campaign at KVK campus from 15th September to 2nd October 2018 with

an aim to create greater public awareness towards Swachhata. During this period various activities such as cleaning of KVK campus, streets, drains, organising waste collection drives, village level rallies for generating awareness about Swachhata, demonstration of organic compost making, etc. were carried out by KVK staff.

Human Resource Development

- ❖ Dr. Tejaswini, Principal Scientist, was deputed to Germany as member of Indian team for a study visit program on “DUS testing of rose” as a part of Indo-German bilateral program Cooperation on Seed sector development and protection of plant varieties at Hannover, Germany from 8-14 July, 2018.
- ❖ Mr. Prabhakar, SMS (Horticulture) attended the training programme on Coffee cultivation at CCRI Balehonnur, Chikkamagaluru, from 18-29 July, 2018.
- ❖ Dr. Pritee Singh, attended CAFT training program on "Comparative Genomics of Horticulture Plant Genetic Resources Methods and Applications" at College of Horticulture, UHS Campus, GKVK post, Bengaluru from 1-21 August, 2018.
- ❖ Mr. Prabhakar, SMS (Horticulture), attended the training programme on cultivation and conservation of medicinal plants at ICAR-IIHR Bangalore held from 28 August to 3 September 2018.
- ❖ Dr. G.R. Smitha participated in NIAS-DST training programme for Women Scientists (under Disha Scheme) on the theme “ Science and Sustainability in India” held at NIAS, Bengaluru from 3 -7 September 2018.
- ❖ Dr. D.V. Sudhakar Rao attended the National Program for Organic Production Audit Program for conducting renewal audit of TNOCD (Tamil Nadu Organic Certification Department, Coimbatore) held at Coimbatore from 17-20 September 2018
- ❖ Mr. Prabhakar, SMS (Horticulture), and Dr. Somashekar, SMS (Plant breeding), attended training programme for trainers of KVK/SAUs/ICAR institutes organised by Agriculture Skill Council of India, conducted from 24-25 September, 2018 at UAS Bangalore.
- ❖ Bishnu Charan Patra, Sr. Technician CHES Bhubaneswar attended the training on “Motivation, Positive thinking and Communication Skills for Technical Staff” at ICAR-CIAE, Bhopal, organised by NAARAM, Hyderabad.



Honours and recognitions

- ❖ Dr. H.S. Oberoi has been conferred with the Fellow of National Academy of Biological Sciences (NABS) for the year 2017 in Food Sciences.
- ❖ Dr. B.L. Manjunath was nominated as a Member (DDG–NRM nominee) for Zonal Monitoring Committee (ZMC) to monitor NICRA activities of three KVK's viz, Chickaballapur, Tumkur and Davanagere.
- ❖ Dr. S. Bhuvaneshwari was awarded the best oral paper presentation award for the research paper entitled “Shelf life studies of guava packed in customized corrugated fibre board (CFB) box after subjecting to vibration and drop tests” authored by Bhuvaneshwari, S, Sudhakar Rao D.V and Senthil Kumaran, G. in the International Conference on Recent Advances in Food Processing Technology organized by Indian Institute of Food Processing Technology, Thanjavur during 17-19 August 2018.

Distinguished visitors

- ❖ Prof. (Dr.) Nazeer Ahmed, Vice Chancellor, Sher-e-Kashmir, University of Agricultural Sciences visited CHES, Hirehalli on 6th July 2018.
- ❖ Swamji Boda Swarupanda Ji of Ramakrishna Asharma, Ponnampet, visited KVK Gonikoppal on 18th August 2018.
- ❖ Dr. S. Ayyappan, Former Secretary, Department of Agriculture Research and Education (DARE) and Director General (DG), ICAR, visited KVK, Gonikoppal on 31st August, 2018.
- ❖ Shri. Devendra Kumar, Director (Finance), ICAR, visited ICAR-IIHR, Bengaluru on 28th September 2018 and KVK, Gonikoppal, on 30th September 2018.

