

## Dr. S. Ayyappan as DG, ICAR

Dr S. Ayyappan, an eminent scientist in the field of fisheries took over as the Secretary, DARE and Director General, ICAR on January 01, 2010. Prior to his present assignment, Dr. Ayyappan served in the ICAR system in various capacities as Deputy Director General (Fisheries); Director, CIFE, Mumbai; Director, CIFA, Bhubaneswar; Principal Scientist etc.

Born on December 10, 1955 at Alakere in Karnataka State, Dr. Ayyappan has made significant contribution to the field of research in fisheries, freshwater aquaculture and aquatic microbiology. He has more than 200 research publications to his credit in national and international journals and authored many books and documents. He has two patents and one design in his name. He has received many awards and honours viz., Zahoor Qasim Gold Medal, V. G. Jhingran Gold Medal and ICAR Best Team Research Award. Under his leadership as the Director, the CIFA Bhubaneswar received Best ICAR Institute Award, 1996. He is a Fellow and Vice President of National Academy of Agricultural Sciences, India, Asian Fisheries Society, Manila, Philippines, and Vice President, Indian Society of Coastal Agricultural Research. Dr. Ayyappan has represented India in several important international fora and has served on the Boards of several international institutions and organizations such as Net work of Aquaculture Centers in Asia-Pacific (NACA), Bangkok, Thailand ; World Fish Centre, Penang, Malaysia etc. Dr Ayyappan was the founder Chief Executive of the National Fisheries Development Board, Hyderabad and virtually established the Board.

In his first communication to the members of ICAR after taking over as the Director General, Dr. Ayyappan suggested for knowledge based enterprise to achieve the goal of farmers well being with a 'Team Approach' based on interactive and consultative efforts.

The staff of IIHR, Bangalore congratulate Dr. Ayyappan on his new assignment and extend all the support and cooperation in achieving the goals of ICAR and the expectations of the country men, particularly the farming community.

## HIGHLIGHTS

### EVENTS

## 28<sup>th</sup> Group Meeting of All India Co-ordinated Research Project on Vegetable Crops

The 28<sup>th</sup> Group Meeting of All India Co-ordinated Research Project on Vegetable Crops was organized at IIHR, Bangalore jointly by the Indian Institute of Horticultural Research, Bangalore and Indian Institute of Vegetable Research, Varanasi from January 16 -19, 2010. His Excellency, the Governor of Karnataka Dr. Hans Raj Bharadwaj was the Chief Guest who inaugurated the Group Meeting and addressed



His Excellency the Governor of Karnataka  
Dr. Hans Raj Bharadwaj inaugurating by  
lighting the lamp

the gathering on January 16, 2010. Dr. H.P. Singh, DDG (H), ICAR, New Delhi delivered the key note address. In the beginning, Dr. A.S.Sidhu, Director, IIHR welcomed the guests and delegates followed by a brief presentation on "An

overview on AICRP on Vegetable Crops" by Dr. Dr. Mathura Rai, Director & Project Coordinator, IIVR, Varanasi, Uttar Pradesh. On this occasion the Lt. Amit Singh Memorial Award for the Best Coordinating Centre instituted by Lt. Amit Singh Memorial Foundation, New Delhi was conferred to the Indian Institute of Horticultural Research, Bangalore for the year 2009.



Dr. A.S. Sidhu, Director, IIHR receiving the best co-ordinating centre award from  
His Excellency the Governor of Karnataka Dr. Hans Raj Bharadwaj

An exhibition showcasing the technologies developed by research institutes and State Agricultural Universities / Krishi Vigyan Kendras, private Seed Companies and input providing agencies was organized on the occasion which was inaugurated by His Excellency the Governor . More than 25 firms took part in the exhibition by putting up their stalls.

The work done during the previous year by all the AICRP centers located in various State Agricultural Universities and other institutes was reviewed during the Group Meeting and the Technical Programme of work for the next year was formulated. Deliberations were held for three days on various topics like, germplasm collection & exploration, varieties trials, hybrid trials, physiology & biochemistry, disease & pest management, seed production etc., In the session on Public – Private Interface, germplasm exchange, sharing of segregating material between public institutes and private sector were discussed. Apart from these, a Brain Storming Session on Marker Assisted Breeding in Vegetables was also held on January 16, 2010 in the afternoon.

More than 200 delegates representing various AICRP centers, seed production companies and input providers from across the country participated in the workshop.

### Field Day On Vegetable Varieties

The Institute organized a field day on Vegetable Varieties Developed by IIHR on February 24, 2010 at the Field Demonstration Block at IIHR, Hessaraghatta Campus. Twenty eight varieties of 16 vegetable crops were demonstrated using improved production practices developed by the institute for the benefit of the farmers. Dr. K. L. Chadha, Former DDG (H), ICAR, New Delhi and Chairman, RAC, of IIHR was the Chief Guest and Dr. G Trivedi, Former Vice Chancellor, RAU, Bihar and Dr Kariyanna, Members of RAC of IIHR were the other guests present on the occasion.



A view of demonstration with the guests and farmers.

More than 250 farmers from in and around Hessaraghatta village participated in the field day and witnessed the crop demonstration. On this occasion, Scientist-Farmers Meet was organized wherein scientists of the institute from different disciplines replied to the queries related to the problems being faced by farmers in the production of vegetable crops.

### Media Meet and Showcasing of Technology

The Indian Institute of Horticultural Research, Bangalore organized a Media Meet and Review Workshop at the campus of the Institute at Bangalore on March 26- 27, 2010, as a part of the NAIP Project on Mobilizing Mass Media Support for

Sharing Agro Information. Dr. H. P. Singh, Deputy Director General (Hort.), Indian Council of Agricultural Research (ICAR), New Delhi was the Chief Guest and inaugurated the function on March 26, 2010. Dr T. P. Trivedi, Assistant Director General (ARIS) & Project Director (DIPA), ICAR, New Delhi delivered the inaugural address and Dr .A. S. Sidhu Director, IIHR presided over the function.

An exhibition depicting the technologies developed in the field of agriculture/horticulture by research institutes and State Agricultural Universities was organized on the occasion. More than 20 institutes including Indian Institute of Horticultural Research, KVKs and extension centers showcased the technologies for the benefit of the farmers and general public on the occasion. Farmers in large numbers from in and around Hessaraghatta village took part in the event on the first day of the programme.

Dr. H. P. Singh DDG (Hort.), ICAR, New Delhi conducted a media interaction meeting organized to disseminate the technologies developed by IIHR Bangalore. Media representatives from news dailies like The Hindu, Rajasthan Patrika, Udayavani (Kannada daily), The Observer and officials of Press Information Bureau (PIB), Press Trust of India (PTI), All India Radio (AIR), Doordarshan and Chandana (Kannada News Channel) participated in the discussion.



Dr. H.P. Singh, DDG (H) addressing the media persons.

Dr T.P. Trivedi briefed about the NAIP project, its objectives and appealed to the media persons to give wider publicity to the technologies developed in the field of horticulture for the benefit of the farmers.

Farmers' interaction and review meeting of the project was conducted on March 27, 2010. Shri. Manoj Pandey,



Shri. Manoj Pandey, Additional Director General (PIB) addressing the gathering.

Additional Director General (PIB) was the Chief Guest on this occasion and delivered key note address and assured to extend all possible support from PIB to the project in achieving the objectives and suggested to involve local leaders in the programme in order to get wider publicity in the media.

Dr T P Trivedi, consortium leader briefly mentioned about the progress of the NAIP sub project ‘Mobilizing Mass Media Support for Sharing Agro-Information’ and further reviewed the on going programmes in the project. Dr. B. Meenakumari, Director, Central Institute of Fisheries Technology (CIFT), was the Guest of Honor and Dr. A. S. Sidhu, Director, IIHR presided over the function.

### International Women’s Day Celebration at IIHR

The Complaints Committee on Sexual Harassment of Women at Workplace including Womens’ Cell, IIHR celebrated International Women’s Day, 2010 by organizing two Guest lectures viz., Women and mental health and Parenting issues in children and adolescents by Dr. Prakashi Rajaram and Dr Indiramma, both Associate Professors, Dept. of Psychiatric Social Works, Nimhans on 6 and 10 March respectively This was attended by all the staff member of the Institute. The talks were very informative and beneficial. A get-together of the IIHR Women Employees was organized in the auditorium in the forenoon which served as a platform for participants to air views on issues of their choice, followed by a contributory lunch. For the first time, the women’s cell also hosted free lunch to women labourers of the Institute as a token of appreciation for their contribution to agriculture. During the get-together, Dr A. Vani, Principal Scientist, IIHR enthused the audience with a presentation on ‘Special attributes of women’ in order to motivate them to bring out their true potential.



Dr Indiramma addressing during the Women’s Day

### K V K, Hirehalli Celebrates International Women’s Day

International Women’s Day was organized on 08.03.2010 at Krishi Vigyan Kendra, Hirehalli, Tumkur. Smt



Smt .Shivarudramma, President, Gram Panchayat, Hirehalli inaugurating the programme.

