

## Dr. M. Anandaraj joins as Director, IISR, Kozhikode



Dr. M. Anandaraj, a renowned Plant Pathologist and Project Coordinator (Spices) has taken over as the new Director of Indian Institute of Spices Research, Kozhikode (Calicut) w.e.f. 4 July 2011. Dr. Anandaraj joined ICAR in 1978 as Scientist and since then he has been serving the Council in various capacities. Currently he is also the National Coordinator of the ICAR Outreach Project on "*Phytophthora*, *Fusarium* and *Ralstonia* diseases of horticultural and field crops". He is well known for his contributions on epidemiology and management of *Phytophthora* foot rot and his pioneering work on biological control of *Phytophthora*. To his credit he has 148 publications besides 19 books/monographs/chapters. He also served as Editor of six books on spices and has also contributed chapters for

UNESCO-EOLSS (Encyclopedia of life support system). Dr. Anandaraj has guided 5 Ph.D and 16 M.Sc students under Calicut University, Mangalore University and Nagarjuna University. He represented India in International Pepper Community, Jakarta, and has been empanelled as a member to draft Good Agricultural Practices for black pepper.

A recipient of Dr.J.S. Pruthy Award (three times) and Dr.C.S. Venkat Ram Award, Dr. Anandaraj is currently the President of Indian Society for Spices and Fellow of the following professional Societies: National Academy of Biological Sciences, Phytopathological Society of India, Indian Society for Spices, Indian Society for Plantation Crops, Indian Society for Seed Spices and Society for Advancement of Biological Control.

IISR family congratulates him on his new assignment and extends support for all his future endeavours.

## Research update

### Germplasm enrichment

During the period under report, 103 accessions of black pepper were collected from coastal regions of Alleppey district and 92 accessions of wild relatives of *Piper* from the forests of Idukki Wild Life Sanctuary and added to the germplasm repository.

### Mechanisation of farm operation

A machine was fabricated in collaboration with Central Institute of Agricultural Engineering, Regional Station, Coimbatore for mixing and vending potting mixture for spices nursery.

### Banana Bract mosaic virus infecting cardamom

The association of BBrMV with symptomatic cardamom plants was con-

## Inside

- 1 Research Update
- 2 Personalia
- 7 News and Events
- 10 Transfer of Technology
- 11 Publications



firmed by RT-PCR and electron microscopy.

### **Survey on rhizome and root rot pathogens of cardamom**

Surveys carried out in Wayanad and Idukki districts of Kerala, Valparai in Tamilnadu, and Hassan and Kadogudi districts of Karnataka for rhizome and root rot pathogens of cardamom indicated that Meppadi Parichayath in Wayanad district is a hot spot for the disease.

Sixty fungi including *Rhizoctonia solani*, *Fusarium oxysporum*, *Fusarium solani*, *Colletotrichum* sp., *Pythium vexans* and *Botryodiplodia theobromae* were isolated from the rhizome and root rot affected cardamom plants.

### **Natural resistance against leaf spot disease of cardamom**

Studying 328 germplasm accessions of cardamom under natural conditions resulted in identifying two accessions, namely, IC-349613 and IC-349588, highly resistant to the disease.

### **Efficient *Trichoderma* isolate**

Among the thirty two *Trichoderma* spp., WYD T11, the *Trichoderma harzianum* isolate obtained from the rhizosphere of black pepper was found promising and also compatible with metalaxyl + mancozeb.

### **Protocol for DNA isolation**

A protocol was standardized for total DNA extraction from the fungal colony, cultured on potato dextrose agar and potato dextrose broth.

## **Personalia**

### **Awards/ Honours/ Recognitions**

#### **Pervez R, Eapen S J, Devasahayam S & Jacob T K**

Best Poster Award for the research paper entitled "A new species of entomopathogenic nematode *Steinernema ramani* (Rhabditida: Steinernematidae) from ginger (*Zingiber officinale* Rosc.)", 13<sup>th</sup> Indian Agricultural Scientists' and Farmers' Congress, Allahabad, 19-20 February 2011.