Transfer of Technology

On Campus Trainings

Title	Dates	No. of Participants
ICAR-IIHR, Bengaluru		
Special training course for the FPOs on Crops identified for “Improved Horticultural Technologies” (Production, Postharvest & Marketing) for Bidar district	Jul 9-13	24
Capacity building of rural women for enhancing household income and nutrition through mushroom cultivation	July 17,27,31 st and Aug 01	35
Special training course for the FPOs on Crops identified for “Improved Horticultural Technologies”(Production, Postharvest & Marketing) for Kalburgi district	Jul 23-27	25
Special training course for the FPOs on Crops identified for “Improved Horticultural Technologies”(Production, Postharvest & Marketing) for Yadgiri district	Jul 31-Sep 04	21
Capacity building of rural women for enhancing household income and nutrition through mushroom cultivation	Aug 17, 24, 27 & 28	33
Pollen viability and Cryopreservation for important vegetables for the staff of Indo American Hybrid Seeds.	Aug 20-24	14



Special training course for the FPOs on Crops identified for “Improved Horticultural Technologies”(Production, Postharvest & Marketing) for Chamarajnar district	Aug 21-25	33
Orchard Management Practices in Fruit Crops	Aug 27-29	18
Conservation and Cultivation of Medicinal Plants	Aug 30-Sept 03	23
Improved Horticultural Technologies (Production, Postharvest & Marketing) for Vijayapura district	Sep 10-14	31
Capacity building of rural women for enhancing household income and nutrition through mushroom cultivation	Sept 11, 18, 24 & 25	30
Improved Horticultural Technologies (Production, Postharvest & Marketing) for Chickmagalur district	Sept 24-28	23
Entrepreneurial development training through Mushroom spawn production and Mushroom cultivation	Aug 30 - Sept 7	39
Interstate Exposure Visits		
Tamil Nadu -20 programmes	-	400
Karnataka-5 programmes	-	100
Maharashtra-2 programmes	-	50
Gujarat-1 programme	-	55
Rajasthan-1 programme	-	10
Kerala-3 programmes	-	100
CHES, Bhubaneswar	-	
Training on mango rejuvenation	Aug 20	50
ICAR-KVK, Hirehalli		
Oyster Mushroom Cultivation	July 07	19
Oyster Mushroom Cultivation	July 21	21
Scientific Beekeeping	July 28	27
Methods of multiplication of pepper plants to the Tribals of Biligiri Rangana Betta (B R Hills) under TSP	Jul 30	20
Method of planting techniques of spine gourd and distribution of plants to the tribal beneficiaries at Biligiri Rangana Betta	Jul 30	12
Vegetable nursery management and distribution of Arka vegetable seed kits at Biligiri Rangana Betta	Sep 14	144
Trichoderma culture mixing with compost and application for control of diseases in Coorg mandarin, Coffee and Pepper at Biligiri Rangana Betta	Sep 14	144
Scientific Beekeeping	Sep 29	11



KVK, Gonikoppal		
Training programme on value addition in jackfruit	July 4	50
Training programme on mushroom production	July 5	36
Training programme on value addition in Butter Fruit	Aug 2	46
Training on mixed fruits processing	Sept 14	38
Training programme on value addition of aonla fruit for rural youth	Sept 25	46
Training programme on medicinal plants	Sept 28	40

Off-Campus Trainings

Title	Place	Date	No. of Participants
ICAR-IIHR, Bengaluru			
Mushroom cultivation and its value addition in collaboration with KVK Yadagiri, under Honorable Prime Minister launched 'Transformation of Aspirational Districts' program.	Yadagiri	Jul 17	35
Post-harvest technologies of ICAR-IIHR and value addition of Jackfruits, Pineapple and improved varieties of vegetable crops	Agartala, Tripura	Aug 7	85
Precision farming in vegetable crops (Tomato, chilli and French bean)	FFP villages, Kanakapura	Aug 7	15
Group meetings on IIHR technologies (2)	Lakmidevapura S.Nagenahalli	Aug 8	30
Improved vegetable varieties and hybrids of ICAR-IIHR, and protected cultivation of vegetable crops	KVK, Kamarup, Guwahati, Assam	Aug 9	110
Quality mushroom spawn for beginners at College of Horticulture	Mysore	Aug 10	50
Programme on TSP project on IIHR technologies (distributed 35 bee hives)	BR Hills	Aug 16	35
Mushroom cultivation and its value addition in collaboration with KVK Raichur under Honorable Prime Minister launched 'Transformation of Aspirational Districts' program	Raichur	Aug 16-18	52
Mechanization in Mushroom Production Technology at KVK	Raichur	Aug 16-18	40