Shivarudramma, President, Grama Panchayat, Hirehalli inaugurated the programme. The programme was chaired by the Dr.L.B.Naik, Programme Coordinator, Krishi Vigyan Kendra, Hirehalli, Tumkur. Smt. Sharadamma, Senior Assistant Director of Horticulture, Department of Horticulture was the chief guest. On the same occasion, Kumari Radha R. Banakar, Subject Matter Specialist (Home Science) conducted training on preparation of value added products of Amla and Ragi to the participants. Fourty farm women from Hirehalli and surrounding villages participated in the programme. Subject Matter Specialists and staff members of the Krishi Vigyan Kendra also participated.

### IIHR lifts Krishnamurthy Rolling Trophy

The IIHR sports contingent won the overall Runner up position and the Krishnamurthy Rolling Trophy in the ICAR Inter Institutional Sports Meet held at Cochin from



February 23 - 27, 2010. Mr. B. Mallesh (First from left) won Gold Medal in Long Jump and Silver Medal in 100, 200 and 800m and Anchored in 4x100 m Relay winning Gold Medal. Ms. Meenakshi added two Silver medals from 100 & 200m sprints to the institute tally. The institute shuttle badminton team continued its dominance in south by winning the Gold Medal. The institute won Silver in Table Tennis and Volleyball (shooting), 1500m cycle race and Bronze Medal in 100m race for men.



Shuttle badminton team



4x100 m Relay team

### Scientific Advisory Committee of Hirehalli

The First Scientific Advisory Committee meeting of KVK, Hirehalli, was held on March 29, 2010. Dr.Sidhu.A.S., Director, IIHR, Bangalore, Dr.Prabhukumar, S. Zonal Project Director, Zone-VIII, Hebbal, Bangalore, Dr. R. S. Kulkarani, DE, UAS, Bangalore, Dr. Y. K. Kottigal, DE, UHS, Bagalkote and other SAC members participated in the meeting on March 29, 2010. The committee reviewed the on going programmes of the KVK and suggested the action plan for the KVK.

## 1. New Varieties/Hybrids/Selections

The following varieties/hybrids have been identified for release at the institute level;

● **CMS based F1 Chilli hybrid - MSH 206** has been developed by the institute. This is a CMS based F1 hybrid, fruits smooth and acceptable quality with medium pungency, yields 40-45 tones /ha fresh green or 5-5.5 t/ha red dry fruits in 180 days. The hybrid is moderately tolerant to viruses and suitable for fresh markets.



● **Arka Muthu- A new watermelon IIHR-81-1-3-4-6** is an advance line of watermelon, an individual plant selection from segregating population of Attur local collection. It has unique character of dwarf vine in nature (vine length (1.2mt), shorter internodal length, bush type and early maturing type (75-80 days) when compared to other commercial varieties (95-100 days). Line is uniformly stable having very good biomass.



● **Dianthus hybrid “Arka Tejas” (INGR No. 08065):** This hybrid is identified for its commercial potential as an ornamental pot plant. ‘Arka Tejas’ is an interspecific hybrid between carnation (*D. caryophyllus*) and *D. chinensis*, has attractive red coloured single whorl flowers, and has been



registered (INGR No. 08102) for its unique ornamental characters. The uniform hybrid plants having dark red flowers with contrasting white anthers and lush green foliage background makes it attractive pot plant for landscaping and interior arrangements.

● **Tuberose Hybrid Selection-1 Arka Nirantara:** This hybrid has higher spike yield, early and prolonged flowering period.

● **Gladiolus Hybrid Selection IIHR G-5** is a pedigree selection of the cross 74-39-1 X Tropic Seas and selected for its flower quality. Florets are purple violet (82.C) having red purple (72.B) margin with yellow green (154.D) blotch, florets are wavy and yields 1-2 marketable spikes/corm and named as **Arka Naveen**.



● **Hybrid Selection Gladiolus IIHR G-9 Arka Gold** Developed by hybridization followed by selection of Greenbay x Gold Medal 412. It is selected for its flower quality. Florets are yellow (4.C) having yellow (6.C) lower lip with red (39.A) blotch, florets slightly ruffled are wavy and yields 1-1.5 marketable spikes/corm.

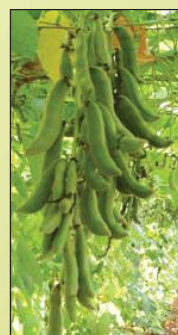
● **Gladiolus Hybrid Selection (IIHR-10) Arka Amar-** It is a pedigree selection of Watermelon Pink X Aarti. It is selected for its flower quality and *Fusarium* wilt resistance. Florets are red (46.D) with red (45.B) margin & white (155.B) on tepals with yellow blotch (2.CV). Florets wavy, and arranged in double rows. Yields 1-2 marketable spikes per corm



● **Velvet bean- (*Mucuna* sp.)** is an indigenous medicinal climber belonging to family Fabaceae, commonly known as Kewanch, and Cow itch. The seeds of Kewanch are a source of L-dopa (L-3, 4-dihydroxyphenylalanine), used in the treatment of



Arka Aswini



Arka Dhanwantari

Parkinson’s disease. In Ayurveda, it is regarded as nervine tonic, aphrodisiac and diuretic. Besides this, *Mucuna* is a green manure, cover crop and also used as food and fodder. Two elite lines for high yield, high L-dopa content and early maturity

have been identified for release at the institute level which lack itchy trichomes on pods and are suitable for commercial cultivation and have been christened as **Arka Dhanwantari** and **Arka Aswini**, the salient features are given below

### 2. Wild Edible Mushroom

The wild edible mushroom (*Calocybe sp.*) collected by the institute from Girnar forest fruited after application of casing layer. The sporophore was similar as the wild sample collected thus validating the genetically purity of the culture.

### 3. Alleviation of Chilling Injury and Extension of Storage Life of Sapota and Custard Apple

The storage life of sapota (cv. Cricket ball) could be extended to 3 weeks at 10°C without any chilling injury when the fruits were MA packed with micro perforated LD film. The fruits ripened normally within 3 days when they were shifted to ambient conditions for ripening. The storage life of custard apple fruits (cv. Balanagar) could be extended to 2 weeks at 12°C without any chilling injury when the fruits were MA packed with 100 gauges PE or PD-961 film. The fruits ripened normally within 4 days when they were shifted to ambient conditions for ripening.

### 4. Mango Fruit Fly Trap

Mango fruit fly and mango stone weevil are the two invisible pests of mango whose presence cannot be felt and hence management has been a difficult task for farmers. This is also a point of concern for exporters since they are quarantine pests.

These pests are causing nearly 20 to 60% losses to farmers in mango growing areas of south and north Karnataka. Keeping this in mind IIHR has adopted 500 acres of land in Kolar district and 500



acres of land in north Karnataka for conducting field level demonstrations in association with NABARD. The Department of Horticulture, Govt. of Karnataka, University of Horticultural Sciences, Bagalkot, KVK and BAIF, Bangalore are collaborating in this project to bring in a sea change in farmers practice. Presently, the farmers are experiencing huge losses due to fruit fly and this can be reduced effectively by using pheromone trap. The cost of pheromone traps is just Rs.350.00 only per acre with which the farmer can save nearly Rs.10, 000 worth mango fruits, making the technology cost effective. The farmers have shown keen interest and the technology is now being demonstrated on large areas. The process of impregnation of pheromone on to the lure trap has been developed by IIHR scientists and has filed for a patent through NRDC. The technology has been successfully commercialized and three entrepreneurs/ private companies have already purchased the technology and commercialized the same.

### Post Graduate Education

- Dr. H. S. Vageeshbabu, Senior Scientist has been recognized as PG Teacher at Kuvempu University, Shimoga, for guiding Ph. D. students in Biotechnology
- Mr. Prashanth Kumar, G. M. completed his dissertation entitled ‘Molecular fingerprinting of okra accessions by DNA markers’ for the M Sc (Biotechnology) degree of the University of Agricultural Sciences (UAS) Bangalore under the guidance of Dr T V Ananthanarayanan, Principal Scientist and Head, Division of PGR.

### Training of IIHR Scientists

#### Abroad

- Dr. Panneerselvam, Sr. Scientist was deputed to Australia for training in the area of Bio-remediation under Prof. Nanthi S.Bolan, Chair in Environmental Sciences (CFRA) & Dean of Post Graduate Studies, University of South Australia, from February 20- May 19, 2010 under HRD program of NAIP, Component – I.
- Dr. Prakash Patil, Sr. Scientist, PC Unit, AICRP(TF) was deputed to Malaysia to the Regional training workshop on “Methodology of genetic diversity assessment of cultivated and wild tropical fruit tree diversity” at Kuala Lumpur, Malaysia from March 3-6, 2010.

#### India

- Dr. S Ganeshan, Principal Scientist was deputed for the training on Intellectual Property Rights and Related WTO Issues from January 11-15, 2010, at Jaipur.
- Dr Lakshmana Reddy, D.C., Scientist, Division of Biotechnology was deputed for the training on “Molecular markers: discovery and the validation” at CPCRI, Kasargod from January 18- 22, 2010.
- The following Subject Matter Specialists of KVK, Hirehalli were deputed for the training on “Orientation programme on technology assessment refinement and demonstration”- at CARD-KVK, Pathanamthitta, Kerala from February 9-12, 2010.