#### **Anandaraj M**

Fellow, Society for the Advancement of Biological Control.

### **Deputation abroad**

#### **Iswara Bhat A**

Deputed for NAIP sponsored training in the area of Biosecurity (Horticulture), Food and Environ-

ment Research Agency (FERA), Sand Hutton, York, UK, 28 March-27 June 2011.

#### **K Nirmal Babu & Utpala Parthasarathy**

Deputed for Second International Symposium on Underutilized Plant Species – Crops for the Future: Beyond Food Security, Kuala Lumpur, Malaysia, 27 June-1 July 2011.

#### **Senthil Kumar R**

Deputed for training on Marker assisted selection, Iowa State University of Science and Technology, Ames, Iowa, USA, 15 March-14 June 2011.

#### **Zachariah T J**

Deputed for Institute of Food Technologists Annual Meeting & Food Expo-2011, New Orleans, Louisiana, USA, 11-14 June 2011.

### **Participation in Symposia/ Seminars/ Workshops/ Conferences/ Meetings**

#### **All Scientists**

Kisan Mela, IISR, Calicut, 27 January 2011.

#### **Anandaraj M**

Executive Committee Meeting of Indian Society for Plantation Crops, CPCRI, Kasaragod, 20 January 2011.

Review Meeting at AICRPS Centre, Guntur, Hyderabad & Vegetable Research Station, APHU, Rajendranagar, Hyderabad, 1-3 February 2011.

Review Meeting at AICRPS Centre, NDU&T, Kumarganj, Faizabad, 25-26 February 2011.

Fourth Peer Review Committee Meeting of the Project entitled, *Molecular Diagnosis of Fungal Diseases of Cassava, Taro, Amorphophallus and Yam*, CTCRI, Trivandrum, 2-3 March 2011.

National Consultation on Production of disease free Quality planting material, CPRI, Modipuram, 4-6 March 2011.

Review Meeting at AICRPS Centre, Choudhary Charan Singh Haryana Agricultural University, Hisar, 7-8 March 2011.

Executive Committee Meeting of National Academy of Biological Sciences, Chennai, PRIST University, Thanjavur, 11-13 March 2011.

Meeting with DDG (Hort) on AICRPS Workshop, ICAR, New Delhi, 14-15 March 2011.

Golden jubilee celebrations of University of Mysore, Mysore, 16-17 March 2011.

Meeting to prepare a draft plan for overall development of Horticulture areas, NRC Citrus, Nagpur & Chhindwara, 4-8 April 2011.

National Review Meeting of AMAAS, NBAIM, Mau, 14-15 May 2011.

Review Meeting on *Fusarium* under *PhytoFuRa*, IIVR, Varanasi, 15-16 May 2011.

Selection Committee Meeting, Spices Board, Cochin, 24 May 2011.

National Symposium organized by NBAII, Bangalore, 25 May 2011.

National Horticultural Conference on Linking farmers with market, Dehra Dun, 28-29 May 2011.

Review Meeting at AICRPS Centre, Jobner, 31 May-1 June 2011.

Meeting with DDG (Hort) on AICRPS Workshop, ICAR, New Delhi, 13 June 2011.

Review Meeting at AICRPS Centre, Solan, YSPUHS&F, Solan, 14-15 June 2011.

Project Coordinator's Meeting, CIAE, Bhopal, 16 June 2011.

Horticultural Division Meeting on 12<sup>th</sup> Plan programmes, ICAR, New Delhi, 24 June 2011.

**Anandaraj M**  
**Anke Gowda S J**  
**Chempakam B**  
**Devasahayam S**  
**Jayashree E**  
**Prasath D**  
**Parthasarathy VA**  
**Srinivasan V**

XXII Group Meeting of Research Workers of AICRPS, Jaipur, 18-19 June 2011.

**Anandaraj M**  
**Devasahayam S**  
**Rajeev P**  
**Srinivasan V**

Training Workshop on *Increasing Production and Productivity of Major Spice Crops with Special Reference to Assam*, Kahikuchi, 3-4 March 2011.