Use of CLIMEX, a bioclimatic software for quarantine” to the scientific officers of Biosecurity division, National Institute of Plant Health Management	Hyderabad	Aug 20-21	6
Improved production technology of tuberose	FFP villages, Kanakapura	Aug 25	12
Operation and maintenance of Agricultural/ Horticultural Machinery” at Sanipalli (Village), Penukonda, Anantapur (Dt.)	Andhra Pradesh	Sept 7	93
Mushroom cultivation and its value addition for the Soliga tribe women of BR Hills	Chamrajnagar	Sept 17-18	20
Mushroom cultivation and its value addition at College of Agriculture, CAU, Lembuchera, Agartala,	Tripura	Sept 24-25	493
Mechanisation in Mushroom Production Technology at College of Horticulture and Forestry, CAU	Arunachal Pradesh	Sept 25-27	100
Mushroom cultivation and its value addition at Agriculture, Pasighat,	Arunchal Pradesh	Sept 27-29	100
Mechanisation in Mushroom Production Technology at College of Horticulture, Lumbicherra, Agartala	Tripura	Sept 28-29	492
CHES, Chettalli			
Training on method of multiplication of pepper plants	Biligiri Rangana Betta	July 3	20
Training on method of planting techniques of spine gourd and distribution of plants to the tribal beneficiaries	Biligiri Rangana Betta	July 3	12
Training on vegetable nursery management and Distribution of Arka vegetable seed kits	Biligiri Rangana Betta	Sept 14	144
Training on Trichoderma culture mixing with compost and application for control of diseases in Coorg mandarin, coffee and Pepper	Biligiri Rangana Betta	Sept 14	144
ICAR-KVK, Hirehalli			
Cultivation practices of finger millet	Hirehalli	July 9	42
Coconut and arecanut production	Hirehalli	July 18	40
Importance of Soil Health Card	Hirehalli	July 22	40
Arecanut and coconut production techniques and importance of Soil Health Cards	Hirehalli	July 31	40
Arecanut and coconut production techniques	Hirehalli	Aug 8	36



Importance of nutrition garden	Hirehalli	Aug 10	58
Importance of nutrition garden	Hirehalli	Aug 13	104
Importance of nutrition garden	Hirehalli	Aug 20	88
Importance of nutrition garden	Hirehalli	Aug 21	99
Importance of nutrition garden	Hirehalli	Aug 25	44
Importance of nutrition garden	Hirehalli	Aug 29	85
KVK, Gonikoppal			
Training on scientific pepper cultivation	Suntikoppa	July 13	40
Training on integrated pest and disease management in paddy	Shanivarsanthe	July 21	38
Training programme on safe use of pesticides in agriculture	Ammathi	July 23	55
Training on plant protection in black pepper	Shantalli	Aug 1	70
Training on scientific pepper cultivation	Kirgoor	Aug 6	46
Training programme on Mushroom production	Maragodu	Sep 20	56

Front Line Demonstrations

KVK, Gonikoppal

Topic	No. of Demonstrations
Integrated crop management in coffee	10
Integrated pest and disease management in black pepper	10
Demonstration of fodder cafeteria with hybrid Napier- DHN-6 and multi cut fodder Sorghum- COF-31	10
Composite fish culture in IFS plot	10

ICAR-KVK Hirehalli

Topic	No. of Demonstrations
Demonstration of Arka Actino-plus (ACP) on growth and yield of brinjal	3
Integrated crop management in china aster-Arka kamini	3
Integrated crop management in chilli-Arka kyathi	3