Name	Subject Matter Specialist
Sri. K.N. Jagadish,	Subject Matter Specialist (Agril.Extension)
Sri P.R.Ramesh,	Subject Matter Specialist (Soil Science)
Sri B. Hanumanthe Gowda	Subject Matter Specialist (Plant Protection)
Ms. Radha R.Banakar	Subject Matter Specialist (Home Science)
Sri Somashekhar	Subject Matter Specialist (Plant Breeding)

- Mr. B. N. Ramachandrappa, AFAO was deputed for the training programme on Pension and other Retirement Benefits organised by ISTM, New Delhi from March 15-19, 2010.

### **Participation in Seminar / Symposia / Conference / Group Meeting etc.**

The following scientists of the institute were deputed for participation in various seminars / symposia / conferences etc during the period;

- Fourty two scientists from IIHR, Bangalore and its regional stations were deputed to participate in the XXVIII Group Meeting of AICRP on Vegetable Crops at IIHR, Bangalore from January 16-19, 2010.
- Fourty eight scientists from IIHR, Bangalore and its regional stations were deputed to participate in the National conference on production of quality seeds and planting material – health management in horticultural crops at New Delhi from March 11-14, 2010.
- Chithiraichelvan R., Principal Scientist & Head, Jalikop S.H., Sukhada Mohandas, Gopalakrishnan C., Principal Scientists, Sampath Kumar P. and Ravishankar K.V., Senior Scientists - XV Biennial Research Workers Group Meeting of All India Co-ordinated Research Project on Arid Zone Fruits” at College of Horticulture & Research Institute, Periyakulam, Tamil Nadu from January 25-28,, 2010.
- Girija Ganeshan, Principal Scientist - Interaction meeting cum - training for the vegetable growers of Malur Taluk on ‘Protected cultivation of vegetable crops” at the office of SADH, Malur, Kolar distric on March 3,,2010.
- Girija Ganeshan and Gopalakrishnan C. - Network project review meeting on “ORP on phytophthora, fusarium and ralstonia diseases of horticultural and field crops, at NASC Complex New Delhi, March 15 - 16, 2010.
- Krishna Reedy M, Principal Scientist and Sumangala H.P., Scientist - National Symposium on Conservation Horticulture – 2010, at Deharadun, Uttarakhand March 21-23, 2010.
- Krishna Reedy M., Principal Scientist and Ravishankar K.V., Sr. Scientist - Brain storming session on okra research in India: present status and future strategies, at IIVR, Varnasi, Uttar Pradesh January 3 - 4, 2010.
- Narayana C.K., Principal Scientist & Head, Debi Sharma, Soudamini Mohapatra, Principal Scientists and Tiwari R.B., Sr.Scientist. - Seminar on emerging trends in export of agro products-preparedness of India organized by APEDA at Bangalore on February 11, 2010.
- Narayana C.K., Principal Scientist & Head, PHT Division - National Seminar on Banana Processing and Value Addition held at Trichy on March 27-28, 2010.
- Prabhakar M. Principal Scientist - Meeting of Technical Committee of Horticulture on Watershed Development, Govt. of Karnataka on at Commissioners Office, Karnataka, Watershed Development Department, Bangalore on March 19, 2010 .
- Prabhakar M.,Principal Scientist - IFFCO-KISAN- Sanchar mobile voice messaging meeting at IIHR, Bangalore on January 11, 2010.
- Ramachandran.N, Chowdappa. P and Krishna Reddy.M Principal Scientists - National Consultative Meeting on Disease Diagnostics for Horticultural Crops, at NRC, Banana, Trichy, Tamil Nadu January 22 - 24, 2010.
- Reddy T.M., Scientist (SS) (Extesnion) - Meeting on “Production of Pepper and Coorg mandarin grafts.”on 25-02-2010 organised by Zilla Panchayat, and Watershed Development Authority, Madikeri at the office of CEO, Madikeri
- Debi Sharma, Soudamini Mohapatra and Ahuja A.K. Principal Scientists - XVIII Annual Workshop of “All India Network Project on Pesticide Residues”on held Feb, 17, 2010 and Fourth Workshop of the Central Sector Scheme “Monitoring of Pesticide Residues at National Level” held on Feb, 18-19, 2010 at Anand Agriculture University, Anand, Gujarat.
- Tejaswini, Principal Scientist - Workshop on ‘Development of Technology Commercialisation and Transfer Specialists’, at Bangalore, March 11-13, 2010.
- Tiwari R.B.,Sr. Scientist - Workshop on Entrepreneurship development for formulated and functional foods using extrusion-cooking at the Soybean Processing and Utilization Centre (SPU), CIAE, Bhopal on March 08-13, 2010 .
- Upreti K.K - CPCSEA Workshop for IAEC member at Indian Institute of Sciences, Bangalore
- Vageshbabu H. S, Sr. Scientist - National Consultation Seminar on Bt brinjal, convened by Shri Jairam Ramesh Honourable Union Minister of Environment and Forests, GOI, on 06.02.2010, at Bangalore.
- Vasantha Kumar T.Principal Scientist and Abdul Kareem - National Seminar on Medicinal Plants organized by NEDFi at Meghalaya on February 9-10, 2010.

## TRANSFER OF TECHNOLOGY

### Training

The following training programmes were conducted during the period at IIHR Hessaraghatta, Bangalore.

#### TTC Training Programmes

Sl. No.	Name of the programme	Date	No. of participants	Revenue Generated (Rs.)
1.	Horticulture Technology for Subject Matter Specialist of KVK, Hirehalli, Tumkur	4-8 Jan., 2010	8	-
2.	Mushroom Production Technology	20- 28 January, 2010	9	85,000-00
3.	Post Harvest Management in Horticultural Crops (Kerala)	2-11 Feb., 2010	10	95,400.00
4.	Advances in Production and Post Harvest Management of Mango (Karnataka)	16 - 20 Feb., 2010	20	70,000.00
5.	Production Technology of Vegetables (Kerala)	11 - 12 March, 2010	12	8,000-00
6.	Entrepreneurship development through spawn production	4- 8 Jan., 2010		28,750.00

#### Other Training Programmes

1. Dr. G. Selvakumar, imparted the training on 'Mass production of bio-fertilizers and Plant Growth Promoting Rhizobacteria (PGPR)' from 22-23 March 2010 to Dr. M.P. Singh, Technical Officer, Indian Institute of Pulses Research, Kanpur at the Soil Chemistry/Microbiology Lab of IIHR.

2. The following training programmes were conducted by CHES Chettalli

- Dr.K.Shivaramu, Senior Scientist and In-charge Head, Dr.T.Sakthivel, Senior Scientist (Hort.) and Shri. P.M.Shivarama, T-O (T-5) (Field), CHES, Chettalli jointly conducted a training programme on "Citrus cultivation and plant protection aspects" under National Horticulture Mission programme on 23-03-2010 at CHES, Chettalli to 50 progressive growers from Kodaikanal, and Tamilnadu.
- Dr.K.Shivaramu, Senior Scientist and Head In-charge and Smt. P.B.Swathy, Senior Technical Assistant, CHES, Chettalli conducted training programmes on Vermicomposting and Apiculture and Mushroom cultivation on 18-03-2010 at Thalthar Sheththalli and on 24-03-2010 at Shanivarasantha in Somwarpet Taluk, Kodagu to 25 members of Stri-shakthi and self help women groups organized by Coffee Board, Somwarpet.

#### Farmer's Meet / Interactive Meet / Field Days

- The CHES, Chettalli participated in one day workshop on "Good Agricultural Practices and Good Marketing Practices for Spices" in the series of "Banuli Krishi Belaku" programmes organized by APMC, Mysore, Akashavani, Mysore and Madikeri at Kaveri Kalashetra on 01-02-2010. The meet was organized for the benefit of farmers in

association with Akashavani, Mysore and Madikeri, Webcity, Mandya, Krishi Vigyan Kendra, V.C Farm, Mandya, Vikasana Samsthae, Mandya, Department of Agriculture, Mandya and Department of Information and Publicity, Mysore to enable them about organic practices. About 300 farmers attended the meet, during which Dr. K. Shivaramu delivered a talk on "Vermicomposting" and Smt. P .B. Swathy, Senior Technical Assistant about "Processing of Fruits".

#### Field Demonstrations

The following field demonstrations were laid out in the farmer's fields on the varieties /technologies developed by the institute.