**Anandaraj M**  
**Dinesh R**

Half-yearly review meeting of the ICAR network project on Application of Microorganisms in Agriculture and Allied Sectors (AMAAS), NBAIM, Mau, 21 February 2011.

**Anandaraj M**  
**Eapen S J**

Annual Review Meeting of *PhytoFuRa*, IISR, Calicut, 17-18 February 2011.

**Anandaraj M**  
**Parthasarathy VA**

Directors' Conference, ICAR, New Delhi, 24 February 2011.

**Anandaraj M**  
**Parthasarathy VA**  
**Prasath D**

Interactive Workshop Series-4, National Academy of Biological Sciences, PRIST University, Thanjavur, Tamil Nadu, 12-13 March 2011.

**Biju CN**

National consultation-cum-training on Diagnostics in Horticultural Crops, Central Potato Research Institute, Shimla, 16 April 2011.

**Devasahayam S**

Institute Management Committee Meeting, Central Tuber Crops Research Institute, Trivandrum, 28 January 2011.

National Seminar on Harmful / Beneficial Insects of Agricultural Importance, Calicut, 17-18 February 2011.

Meeting of National Agricultural Bio-security Network, New Delhi, 22 March 2011.

Meeting of Heads of Divisions of ICAR Institutes, Bhopal, 14-15 June 2011.

**Dinesh R**

Quarterly review of Soil based nutrient management plans for agro-ecosystems of Kerala, STL, Parattukonam, Trivandrum, 15 March 2011.

**Eapen S J**

Silver Jubilee Symposium on *Bioinformatics*, Pondicherry University, Pondicherry, 2 February 2011.

22<sup>nd</sup> Annual BTIS Coordinators Meeting, Pondicherry University, Pondicherry, 3-4 February 2011.

Annual Meeting cum Workshop of ZTM-BPD Unit (South Zone), CIFT, Kochi, 4-5 March 2011.

State-level training on *Pest and Disease Management in Spice Crops*, ICAR Research complex, Goa, 20 April 2011.

National Symposium on *Harnessing Biodiversity for Biological Control of Crop Pests*, NBAII, Bangalore, 25-26 May 2011.

**Jayarajan K**

3<sup>rd</sup> International Geography Congress, CWRDM, Kozhikode, 6-8 May 2011.

**Jayashree E**

45<sup>th</sup> Annual Convention of Indian Society of Agricultural Engineering and International Symposium on *Water for Agriculture*, Dr. Panjab Rao Deshmukh Krishi Vidyapeeth, Akola, Nagpur, 17-19 January 2011.



**Kandiannan K  
Suseela Bhai R S**

District Level Seminar on *Quality Planting Material Production, Certification and Distribution of Vegetables and Spice Crops*, Chakkittapara Panchayat, Calicut, 6-7 January 2011.

National Consultative Meeting on *Statistics of Pepper and Ginger*, DASD, Calicut, 28 January 2011.

**Kandiannan K  
Praveena R**

National Consultative Meeting on *Production of Disease-free Quality Planting Material Propagated through Tubers and Rhizomes*, CPRI Campus, Modipuram (Meerut), 4-5 March 2011.

**Parthasarathy V A**

70<sup>th</sup> Meeting of Spices Board, Spices Board, Cochin, 6 January 2011

Dr R S Paroda Committee Meeting on ARS Disciplines, New Delhi, 15 January 2011.

*Crop Improvement and Genomics* in the National Seminar on Climate Change and Food Security: Challenges and Opportunities for Tuber Crops, CTCRI, Trivandrum, 20- 21 January 2011.

Consultative Meet on issues in Statistics of Pepper and Ginger, DASD, Calicut, 28 January 2011.

Interface with Dr K Kasturirangan, Member, Planning Commission, CMFRI, Cochin, 31 January 2011.

Conference on National Consultation for Production and Utilization of Orchids, NRC for Orchids, Sikkim, 19-21 February 2011.

*Interface with the Vice Chancellors and the Deans*, New Delhi, 23 February 2011.

Division-wise interaction Meetings with the Chairs of RACs, New Delhi, 8-9 March 2011.