On Farm Testing

Topic	No. of OFTs organized
KVK, Gonikoppal	
Assessment of cassava varieties for higher yield and income	3
Management of yellowing and spike shedding in black pepper	5

Farmer Field School

Topic	No. of Farmers
KVK, Gonikoppal	
Integrated pest and disease management in paddy	25

Exhibitions

Events	Venue and date
ICAR-IIHR, Bengaluru	
Interactive Workshop on GAP, Post harvest handling and export of Bangalore Rose Onion	July 21, Chikkaballapur
Samagra Krishi Abhiyan	Aug 5, Gouribidanuru
National farmers science congress on grassroots innovations in farm Production	Aug 5-7, Bihar Agriculture University, Bhagalpur, Bihar
CHES, Bhubaneswar	
World kitchen day	Sept 26, Kitchen Garden Association, Bhubaneswar
Science exhibition	Sept 22-23, Institute of Life Science, Bhubaneswar
Mahindra krushi Jagran	Sept 28, Guapur, Balipatna, Bhubaneswar
CHES, Hirehalli	
Jack fruit varieties and technology exhibition in Akala Halasu Sangama 2018	Sept 8-9, Sparsha Kala Mandira Bantwala.
CHES, Chettalli	
Planters meet and Exhibition	Aug 11-12, Kodava Samaja, Kodagu



Field Days

Field day on Dragon fruit production technology

A Field Day on 'Dragon Fruit Production Technology' was organized by CHES (ICAR-IIHR), Bhubaneswar, on 6th September 2018. During the field day importance of climate, training system, nutrient and water management, hand pollination, disease management and maturity indices were highlighted.



Field Day on Dragon Fruit

Field Day on Tuberose

A Field Day on Tuberose cv. Arka Prajwal was organized by ICAR-IIHR under Farmers First Project in collaboration with the Department of Horticulture at Balepura Village, Kanakpura Taluk, Ramanagara District on 22nd September 2018. Dr. M.R. Dinesh, Director, ICAR-IIHR presided over the function. Mr. G. Gunavanth, DDH, Ramanagara district, and panchayath members attended the meeting. Dr. T.M. Rao, Dr. Sujatha A. Nair, Dr. Rajiv Kumar, and Dr. T. Usha Bharathi participated and interacted with farmers. Planting material of ICAR-IIHR varieties of Gladiolus viz., Arka Amar, Arka Ayush and Arka Gold and bulbs of tuberose cv. Arka Prajwal were distributed to the farmers for demonstration.

Field Day on Conservation Horticulture in Mango Orchards

Under NICRA programme of IIHR, a field day was held in ICAR-IIHR on 26th September 2018 to showcase the technology of "conservation horticulture in mango orchards". The field day showcased three different systems of conservation horticulture viz., complete rainfed system, protective irrigation system and integrated farming system.

Conservation horticulture in Rainfed system demonstrated successful cultivation of several intercrops, mixed crops and

cover crops. It has been demonstrated that farmers can successfully grow pigeon pea, sweet corn and sweet potato. Similarly if the sowing is done on receiving first monsoon rains, two crops like mung bean followed by niger or French bean followed by cow pea or horse gram can be successfully grown in mango orchards without affecting mango yield. Under protective irrigation it has been demonstrated that farmers having provision of protective irrigation can successfully grow even cash crops like vegetables, flower crops like chrysanthemum and other crops which can fetch good money. Chief Guest of the function Dr. M. R. Dinesh, Director ICAR-IIHR, in his presidential address explained farmers that several technologies are demonstrated in IIHR on a regular basis and urged farmers to avail this facility by visiting IIHR and interacting with experts for getting the benefits. About 200 mango farmers from Karnataka, Maharashtra and Gujarat took part in this field day and visited the demonstration fields and interacted with the scientists of NICRA team.



Field Day on Conservation Horticulture in Mango Orchards



Field visit and Demonstration

Diagnostic field visit to Maize field

Dr. B.H. Gowda, SMS, Plant Protection and. Sri. J.M. Prashanth, SMS, Horticulture, along with Agriculture Department officials visited cut worm affected fields on 5th July, 2018 at Doddanelkuru village of I.D. Halli hobli, Madhugiri taluk. It was diagnosed as a new species of cutworm *Spodoptera frugiperda*. Farmers were advised to take control measures as per the package. About 12 farmers participated in the field visit.