Sl. No.	Title of the demonstration	Location	No.of demonstrations
1.	Improved variety on French bean Arka Anoop	Doddaballapura, Hirehalli	2
2.	IPM in Tomato	Agrahra, Bangalore rural	1
	Management of collar rot in Peas	Pemmanahalli, Hirehalli	2
3	Safe & quality production of coloured capsicum under shade net/polyhouse	Bangalore, Kolar, Ramanagar and Mysore Districts	8(10 Acs)
4	IIHR Chilli Hybrid	Mysore, Mandya Districts	06(10 Acs)
5	Cultivation of crossandra variety Arka Ambara	Bangalore, Mysore Districts	02(1½ Acs)

## Field Visit

- Dr. M. Edward Raja, Head, Division of Soil Science and Agricultural Chemistry and Dr. M. Krishna Reddy, PS (Virologist), Division of Plant Pathology visited the orchards of Kuppam taluk of Chittoor district, Andhra Pradesh on March 9, 2010 to offer advisory services to the farmers. Severe boron deficiency was noticed in papaya, banana, coconut, beans. The farmers were advised on corrective measures for boron. The technology for correction of boron deficiency like soil and foliar application, nursery management and crop rotation were explained to them.
- Dr. K. Madhavi Reddy visited Malavalli in Mandya Dist. and Dibbur in Mysore Dist. to inspect the chilli growing plots where wilt is observed by the farmers. It was diagnosed as *Rhizoctonia* wilt

## TV and Radio Programme

The following radio /T.V programmes were given by the staff of IIHR and its regional stations.

### Radio Talks

Sl. No.	Topic	Resource person	Date
1.	Passion fruit Cultivation	Dr.T.M. Reddy	26.01.2010
2.	Fruit processing	Smt. P.B. Swathy	04.02.2010

### T.V programme

Sl. No.	Topic	Resource person	Date of telecast
1.	Organic in cabbage	Dr.M.Prabhakar	08.02.2010
2.	Chilli varieties released from IIHR	Dr.K. Madhavi Reddy	06.03.2010

## Exhibitions

The main institute at Hessaraghatta and its regional stations participated in various exhibitions organized during the period;

1. XVIII Group Meeting of AICRP on Vegetable Crops at IIHR, Bangalore from 16-18 January, 2010. IIHR, Hessaraghatta, CHES, Chettalli and KVK, Hirehalli participated.
2. 10<sup>th</sup> Rashtriya Kisan Mela on Citrus held at NRCC, Nagpur from February 21-22, 2010. IIHR, Hessaraghatta, Bangalore and CHES, Chettalli participated. The CHES exhibits viz., Pummelo and Grape fruit were judged as best and won awards.
3. National Conference on Production of Quality Seeds and Planting Material in Horticultural Crops at NASC New Delhi, March 11-14, 2010. IIHR, Hessaraghatta, CHES, Chettalli and KVK, Hirehalli participated

4. Media Meet and Review Meeting at IIHR, Bangalore from 26-27 March, 2010. IIHR, Hessaraghatta, CHES, Chettalli and KVK, Hirehalli participated.

## Visitors

### IIHR, Hessaraghatta

During the period 2144 farmers in 51 groups from different parts of the nation visited the institute.

### CHES, Chettalli

1. Mr. Mumez Frangoing, 31270, Cugmmue (France) on 05-02-2010.
2. Mr. Boudet Daniel, 09140, 6VST, France on 05-02-2010.
3. Dr. Ranabir Singh, Principal Scientist, NBPGR, Pusa Campus, New Delhi on 08-02-2010.

### KVK, Hirehalli

1. Dr. Umesh Srivastava, ADG, (H- II), ICAR, New Delhi on 19-01-2010.
2. Dr. K.L. Chadha, Former DDG (Hort.) and Chairman RAC and Dr. G. Trivedi, Dr. I. Iruappan, Dr. A. N. Maurya, Dr. A. K. Singh, Dr. D. S. Khurdiya and Dr. A. Karianna, Members RAC, IIHR, Bangalore, Dr. A. S. Sidhu, Director, IIHR, Bangalore and Dr. M. R. Hegde Member Secretary, RAC, IIHR, Bangalore on 25-02-2010

## PUBLICATIONS

### Research Papers

1. Ahuja A.K. and Soudamini Mohapatra., 2009. Persistence of propineb residues in papaya, *Pest Management in Horticultural Ecosystems*, **15** (2) : 131-134.
2. Bhanuprakash. K., 2010. Seed quality enhancement through seed priming *Souvenir, National Conference on Production of Quality Seed and Planting Material -Health Management in Horticultural Crops*, March 11-14, 2010, New Delhi
3. Bhatt, R.M., Srinivasa Rao, N.K., Upreti, K.K. and Jyothi Lakshmi., M. 2009. Hormonal activity in tomato flowers in relation to their abscission under water stress. *Indian Journal of Plant Physiology*, **14** (4) 492-495.
4. Bhatt, R.M., Srinivasa Rao, N.K., Upreti, K.K. and Shobha, H.S., 2009. Floral abscission and changes in sucrose phosphate synthase and invertase activities in water deficient tomato. *Indian Journal of Plant Physiology*, **14** (1 (N.S.)), 370-376.
5. Biswas P, Chandra S., Kumar R., Nagchan S.V and Rosa D., 2010. First record of *Rhizoctonia solani* AG-2-1 on *Ctenanthe oppenheimiana* in India, *Plant Disease*, **94**(1):126
6. Gopal K., Krishna Reddy, M., Reddy, D.V.R., and



- Muniappa, V. (2010). Transmission of peanut yellow spot virus (PYSV) by thrips, *Scirtothrips dorsalis* Hood in groundnut, *Archives of Phytopathology and Plant Protection*, 43: 421-429.
7. Jalikop, S.H., 2010. Inheritance of foliage characteristics in (*Annonacherimola* Mil × *A. squamosa* L.) × *A. reticulata* L. hybrids, *Euphytica*, 171:175-180.
  8. Kamala Jayanthi, P.D., Verghese A. and Nagaraju D.K., 2009. Studies on feeding preference of adult fruit sucking moth, *Eudocima (Othreis) materna* (L.) - A clue for devising trap cropping strategies. *Pest Management in Horticultural Ecosystems*, 15 (2): 107-103.
  9. Krishna Kumar, N. K., Vageeshbabu Hanur S. and Jhansi Rani, B., 2009. Proceedings-National group meeting on application of bioinformatics in pest and disease management., *Pest Management in Horticultural Ecosystems*, 15: 172-178.
  10. Krishna Reddy, M., Venkataravanappa, V., Madhuvanathi, B. and Jalali, S., 2010. Molecular characterization of begomoviruses associated with papaya leaf curl disease in India, *Acta Hort.* (ISHS) 851: 465-472
  11. Munishekara Reddy, T. and Narayana Swamy, B. K., 2009. Planning, designing and methodology adopted in training programmes organized by ICAR institutes, *Mysore J. Agri. Sci.*, 43(4): 783-786.
  12. Naik L.B., Yogeesh H. S., Bhanuprakash K. and Padmini K., 2010. Production technology in vegetables: distinct in seed crop from fresh market crop, *Souvenir '10 of Indian Seed Congress*, National Seed Association of India and Seeds for Global Security, pp73-76.
  13. Rao V. K. Rajasekharan, P. E., Roy T. K. and Vasantha Kumar T., 2009. Comparison of essential oil components in rhizomes and *in-vitro* regenerated whole plants of *Kaempferia galanga* L., *Journal of Medicinal and Aromatic Plant Sciences*, 31 (4): 326-329.
  14. Shashikumar K. T., Pitchaimuthu M. and Rawal R. D., 2010. Generation mean analysis of resistance to downy mildew in adult muskmelon plants, *Euphytica* 10.1007/s10681-010-0132-0 (on line)
  15. Shilpashree, Y.P. and Kotur, S.C., 2009. Urease and dehydrogenase activity as related to physico-chemical properties of some soils of Bangalore region. *Mysore Journal of Agricultural Sciences*. 43: 803-4.
  16. Surekha, A, Krishna Reddy, M. and Jain, R.K., 2009. Production of polyclonal antibodies using recombinant coat protein of papaya ring spot virus and their use in immunodiagnosis, *J. Plant Biochemistry & Biotechnology*, 18: 175-177.
  17. Varalakshmi, B., Girija Ganeshan., Gopalakrishnan, C., Pushpalatha, A. and Chethana B.S., 2009. Identification of sources of resistance to alternaria leaf spot (*Alternaria brassicola*), black rot (*Xanthomonas campestris*) and downy mildew (*Peronospora parasitica*) in cauliflower (*Brassica oleracea*), *Indian Journal of Agricultural Sciences*, 79(6): 482 – 484.
  18. Verghese, A., Mahiba Helen, Kamala Jayanthi P.D. and Uma. M.S., 2009. Extended range of *Craspedoxantha indica* Zaka-ur-Rab (Diptera : Tephritidae) to Karnataka, South India. *Pest Management in Horticultural Ecosystems*, 15 (2): 170-171.

## Popular Articles

1. Chowdappa, P., Girija Ganeshan and Gopalakrishnan C., 2009. Identification and management foliar diseases of tomato from the seed and plant, *Vatica*, (Autumn 2009) (3): 4-11.
2. Debi Sharma, S. Mohapatra and, Ahuja A.K., (2010) Mitigating pesticide residues in horticultural produce., *Lifestyle Horticulture- Delhi Garden Magazine*, Horticulture Show, 48: 79-80, Publ. Delhi Agri-horticultural Society.
3. Doreyappa Gowda, I.N, 2010. 'Hannu Mattu Tarakarigala Samskarane' (Kannada) Publ. by Registrar, Karnataka State Open University, Manasagangotri, Mysore-570006. 12.
4. Soudamini Mohapatra, A. K. Ahuja and Debi Sharma., 2010. Pesticide Residues in Mango, Extension Folder No 64-09, ATIC Series 24-09, IIHR, Bangalore
5. Hima Bindu K., 2010. Pharmaceutical molecules from medicinal plants. *Lifestyle Horticulture*, 48: 52-57. Delhi Agri- Horticultural Society, Division of Floriculture and Landscaping, IARI, New Delhi 110 012
6. Krishna Reddy, M., 2010. Cleaning and diagnostics as an aid in improving the quality of seed and planting material, *Indian Horticulture*, 55 (2):50-55.
7. Manjunatha Rao T., and Janakiram T., 2009. Arka Ravi chrysanthemum to enrich flower basket, *Indian Horticulture*, 54:10-11.
8. Meera Pandey and Veena S.S., 2010. Medicinally important mushrooms. *Lifestyle Horticultur*, Ed. T. Janakiram, K.V. Prasad, K.P. Singh & Kishen Swaroop, Vol 48, page-118-124.
9. Mishra, P.K., Selvakumar, G. and Bisht, J.K., 2010. Enhance the chilling tolerance of plants with the use of plant growth promoting bacteria (PGPB). *Indian Farmers Digest*, Jan. issue, 18-24.
10. Nair Sujatha A., Sujatha K. and Rajiv Kumar. 2010. Production trends in traditional flowers. Souvenir (Ed. Y.C Gupta and others). National Symposium on Lifestyle Floriculture: Challenges and Opportunities, March 19-21, 2010, Y.S. Parmar University of Horticulture & Forestry, Solan, pp. 91-93.
11. Narayana C.K. and Tiwari R.B., 2010. IIHR - Post Harvest Technology at a Glance, A Technical Folder, Publ. IIHR, Bangalore

12. Narayana C.K., 2010. Processing and value addition in banana, Souvenir , National Seminar on Banana Processing and Value Addition Trichy during March27 – 28, 2010.
13. Pitchaimuthu M. and Varalakshmi B. , 2009. Cultivation of ridge gourd. IIHR Extension folder No.62-09 (ATIC Series: 22-09)
14. Rajiv Kumar., 2010. Interiorscaping for changing lifestyle, *Lifestyle Horticulture*, Delhi Garden Magazine (Ed. T. Janakiram, K.V. Prasad, Kunwar Pal Singh, D.V.S. Raju and Kisahn Swaroop). Publ. Agri-Horticultural Society, Division of Floriculture & Landscaping, IARI, Pusa, New Delhi.p.p. 110- 1117.
15. Sadashiva A.T, Veere Gowda R., Madhavi Reddy K., Aghora T.S., Singh T.H., Varalakshmi B., Pitchiamithu M., and Srinivasa Rao E., 2010. Hybrids seed production in vegetable crops. Souvenir “National Conference on Production of Quality Seeds and Planting Material Health Management in Horticultural Crops at New Delhi, March 11-14, 2010.
16. Suryanarayana MA, Hima Bindu K. and Vasantha Kumar T., (2010) Anola a versatile medicinal fruit for changing life style, *Lifestyle Horticulture*, **48**:98-104.Delhi Agri-Horticultural Society, Division of Floriculture and Landscaping, IARI, New Delhi 110 012.
17. Varalakshmi L.R., 2010. Mitigating heavy metal toxicity in peri-urban horticultural crops, *Lifestyle Horticulture*, - *Delhi Garden Magazine*, Horticulture Show, 48: 81-85, Publ. Delhi Agri-horticultural Society.
18. Varalakshmi B., 2009. Cauliflower cultivation. IIHR Extension folder No.63-09 (ATIC Series: 23-09)

### Books/Chapters in Book

1. Girija Ganesan, Chowdappa P., Krishnareddy, M., and Gopal Krishnan C., 2010. Vegetable crop diseases and management. Technical bulletin, Publ. Director, IIHR, Bangalore, 35p.
2. Gopalakrishnan C., Saxena A.K., Ramachandran N. , Benagi V.I. and Ravi Kumar M. R., 2009. Management of bacterial blight in pomegranate (A training manual in Kannada titled – “Dalimbe beleya dundanu angamari rogada parikshshane mathu adara nirvahana kramagalu”) a joint publication of NRC Pomegranate, Solan, UAS, Dharwad and IIHR, Bangalore.
3. Krishna Kumar, N. K., Vageeshbabu S. H. and Jhansi Rani B. , 2009. Proceedings of national group meeting on application of bioinformatics in pest and disease management. *Pest Management in Horticultural Ecosystems*, 15 (2): 172-178.
4. Krishna Reddy, M., 2010. Climate change and virus diseases of horticultural crops. **In**: Challenges of climate

change – Indian Horticulture. PP. 153-165. (Eds) H.P.Singh J.P. Singh, and S.S.Lal. Westville Publishing house, New Delhi, India.

5. Laxman, R.H., Shivashankara, K.S. and Srinivasa Rao, N.K., (2010). An assessment of potential impacts of climate change on fruit crops. **In**: Challenges of climate change-Indian Horticulture. Eds H.P. Singh, J.P. Singh and S.S. Lal, Westville Publishing House, New Delhi, pp 23-30.
6. Srinivasa Rao, N.K., Laxman, R.H. and Bhatt, R.M., (2010). Impact of climate change on vegetable crops. **In**: Eds. H.P. Singh, J.P. Singh and S.S. Lal, Westville Publishing House, New Delhi, pp 113-123.
7. Vageeshbabu Hanur S., 2010. Advances in stem cell research in plants. **In**: Genetic Engineering: A new hope for crop production and improvement (C.P.Malik,ed.), Aavishkar Publishers & Distributors, Jaipur : 289-321.

### PAPERS PRESENTED IN SEMINAR/ SYMPOSIA/CONFERENCE, etc

1. **Brain Storming Session on okra at Indian Institute of Vegetable Crops Research, Varanasi, January, 3 - 4, 2010.**
  - Ravishankar K.V. - Marker assisted breeding in okra.
2. **Plant and Animal Genome Conference -2010 (PAG - XVIII), January 9-13, 2010 San Diego, California, USA.,**
  - Sadashiva, A.T., Krishnareddy, M., Ravishankar, K.V., Singh, T.H., Manjunath, B., Swarnalatha, P., Deepa, J., Sudarshini, K., and Puspapalatha, R. - Breeding for begomovirus resistance in tomato (*Solanum*
3. **Brain Storming Session on Marker assisted Selection in Vegetable Crops as a part of AICRP Workshop on Vegetables, Jan 16,2010, IIHR, Bangalore .**
  - Aswath. C. - Basics of molecular markers
  - Ravishankar K.V. - Markers assisted selection at IIHR
4. **Indo-French symposium on Genomics and biotechnology on fruit quality: recent advances, January 18-20, 2010, Lucknow.**
  - Aswath C. - Identification and stability of QTLS for fruit quality traits in guava (*Psidium guajava* L.).
  - Ravishankar K.V. - Development of microsatellite markers from mango (*Mangifera indica* L.) and genetic diversity analysis of mango cultivars from southern and western India
5. **National Consultative Meeting on Disease Diagnostics for Horticultural Crops, January 22-24, 2010, NRC, Banana, Trichy, Tamil Nadu.**
  - Chowdappa. P. - Diagnostics developments, constraints and future prospects for foliar pathogens