Diagnostic field visit to Maize field

Diagnostic field visit to Arecanut field

SMS-Plant Protection, KVK, Hirehalli visited Ganoderma affected fields of Arecanut belonging to farmer Shri. T.K. Rajana, Bandapalya village, Hebbur Hobli, Tumkur Taluk, on 6th July 2018. They were advised to apply AMC enriched FYM, Neem cake and root feeding with Hexocanazole at the rate of 3 ml per 125 ml of water.



Diagnostic field visit to Arecanut field

Field visit for assessment of pepper varieties

Field visit to Boikeri village, Madikeri Taluk was conducted on 10th September 2018, for assessment of pepper varieties for higher yield potential in high altitude regions. Mr. Devaiah demonstrated the planting of pepper saplings and explained the farmers how it could increase the potential yield.

Method Demonstration on Seed Treatment with Arka Microbial Consortium

A method demonstration was conducted using Arka Microbial Consortium at the rate of 10 gm/kg seed for the control of stem rot of groundnut at Girigowdanahalli of Madhugiri Taluk. A lecture was delivered on role of seed treatment and method of seed treatment. Method demonstration was conducted for the farmers who implemented Front Line Demonstration of NMOOP scheme. Thirty eight farmers participated in the event.



Method Demonstration on Seed Treatment with AMC

Success Stories:

Success story on managing insect and nematode pests in European Cucumber under protected conditions

Under protected conditions, insect pests and plant parasitic nematodes pose a serious threat to commercial cultivation of European cucumber. However, regular use of ICAR-IIHR technologies of neem soap, pongamia soap and biopesticides (*Trichoderma harzianum*, *Pochonia chlamydosporia* and



Managing insect and nematode pests in European Cucumber

Pseudomonas fluorescens) enriched with Farm Yard manure/vermicompost had successfully controlled insect and nematode pests. Shri. Nandeesh, a progressive farmer from Doddaballapur, Karnataka adopted these eco-friendly technologies and could successfully reduce the cost of



production to Rs. 1,30,000/- per acre from Rs. 2,00,000/- per acre spent on chemical pesticides. In addition, he accrued a yield of 65 tonnes per acre (+33% compared to chemical methods) and could extend the crop duration by 25 days more. About 85–90% of insect and nematode pests population was effectively managed. The success story of the technology was popularized through Doordarshan-Chandana and local TV channels.

Technology Assessment

Performance of Tomato hybrid Arka Rakshak: Mr. Ramesh Gowda, T Agraphara, Kollegala Taluk, Karnataka, has adopted Arka Rakshak on 2 acres plot during Kharif 2018 (27-4-2018) by arranging irrigation water from rain water collected in a farm pond. The farmer could get first harvest 69 days after planting and could harvest 6 tons as on 16th July 2018.



Farm pond at Agraphara



IIHR Scientists visiting the plot

❖ **Performance of French Bean Variety Arka Arjun:** MYMV resistant variety Arka Arjun was raised on 4 acres at Hanur, Shidlaghatta Taluk by Mr. Veera Kempanna. The farmer has harvested 12 tons and he is able to get Rs.25 per kg. He expects 20 tons from the remaining crop (estimated returns will be around Rs.6.4 lakhs from his 4 acre plot in 70-75 days) & his expenditure is Rs.1.6 lakhs for 4 acres.



Performance of French Bean Variety Arka Arjun in Hanur, Shidlaghatta Taluk, Karnataka

Performance of ridge gourd Variety Arka Prasan in the farmer's field of Andhra Pradesh

Arka Prasan, a high yielding ridge gourd variety cultivation is taken up in Karnataka, Andhra Pradesh, Madhya Pradesh, Maharashtra, Orissa by 35-40 farmers covering an area 80-90 acres of land. Arka Prasan was raised in 4 acres of land by the farmer, Mr. Raghvendra Reddy at Thimmampet village, Garladinne Mandal, Anantapur district of Andhra Pradesh during kharif. The farmer was very much satisfied with the earliness (first picking by 35th day) of the variety with attractive, long, straight, tender green fruits. He harvested about 70 tons of fruits from 4 acres and earned an income of Rs.10.5 lakhs. His expenditure was Rs.50,000/-acre with a net returns of 2.12 lakhs/acre over a period of 3.5 months.