- Krishnareddy, M. - Development and use of diagnostics in vegetable and ornamental crops.
  - Krishnareddy, M. - Accreditation facility for virus indexing in horticultural crops.
  - Ramachandran, N - Disease diagnostics in vegetable crops – Future research needs.
- 6. International Conference on Medicinal Plants and Herbal drugs- Challenges and Opportunities in Cultivation, Sustainable Utilization and Conservation (ICMPHD) 2010, March 4-6, 2010 at Department of Botany, Pachaiyappa's College, Chennai-600030**
- Vasantha Kumar T. - Medicinal plants-Challenges and opportunities.
- 7. National conference on Production of quality seeds and planting material – health management in horticultural crops, March 11-14, 2010, New Delhi.**
- Aswath C., - Genetic engineering for improved production of planting material.
  - Bhanuprakash. K., Yogeesh H. S. and Sowmya K. J. - Studies on seed germination and morphology in important medicinal species.
  - Chithiraichelvan R. - Recent developments in rootstock-scion interaction in fruit crops.
  - Chowdappa, P. - Detection of seed borne infections: Problems and perspectives
  - Chowdappa. P, Chethana,C.S, Arvinda Narayana.V, Reddi bhargavi. B, Sandya.H, Madura.S, Padma Priya.H.V, Nirmal Kumar.B.J, Mohan Kumar.S.P, Thilagar.G, and Girija Ganeshan and Ramachandran N. - A simple PCR based assay for rapid identification of foliar fungal pathogens in infected plant material.
  - Dinesh.M.R. - Production of Quality Seeds of Papaya.
  - Doijode S.D. - Over view of storage of quality seeds in horticultural crops for present and future use
  - Girija Ganeshan - Management of seedling diseases and production of healthy transplants in commercial vegetable nurseries.
  - Gopalakrishnan,C. and Saxena A.K. - Production of disease free planting material of pomegranate .
  - Hima Bindu. K., Bhanu Prakash K. and Vasantha Kumar T. - Preliminary field and seed standards for velvet bean (*Mucuna pruriens* var *utilis*).
  - Krishnareddy M., Samuel, D.K., Lakshmi Devi, V., and Arathi, K. - Recent advances in production of disease free planting material in vegetatively propagated horticultural crops.
  - Madhavi Reddy K. - Use of male sterile systems in hybrid seed production of chilli (*Capsicum annuum* L.)
  - Murthy B.N.S. - Genotypic influence on runner and plug production in Strawberry (*Fragaria × ananassa* Duch.).
  - Naik L.B.,H.S.Yogeesh,H.S.,K.Bhanuprakash and K.Padmini - Nutrient and water management for quality seed production.
  - Padmini,K, Yogeesh H.S., Naik L.B. and Sadashiva A. T. - Effect of flower retention in crossing on hybrid seed yield in tomato (*Solanum lycopersicum* L)) cv Arka Abhijit
  - Patil Manjunath S., Aswath C. and Janakiram T. - Production of disease-free planting material in anthurium (*Anthurium andreaeanum* Lind (Andre) ) using Line X Tester analysis.
  - Prakash.G.S. - Current status of seeds and planting materials – National and International scenario.
  - Rajiv Kumar and Bidyut C. Deka. - Effect of benzyl amino purine (BAP) on growth, flowering and corm multiplication of gladiolus ‘Candyman’.
  - Ramachandran, N. - Role of healthy planting material (ornamentals) in protected cultivation.
  - Reddy Y.T.N. - Influence of pruning time and intensity on scion production and graft success of Alphonso mango through pelleting in onion and carrot.
  - Sakthivel, T., Ravisankar, H., Krishnareddy, M., Samuel, D.K., Pillai, G.K., Karunakaran, G., and Ragupathy, H.B - Identification of superior clones for production of quality planting material of Coorg mandarin (*Citrus reticulata* Blanco)
  - Sakthivel.T., Ravishankar. H., Krishna Reddy M, Samuel. D. K., Pillai.G. K., Karunakaran.G., and Raghupathi. H. B., - Identification of superior clones for production of quality planting material of Coorg mandarin (*Citrus verticulata* Blanco).
  - Senthil Kumaran and Meera Pandey - System management in mushroom spawn production.
  - Sukhada Mohandas - Large scale propagation of banana and perennial plants through development of EC
  - Sumangala H. P. - Multiplication of indigenous lawn grass (*Lepturus radicans*) for landscaping
  - Vasantha Kumar T., Hima Bindu K. and Sukanya D. H. - Recent advances in development of improved varieties in medicinal and aromatic crops.
  - Yogeesh,H.S, Naik L.B. ,Bhanuprakash K and.Padmini K. - Value addition to seeds .

**8. First Annual Conference on Recent Trends in Viral Disease Problems and Management (VIROCON-2010), March 18-20th, 2010, Indian Virological Society, S.V. University, Tirupati, Andhra Pradesh.**

- Venkataravanappa, V., Krishnareddy, M., Swaranalatha, P. and Salil Jalai - Whitefly detection, transmission and diversity of satellite DNA associated with bhendi yellow vein mosaic virus infecting okra in India.

**9. National Symposium on Conservation Horticulture – 2010, March 21-23, 2010, Deharadun, Uttarakhand.**

- Krishnareddy, M. - Technological interventions in plant virus disease management in subtropical fruits.
- Sumangala. H.P. - Interior and exterior landscaping for better environment.

**10. Brainstorming Seminar on Application of Nanotechnology in Agricultural Sciences, March 27-28, 2010, CIFE, Mumbai, jointly organized by CIFE, Mumbai and IISR, Kozhikode**

- Lakshmana Reddy, D.C. - Development of nanobiosensors to detect spoilage and pathogen in packaged foods
- Vageeshbabu H.S. - Pest management in horticulture using novel biopesticide nanoparticle formulations
- Samuel, D.K. - Quantum dots for multiplex detection of plant viral infections for indexing of quality planting material.

**Lectures Delivered**

- Debi Sharma delivered a lecture on 'Detection and management of pesticide residues in fruits and vegetable' in the session 'Pesticides and human health' during the Fifth International Conference on Children's Health and the Environment, organized by INCHEs, Amsterdam and H.P Foundation Bangalore on Feb 3., 2010 at Hotel Atria, Bangalore.
- Edward Raja M., Head, Division of Soil Science and Agriculture Chemistry delivered a lecture on 'Micronutrient management in horticultural crops in changing scenario' to the executives of fertilizer manufacturers (MFC, IFFCO, Coromandel, etc.) in the Workshop on "Critical role and importance of secondary and micronutrients in enhancing the productivity" organized by Fertilizer Association of India – Southern Region, Chennai at Hotel Citadel, Bengaluru on February 22, 2010.
- Girija Ganeshan, Principal Scientist delivered a special lecture on 'Diagnostics and management of field diseases caused by fungal, bacterial and viruses in vegetable crops' on February 18, 2010 to the Sales and Marketing Executives of Indo American Hybrid seeds at Bangalore.
- Madhavi Reddy K. delivered two lectures viz., Recent breeding approaches in chilli & capsicum and. Recent

breeding approaches in tomato during the Winter School on 'Architectural Engineering of Vegetable Crops and their Management' organized by Division of Vegetable Crops, PAU, Ludhiana on Feb. 17, 2010.

- Meera Pandey delivered a lecture at one day workshop on "Current trends on mushroom technology on March 10, 2010 at Acharya's Bangalore B- School, Bangalore
- Prabhakar M.. delivered two lectures viz., Organic farming in vegetable crops and Protected cultivation of vegetables during the Winter School on Architectural Engineering of Vegetable Crops and their Management' organized by Division of Vegetable Crops, PAU, Ludhiana on Feb. 17, 2010.
- Reddy Y.T.N., Principal Scientist delivered a talk on "Banana and papaya production technology" on 26.2.2010 to the growers and officials of M/s. Heritage Foods Pvt. Ltd., Integrated Pack House, Kuppam, Andhra Pradesh.
- Reddy Y.T.N., Principal Scientist delivered a talk on "Flowering and use of growth regulators in mango" organized by Dept. of Pomology on 27.1.2010 to mango growers under the NAIP training programme at TNAU, Coimbatore.
- Reddy Y.T.N., Principal Scientist delivered talk on "Good agricultural practices and production technology" to 250 mango growers organized by Karnataka State Marketing Board, Govt. of Karnataka. on 29.1.2010 at Ramanagaram, Karnataka.
- Sudhakar Rao D.V., Senior Scientist, attended the "3rd Inter State Horticulture Fair Sangam-2010 Orange Festival organized by National Horticultural Board, Ministry of Agriculture, Government of India, and delivered a talk on "Post harvest management of citrus fruits"
- Upreti K.K. delivered a talk on "Food adulteration" in Hindi during Hindi Workshop organized at Centre for Development of Telematics, Bangalore on 11/3/2010.
- Vageeshbabu H. S., Senior Scientist delivered an invited keynote lecture as subject expert and Convenor on "OMICS" in the National Seminar on "Recent Trends in Molecular Biotechniques" organized by Department of Biotechnology, AVS College of Arts & Science, Salem, on January 24, 2010 and also acted as judge to evaluate poster and face-painting competition.

**HONOURS/RECOGNITION**

- Dr. M. Krishna Reddy, Principal Scientist was awarded Fellow of Indian Society of Horticultural Research and Development, during the National Symposium on Conservation Horticulture – 2010, March 21-23, 2010, at Deharadun, Uttarakhand.
- Dr.K.P. Gopalakrishna Rao, Principal Scientist (Hort.) received I Prize from the Karnataka State Agricultural Marketing Board, Bangalore for his article entitled

“*Tarakarigala koylotha nirvahane mattu dastau*” (Kannada) published in “*Krishi Pete*” Vol.34(10):P14-16.

- Dr D.V. Sudhakar Rao, Senior Scientist, has been awarded first prize for the popular article on “*Dalimbae Hannina koyilina- nantharada vyavastae*” (Kannada), published in November 2008 issue of *Krishi pete*
- Dr. T.V. Ananthanarayanan, Principal Scientist and Head, Division of P.G.R. has been nominated by the ICAR to serve as a member of Institute Management Committee of National Bureau of Plant Genetic Resources (NBPGR), New Delhi
- Dr. Girija Ganeshan, Principal Scientist has been nominated as Member, Research Advisory Committee of Central Sericulture Research and Training Institute, Mysore.
- Dr. T. Vasantha Kumar was nominated as Member of a Committee to strengthen OUAT-AINP on betel vine by ICAR
- Dr J.B. Mythili, Principal Scientist, Division of Biotechnology has been nominated as an expert member of Project Monitoring Committee of Small Business Innovation Research initiative (SBIRI) Project of DBT w.e.f January, 2010.
- Dr. I.N. Doreyappa Gowda, Principal Scientist, Division of Post Harvest Technology has been recognized by the University of Horticultural Sciences, Bagalkot as the External expert in the field of Post Harvest Technology for Technical Committee of the University for formulating research programmes on PHT.
- Dr. C.K. Narayana, Principal Scientist & Head, has been identified as Unit Writer by the Indira Gandhi National Open University (IGNOU), New Delhi for writing an unit on “Post Harvest Management of fruits and vegetables” for the one year PG Diploma in Food Technology Programme.
- Dr. K.P. Gopalakrishna Rao, Principal Scientist (Hort.) has been identified as Unit Writer by the Indira Gandhi National Open University (IGNOU), New Delhi for writing an unit on “Minimal Processing” for the one year PG Diploma in Food Technology Programme.
- Dr D.V. Sudhakar Rao, Senior Scientist, has been identified as one of the Unit Writer on Post Harvest Management of fruits and vegetables under the specialized course of Fruit and Vegetable Technology by the School of Agriculture, IGNOU (Indira Gandhi National Open University) for their one year PG Diploma in Food Technology.
- Dr. N. Ramachandran, acted as Chairman for the technical session on Plant Pathology during the XXVIII Group Meeting of the All India Coordinated Research Project on Vegetable Crops, January 16 – 19, 2010 at IIHR.
- Dr. C.K. Narayana, Principal Scientist & Head, chaired a Technical Session on “Banana Processing and Value

Addition” in the National Seminar on Banana Processing and Value Addition held at Vasavi Mahal, Trichy from March 27- 28, 2010.

- Dr. S. Ganeshan, Principal Scientist acted as Convener for Poster sessions facilitation and the session on ‘Regulations, Policy Initiatives and Partnership for Enhanced Availability of Seed and Planting Material’ in The National Conference on Production of Quality Seeds and Planting Material – Health Management in Horticultural Crops at NASC complex, ICAR, New Delhi, March 11-14, 2010.
- Dr. T. Vasantha Kumar, Principal Scientist, acted as a Convener for the Session on Medicinal and Aromatic Plants at the National Conference on Production of Quality Seeds and planting Material– Health Management in Horticultural Crops, March 11-14, 2010 New Delhi.
- Dr. Girija Ganeshan Principal Scientist acted as Judge in the panel, for selection of Best Poster Papers during the National Conference on Production of Quality Seeds and Planting Materials, March 11–14, 2010 at NASC, New Delhi.
- Dr. M. Krishna Reddy, Principal Scientist acted as Co-chairmen for Session VIII on disease management during the XXVIII Group Meeting of AICRP on Vegetable Crops, January 16-19, 2010, at IIHR, Bangalore, Karnataka.
- Dr. M. Krishna Reddy, Principal Scientist acted as Co-chairmen for Session VI on okra resistance breeding during the Brain storming session on okra research in India: present status and future strategies, January 3-4, 2010 at IIVR, Varanasi, Uttar Pradesh.

## PERSONALIA

### New Entrants

- 1) Sh. Hemanth Kumar has been appointed for the post of T-1 (Driver) (LMV+ HMV) at KVK, Hirehalli w.e.f. 04.01.2010.
- 2) Ms. Veda Kurnalli has been appointed to the post of Steno Gr. III at KVK, Hirehalli w.e.f. 17.02.2010.

### Promotions

#### Technical

1. Sh. C. Lokesh, T-4 (FT) has been promoted to the next higher grade of T-5 (TO) (FT) w.e.f. 21.05.2009.
2. Sh. H.M. Puttamada Shetty, T-3 (FT) has been promoted to the next higher grade of T-4 (FT) w.e.f. 01.07.2009.
3. Sh. N. Jayaramaiah, T-3 (FT) has been promoted to the next higher grade of T-4 (FT) w.e.f. 01.07.2009.
4. Sh. T.S. Rajanna, T-3 (FT) has been promoted to the next higher grade of T-4 (FT) w.e.f. 21.05.2009.

5. Sh. A.D.D.V.S. Nageswara Rao, T-5 (TO) has been promoted to the next higher grade of T-6 (TO) (LT) w.e.f. 01.07.2009.
6. Sh. B.E. Umashankar, T-5 (TO) has been promoted to the next higher grade of T-6 (TO) (LT) w.e.f. 01.07.2009.
7. Smt. Jyothi V. Divakar, T-4 (LT) has been promoted to the next higher grade of T-5 (TO) (LT) w.e.f. 18.02.2008.
8. Sh. K. Balasubramanian, T-4 (LT) has been promoted to the next higher grade of T-5 (TO) (FT) w.e.f. 14.06.2007.
9. Sh. P. Dayananda, T-4 (Mech.) has been promoted to the next higher grade of T-5 (TO) (Mech.) w.e.f. 15.05.2009.
10. Sh. S. Narendra, T-4 (Elect.) has been promoted to the next higher grade of T-5 (TO) w.e.f. 17.05.2009.
11. Sh. K.V. Varadarajachary, T-4 (Mech.), CHES, Chettalli has been promoted to the next higher grade of T-5 (TO) (Mech.) w.e.f. 01.07.2008.
12. Sh. M. Ramamurthy, T-2 (Driver) has been promoted to the next higher grade of T-3(Driver) Cat.II w.e.f. 05.11.2008.
13. Sh. Menon Sampath Kumar, T-2 (Driver) Cat. II has been promoted to the next higher grade of T-3 (Driver) Cat. II w.e.f. 29.06.2009.
14. Sh. Suresh Angadi, T-2 (Tr. Driver) Cat. II has been promoted to the next higher grade of T-3 (Tr. Driver) w.e.f. 17.05.2009.
15. Sh. T. Lakshminarayana, T-1 (Tr. Driver) has been promoted to the next higher grade of T-2 (Tr. Driver) Cat. I w.e.f. 26.04.2009.

### Grant of Financial Up gradation

#### Administrative

1.	Smt. Dakshayini G. Prasad, Private Secretary	3 <sup>rd</sup> Financial Upgradation
2.	Smt. K.B. Latha, Personal Assistant, CHES, Chettalli	3 <sup>rd</sup> Financial Upgradation
3.	Sh. Srinivasa Murthachar, Personal Assistant	3 <sup>rd</sup> Financial Upgradation
4.	Smt. A.N. Vaidehi, Personal Assistant	3 <sup>rd</sup> Financial Upgradation
5.	Smt. C.J. Bollamma, Personal Assistant, CHES, Chettalli	3 <sup>rd</sup> Financial Upgradation
6.	Sh. P. Nagaraja, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
7.	Sh. K.N. Prakash, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
8.	Smt. N.S. Nirmala, Personal Assistant	2 <sup>nd</sup> Financial Upgradation

9.	Sh. N. Subramanya, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
10.	Sh. M.V. Giri, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
11.	Sh. S. Rajendran, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
12.	Sh. S. Ravi Kumar, Personal Assistant	2 <sup>nd</sup> Financial Upgradation
13.	Sh. G.N. Ramprasad, Assistant	3 <sup>rd</sup> Financial Upgradation
14.	Smt. K.P. Bollamma, Assistant, KVK, Gonikoppal	3 <sup>rd</sup> Financial Upgradation
15.	Sh. Dwaraknath, Assistant	3 <sup>rd</sup> Financial Upgradation
16.	Sh. A.S. Krishnamurthy, Assistant	3 <sup>rd</sup> Financial Upgradation
17.	Smt. B.A. Kusuma, Assistant	3 <sup>rd</sup> Financial Upgradation
18.	Smt. Vani P. Bheemaiah, Assistant	3 <sup>rd</sup> Financial Upgradation
19.	Smt. G. Mohana, Assistant	3 <sup>rd</sup> Financial Upgradation
20.	Smt. N. Kalai Selvi, Assistant	3 <sup>rd</sup> Financial Upgradation
21.	Sh. B.K. Guru Prasad, Assistant	3 <sup>rd</sup> Financial Upgradation
22.	Smt. Shailaja R. Prasad, Assistant	2 <sup>nd</sup> Financial Upgradation
23.	Ms. A.C. Manjula, Assistant	2 <sup>nd</sup> Financial Upgradation
24.	Smt. S. Jagadambal, Assistant	3 <sup>rd</sup> Financial Upgradation
25.	Smt. P.C. Ponnamma, Assistant, KVK, Gonikoppal	3 <sup>rd</sup> Financial Upgradation
26.	Sh. R. Mahesh, Assistant	3 <sup>rd</sup> Financial Upgradation
27.	Sh. G. Venkoba Rao, UDC	3 <sup>rd</sup> Financial Upgradation
28.	Sh. R. Gopal, UDC	2 <sup>nd</sup> Financial Upgradation
29.	Smt. V. Asha Kumari, UDC	2 <sup>nd</sup> Financial Upgradation
30.	Sh. A.G. Seshachalam, UDC	2 <sup>nd</sup> Financial Upgradation
31.	Smt. D. Vijayalakshmi, UDC	2 <sup>nd</sup> Financial Upgradation
32.	Sh. A. Pandian, UDC	2 <sup>nd</sup> Financial Upgradation
33.	Sh. B.M. Lokesh, UDC	2 <sup>nd</sup> Financial Upgradation