Performance of ridge gourd Variety, Arka Prasan in Anantapur dist of Andhra Pradesh

Performance of ridge gourd variety Arka Prasan at Kunikere, Hiriyyur Tq. Chitradurga Dt., Karnataka

Mr. Vasudeva Rao has grown Ridge gourd variety, Arka Prasan in one acre plot during summer at Kunikere, Hiriyyur tq., Karnataka during summer. He got a yield of about 12-15 tons/acre in 12-14 pickings. He sold the fresh fruits in the Hiriyyur and Davanagere markets at Rs.20-35 per kg which fetched him about Rs. 2.5 lakhs. His expenditure was Rs.40,000/acre with a net returns of Rs.2.1 lakhs/acre over a period of 3.5 months.



Performance of Ridge gourd Variety, Arka Prasan in Chitradurga Dt. Karnataka

Performance of ridge gourd variety Arka Prasan at B.Hosahalli, Sarjapura, Anekal Tq. Bangalore South dt., Karnataka



Performance of Ridge gourd Variety, Arka Prasan in Bangalore South dt., Karnataka

Mr. Naveen Kumar, a farmer from B.Hosahalli, Sarjapura, Anekal Tq. Bangalore South Dt., Karnataka has grown Arka Prasan in one acre plot during *kharif*. The farmer expressed that the fruits are long, straight, green with good quality and very much preferred in the Mangalore and Kerala markets. The farmer harvested about 16.5 tons/acre and earned about 1.65 lakhs by selling @Rs.10/kg. His net income per acre was Rs.1.3 lakhs after deducting the cost of cultivation of Rs.35,000, over a period of 3.5 months.

Sale of ICAR-IIHR products through ATIC

The ATIC realized a revenue of Rs. 18,81,098/- through the sale of Mushrooms and Rs.6,53,690/- through the sale of products and publications during the quarter.

Commercialisation of Technology:

A total of five technologies were licensed to 14 companies during the period of July-Sept 2018 and generated a revenue of Rs. 30,04,000/-

Name/ Company Name	Technology
M/s Beej Sheetal Research Private Limited, Jalna, Maharashtra	Mass production of <i>Trichoderma harzianum</i>
M/s Mukul Biocontrol Industries, Meerut	Mass production of <i>Trichoderma viride</i>
M/s M D Biocoals Pvt Ltd, Haryana	Mass production of <i>Trichoderma viride</i>
M/s M D Biocoals Pvt Ltd, Haryana	Mass production of <i>Pseudomonas fluorescens</i>
M/s Sunsip Agro Processors	Crushed Tomato technology
M/s Sunsip Agro Processors	Fruit Bars of Mango, Guava and Papaya
M/s Team Flame Engg & Solutions, Bangalore	Licensing of 12 machineries
M/s Omega Metallic, Bangalore	Licensing of 16 machineries
M/s SLS Pride Meadows, Andhra Pradesh	Guava-Arka Kiran & Arka Rashmi Varieties
M/s Biopest Control Industries, Bangalore	Mass production of <i>Trichoderma viride</i>
M/s Bloom Biotech, Chikmagalur	Arka Microbial Consortium (Solid)-Renewal
M/s Miracle Agrotech, Belgaum	Arka Microbial Consortium (Liquid)
M/s Trust Grow Fertilisers India Pvt Ltd, Bangalore	Arka Microbial Consortium (Liquid)
M/s Praakruti Fruit Orchards, Udupi	Guava-Arka Kiran
M/s Rohini Bio-Agents, Bagalkot	Mass production of <i>Trichoderma viride (P)</i>
M/s Amar Biotech, Punjab	Mass production of <i>Trichoderma viride (P)</i>
M/s Amar Biotech, Punjab	Mass production of <i>Trichoderma harzianum</i>
M/s Amar Biotech, Punjab	Mass production of <i>Pseudomonas fluorescens</i>
M/s Amar Biotech, Punjab	Mass production of <i>Verticillium chlamydosporia</i>