## Probationary / Confirmation

### Probation & confirmation clearance

Sl. No.	Name of the official & designation	Date of clearance of Probation / Confirmation
<b>Administrative</b>		
1.	Sh. D.Praveen, LDC	04.08.2008
2.	Ms. K.C. Lakshmi Devi, LDC	11.06.2009
3.	Smt. R. Shilpa, LDC	18.06.2009
4.	Sh. R. Hema Prabhu, Assistant	08.11.2008
5.	Sh. K.B. Tittu Kumar, Assistant	17.11.2008
<b>Technical</b>		
6.	Sh. S. Thippeswamy, T-6 (Sr. Comp. Op)	03.11.2008
7.	Sh. M. Senthil Kumar, T-6 (TO)	05.10.2008
8.	Ms. S. Saroja, T-3 (LT)	10.11.2008
9.	Sh. P.R. Ramesh, T-6 (TO), KVK, Hirehalli	08.11.2008 (in the post of T-3 (FT))
10.	Sh. Girdharilal Kumawat, T-3 (FT)	30.11.2008
11.	Sh. A.N. Lokesh, T-3 (FT)	24.11.2008
12.	Sh. S. Karibasavanna, T- (FT)	02.06.2008
13.	Sh. Dharmendra Singh, T- 1(Tr. Driver)	21.11.2008
14.	Sh. M.R. Suresh, T-1 (Driver)	04.01.2009
15.	Sh. K. Velumurugan, T-1 (Driver), KVK., Gonikoppal	20.11.2008
16.	Sh. L. Devaraja, T-1 (FT)	02.06.2008
17.	Sh. N.T. Nagenrappa, T-1 (FT), KVK, Hirehalli	24.11.2007
18.	Sh. K.G. Poonacha, T-1 (FT) (Transferred to Cardomom Res. Centre, Appangala, Madikeri )	09.06.2008
<b>Skilled Support Staff</b>		
19.	Sh. N. Hanumanthappa	19.06.2008
20.	Sh. Puttalakshmaiah	19.06.2008
21.	Sh. C. Munianjanappa,	19.06.2008
22.	Sh. Y. Venkataramanappa	19.06.2008
23.	Sh. G. Ramesha	19.06.2008
24.	Sh. H.S. Venkatesh	10.08.2009
25.	Sh. Dhanavina Gowda	10.08.2009
26.	Smt. P. Mahadevi, CHES, Chettalli	18.08.2009
27.	Smt. Leela K, CHES, Chettalli	18.08.2009
28.	Smt. M. Laxmy, CHES, Chettalli	18.08.2009
29.	Smt. P. Ningamma, CHES, Chettalli	19.07.2008
30.	Sh. Gagan Bihari Sundaray, CHES, Bhuh'swar	14.11.2008
31.	Sh. Biswanth Paikaray, CHES, Bhuh'swar	16.11.2008

## Transfers

The following Technical staffs were transferred vide IIHR O.O. No. 4-98/09/Estt-19241-60, dt: 11.01.2010.

Sl. No.	Name & Designation	From	To
1.	Sh. N.A. Sreeramaiah, T-5 (TO) FT)	Div. of Extn. & Training.	Div. of Ento. & Nematology.
2.	Sh. B. Sudharshan, T-5 (TO) FT)	Div. of Biotechnology	Div. of Pl. Pathology.
3.	Sh. Madhusudhan Rao, T-4 (FT)	RMCC	Div. of Biotechnology
4.	Sh. M.A. Raghavendra Rao, T-1 (FT)	Div. of Fruit Crops	Div. of P.G.R

## Superannuation

The institute bids farewell to the following staff members who retired from ICAR service on superannuation

1. Smt. Kadiramma, Skilled Supporting Staff, Div. of P.H.T, IIHR, Bangalore retired from Council's service on superannuation on the afternoon of 31.01.2010.
2. Sh. V. Chandrappa, T-4 (FT), Div. of Ento. & Nematology, IIHR, Bangalore retired from Council's service on superannuation on the afternoon of 28.02.2010.
3. Sh. M.Muniyappa, SS Gr. III (Watchman), Farm Management, IIHR, Bangalore retired from Council's service on superannuation on the afternoon of 31.03.2010.
4. Sh. R. Hanumaiah, SS Gr. I (Mali), Nursery Unit, IIHR, Bangalore retired from Council's service on superannuation on the afternoon of 31.03.2010.

## Obituary

The staff of IIHR mourns the sad demise of the following and prays that the departed souls be rest in peace.

- Shri A. Manjunatha, T-2 (FT), Div. of P.G.R, IIHR, Bangalore expired on 14.12.2009.
- Shri H.V. Venkanna, T-4 (LT), Div. of Fruit Crops, IIHR, Bangalore expired on 10.03.2010.

## Advance Increment

1. Two advance increments have been granted to Sh. B.R. Mohan Rao, T-4 (FT) in the PB + GP of 9300-34800+4200 of this Institute w.e.f. 01.07.2008.
2. Two advance increments have been granted to Sh. M. Muniraju, T-4 (FT) in the PB + GP of 5200-20200+2800 of this Institute w.e.f. 01.07.2009

**FARMERS MAY CALL TOLL FREE  
NUMBER 1551 FOR ANY ENQUIREY ON  
AGRICULTURAL / HORTICULTURAL  
FIELD PROBLEMS**

## RAIN WATER HARVESTING – INITIATIVES AT IIHR



India has sizable resources of water and a large cultivable land but also a large and growing population to feed. The total cultivable land area in India is 184 million ha of which only 50 million ha is irrigated. With the present population of around 1000 million, the per capita water availability comes to about 1170 m<sup>3</sup>/person/year. Against this background, the problems relating to water resources development and management have been receiving critical attention. With a view to have a systematic and scientific development of water resources, the country has prepared and adopted a comprehensive National Water Policy in the year 1987. In Karnataka, where 70% of the state is drought prone, traditional water harvesting consisted of step wells, lakes, tanks, channels etc., as water storage bodies, the basic purpose of which was to establish a chain of water storage structures. However, a vanishing “Lake Culture” due to urbanization and industrialization has caused these systems to be neglected. The ground water on the other hand is not considered a reliable source owing to the depleting ground water levels and increased pollution. That leaves only one alternative – ‘The Rainwater’. Bangalore has an average of 970 mm rainfall in a year, which makes it easier for harvesting.

‘Rainwater harvesting in rural Karnataka’ funded by Rural Development and Panchayat Raj Department (RDPR), Government of Karnataka is probably the largest rainwater harvesting project in the world. Bangalore became the first city in the state to include rainwater harvesting (RWH) into its bylaws. Bangalore’s main source of water is the river Cauvery, which is nearly 100 kilometers away and 1500 feet below the city’s altitude. Which means that energy levels required for pumping are very high; the industrial tariff of Rs. 60/- a kilolitre is said to be the highest in the country. Studies show that water levels available will be enough to meet demands only till 2011. As individuals, groups and communities, one needs to take action before it is too late and not only understand what rainwater harvesting is all about but also implement measures to harvest rainwater in

houses as well as offices and put it into the soil for subsequent use. The benefits of RWH are many – it is environment friendly and easy method to meet demands due to inadequate water resources, it increases ground water level, improves ground water quality, reduces the runoff which otherwise flood storm water drains, reduces flooding of roads and low-lying areas, reduces soil erosion, is cost effective and easy to maintain and reduces water and electricity bills. Rain water harvesting consisting of *in situ* water harvesting through the opening of small trenches and contour bunding and/or collecting rainwater in the lower regions of the farm and later recycling to the crops is an important way to minimize the impact of water stress to horticultural crops.

Dr A.K Singh, DDG, Natural Resource Management, ICAR, called for the need to maximize benefit from monsoon by establishing water sheds and rain water harvesting sheds during the XXI regional committee meet no. 1 of Indian Council of Agricultural Research (ICAR), held recently at Sher-E-Kashmir University of Agricultural Sciences and Technology, Jammu.

At Indian Institute of Horticultural Research, Bangalore, the Ivarkandapura Lake that exists in the campus with an area of 9ha m has been de-silted with participation of Larsen and Tourbo. Farmers from adjacent villages were invited to carry the silt to their farms. A rainwater harvesting structure of 3 ha m was also created which supplies irrigation water to about 300 acres of experimental area at IIHR. Recently, rooftop rainwater harvesting system has been provided for Biotechnology, Auditorium, Administrative and Library buildings. About one lakh liters of rain water is estimated to be harvested in one spell of 25mm rainfall from these four buildings. The harvested water is used for irrigation in polyhouses and also for recharging the ground water through a deep tube well. We hope to keep up our endeavors in this direction and thereby contribute our mite to sustainable agriculture through rainwater harvesting.



( Amrik Singh Sidhu)

Director

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Production and Editing : IIHR Publication Committee 2009-2010

Printed at : Jwalamukhi Mudranalaya Pvt. Ltd., 44/1, K.R. Road, Basavanagudi, Bangalore-560004  
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