Personalia

Transfer:

- ❖ **Dr. Basavaprabhu L Patil**, Senior Scientist, joined at ICAR-IIHR, Bengaluru, on 13-7-2018 upon transfer from ICAR-NPCPB, New Delhi.
- ❖ **Shri Arivalagan**, Scientist, joined at ICAR-IIHR, Bengaluru on 02-7-2018 upon transfer from CPCRI, Kasaragod

- ❖ **Mr. Siddagangappa**, Skilled Supporting Staff was transferred to ICAR-IIHR, Bangalore, from CHES, Hirehalli.
- ❖ **Mr. Muniyappa**, Skilled Supporting Staff was transferred to ICAR-IIHR, Bangalore, from CHES, Hirehalli
- ❖ **Dr. Sudhamoy Mandal**, Principal Scientist was transferred from ICAR-IIHR, Bhubaneswar, to ICAR-NRRI, Cuttack



Retirement

- ❖ **Dr. J. B. Mythili**, Principal Scientist, retired from council service by opting voluntary retirement on 20.7.2018
- ❖ **Dr. A.K. Saxena**, Principal Scientist, retired from council service on superannuation on 31.07.2018.
- ❖ **Shri. H.C. Siddaveera Aradhya**, Technical Officer, retired from council service on superannuation on 31.07.2018.
- ❖ **Shri. G. Sundarraj**, Technical Officer, retired from

council service on superannuation on 31.07.2018.

- ❖ **Shri. Durgadas Laxman Shetti**, Assistant Chief Technical Officer (Lab.), retired from council service on superannuation on 31.08.2018.
- ❖ **Shri. Felix Monterio**, Private Secretary, retired from council service on superannuation on 30.09.2018.
- ❖ **Shri. R. Gopal**, Assistant, retired from council service on superannuation on 30.09.2018.
- ❖ **Shri. H.K. Venkatesh**, Skilled Support Staff, retired from council service on superannuation on 30.09.2018.

भा.कृ.अनु.प.—भारतीय बागवानी अनुसंधान संस्थान में हिंदी पखवाड़े का आयोजन

भा.कृ.अनु.प.— भारतीय बागवानी अनुसंधान संस्थान, बेंगलूरु में 14 सितंबर 2018 को हिंदी दिवस मनाया गया और हिंदी पखवाड़े का शुभारंभ किया गया। इस अवसर पर प्रसिद्ध साहित्यकार श्री ज्ञानचंद्र मर्मज्ञ मुख्य अतिथि के रूप में उपस्थित थे। प्रभारी निदेशक डॉ. प्रकाश पाटील कार्यक्रम के अध्यक्ष थे। हिंदी पखवाड़े के दौरान 'हिंदी कविता पाठ', 'हिंदी शब्दावली एवं टिप्पण', 'पूर्व-लिखित हिंदी निबंध', 'हिंदी गीत', 'आशु भाषण और 'हिंदी संवाद' प्रतियोगिताएँ आयोजित की गईं और संस्थान के प्रशासनिक और तकनीकी कर्मचारियों के लिए हिंदी में बातचीत करने के लिए 'आइए हिंदी बोलिए' नामक एक विशेष कार्यशाला व प्रशिक्षण कार्यक्रम भी आयोजित किया गया।

उद्घाटन सामरोह के मुख्य अतिथि ने कहा कि हिंदी इंद्रधनुष के समान है, जैसे इंद्रधनुष में सात रंग होते हैं और उन्हें अलग-अलग नहीं किया जा सकता, वैसे ही हिंदी में हमारे देश की अनेक भाषाओं के शब्द मिलते हैं और उन्हें भी अलग नहीं किया जा सकता है। हिंदी हमारे देश की अनेक प्रादेशिक भाषाओं का प्रतिनिधित्व करती है। मातृभाषा और संस्कृति का गहरा नाता है। जब हम मातृभाषा से दूर होते जाएंगे तो हमारा संस्कार दूषित हो जाएगा। इसी का परिणाम अब देश में देखने को मिलता है। हर जगह से महिला और बच्चों के साथ के अत्याचार की खबर आती है। इसलिए हमें मातृभाषा से दूर भागने की नहीं, बल्कि उसे गहरी ममता से गले लगाने की ज़रूरत है। सिर्फ हिंदी दिवस या हिंदी सप्ताह या फिर हिंदी पखवाड़े में नहीं, बल्कि वर्ष भर हिंदी में काम करना हमारा कर्तव्य है।

कार्यक्रम के अध्यक्ष एवं प्रभारी निदेशक डॉ. प्रकाश पाटील ने कहा कि संस्थान के कर्मचारी पूरे लगन से हिंदी में काम करते हैं। हमारे वैज्ञानिक हिंदी में लेख भी लिखते हैं, जिन्हें संस्थान की राजभाषा पत्रिका "बागवानी" में प्रकाशित किए जाते हैं। सभी से मेरा अनुरोध है कि हिंदी में काम करना हमारा कर्तव्य है और हमें उसका पालन करना चाहिए। इस अवसर पर मुख्य अतिथि ने संस्थान की राजभाषा पत्रिका बागवानी के नवीन अंक का विमोचन भी किया।

हिंदी पखवाड़े का समापन समारोह 28 सितंबर 2018 को आयोजित किया गया, जिसमें श्री देवेन्द्र कुमार, निदेशक (वित्त), भारतीय कृषि अनुसंधान परिषद, नई दिल्ली मुख्य अतिथि थे। उन्होंने कहा कि हिंदी एक ऐसी भाषा है, जिसमें राष्ट्र को जोड़ने की क्षमता है। भारत में अधिकांश क्षेत्रों में हिंदी बोली या समझी जाती है। इसीलिए हिंदी को भारत सरकार की राजभाषा का दर्जा प्राप्त हुआ है। उन्होंने आगे कहा कि चाहे कार्यालयीन कार्य हो फिर आपस में बातचीत कर रहा हो, हमें हिंदी के सरल शब्दों का इस्तेमाल करना चाहिए ताकि हमारी बात सामने वाले आसानी से समझ सकें। आजकल हिंदी में काम करना आसान हो गया है, क्योंकि हिंदी में काम करने को सुविधाजनक बनाने के लिए कई सॉफ्टवेयर उपलब्ध हैं। भारत सरकार इस ओर बहुत अधिक प्रयास कर रही है। क्षेत्रीय भाषाओं के माध्यम से हिंदी सीखने के लिए भी कई सॉफ्टवेयर उपलब्ध हैं। कन्नड भाषियों के लिए हिंदी सीखना आसान है, क्योंकि हिंदी और कन्नड में कई शब्द समान हैं। हमें चाहिए कि एक बार काम करना शुरू करें, फिर शब्द अपने आप आ जाएंगे और हिंदी में काम आसान होगा। कार्यक्रम की अध्यक्षता निदेशक डॉ. एम. आर. दिनेश ने किया।

इस अवसर पर मुख्य अतिथि एवं निदेशक ने विभिन्न प्रतियोगिताओं के विजेताओं, हिंदी में मूल रूप से काम करने वाले प्रतिभागियों तथा हिंदी प्रशिक्षण में भाग लिए प्रतिभागियों को पुरस्कार एवं प्रमाण-पत्र वितरित किए।



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 Dr. Shamina Azeez
 Dr. P. Nandeeshia
 Dr. Usha Rani T.R
 Shri A.K. Jagadeesan
 Member Secretary : Smt. M. Malarvizhi

For further details contact :

Director
 ICAR- Indian Institute of Horticultural Research
 Hesaraghatta Lake Post, Bengaluru - 560089
 Phone : +91-80-23086100, Fax: +91-80-28466291
 Email : director@ihr.res.in / director.ihr@icar.gov.in
 Website : http://www.ihr.res.in



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