Workshop on Biotechnological Applications for Sustainable Development, NABS, Thanjavur, 12-13 March 2011.

71<sup>st</sup> Meeting of Spices Board, Spices Board, Cochin, 22 March 2011.

Divisional Meeting of the Directors of Horticulture Division under the Chairmanship of DDG (Hort.), New Delhi, 11 April 2011.

The First Meeting of Working Group on *Horticulture & Plantation Crops* for the twelfth Five Year Plan (2012-17) convened by the Planning Commission, New Delhi, 18 April 2011.

Selection Committee Meeting, ASRB, New Delhi, 5 May 2011.

**Pervez R**

13<sup>th</sup> Indian Agricultural Scientists' and Farmers' Congress, Vigyan Parishad, Allahabad University, Allahabad, 19-20 February 2011.

**Rajeev P**

Scientists-farmer interaction session held in connection with the Technology Showcasing component of NAIP Project on *Mobilising mass media support for sharing agro information*, IISR, Calicut, 27-29 January 2011.

Public information campaign organized by Directorate of Advertising and Visual publicity under the Ministry of Information and Broadcasting, Peravoor, Kannur, 8-10 June 2011.

Training programme on SAS, IASRI, New Delhi, 20-25 June 2011.

**Saji K V**

Farmers' training programme, Community Agro Biodiversity Centre, M S Swaminathan Research foundation, Kalpetta, 22 February 2011.

**Senthil Kumar R**

Loomis Distinguished Lecture & Plant Biology Mini symposium, Ames, Iowa State University, 21- 22 April 2011. Metabolomic workshop, St. Louis, Missouri, 6 May 2011.

Society for *In vitro* Biology meeting, Raleigh, North Carolina, 4-8 June 2011.

**Suseela Bhai R**

National Training on *Molecular diagnostics for pathogens infecting crop plants* sponsored by NAIP, CTCRI, Trivandrum, 16 February - 3 March, 2011.

Training programme on *Production Management and post harvest Technology of Ginger and Turmeric*, IISR Calicut, 10-12 January 2011.

Training programme on *Land, water and Biomass management for pepper farmers*, CWRDM, Calicut, 28-29 March 2011.

*Pest and disease control in pepper cultivation*, CWRDM, Calicut, 29 March 2011.

Training programme on *Pest and disease control in Black pepper, ginger and turmeric and nutmeg cultivation*, Goa, 20 April 2011.

Seminar on *Diseases and pest management in black pepper and ginger*, RARS Ambalavayal, 26 May 2011.

Training programme on *Pests and disease management in Black pepper, ginger and turmeric* organized by KVK, Peruvannamuzhi, 7 June 2011.

*Field Publicity Interactive programme on Nutmeg*, Spices Board, 24-25 June 2011.



## Utpala Parthasarathy

*Data mining and GIS for decision support in agriculture*, IIM, Lucknow, 28 March-8 April 2011.

## Zachariah T J

PMAC Meeting of NAIP on *Mobilizing mass media support for sharing agro information*, KAB-II, New Delhi, 11-12 January 2011.

CIC meeting of NAIP, *Studies on Cryogenic grinding for retention of flavour and medicinal properties of some important Indian spices*, CIPHET, Ludhiana, 30 January 2011.

Two day workshop of NAIP on *Mobilizing mass media support for sharing agro information*, ICAR Complex, Barapani, 4-5 March 2011.

Thematic workshop of NAIP Component-4 projects, IHR Bangalore, 7-8 March 2011.

CAC and CIC meeting of NAIP, *Studies on Cryogenic grinding for retention of flavour and medicinal properties of some important Indian spices*, IASRI, New Delhi, 27 March 2011.

## Lectures delivered

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### Anandaraj M

*Diagnostics of ginger and turmeric crops*, National Consultation on Production of disease free quality planting material, CPRI, Modipuram, 4-6 March 2011.

*Understanding host-pathogen interactions in the genomic era*, NABS Fourth Interactive Workshop on Biotechnological Applications for Sustainable Development, PRIST University, Thanjavur, 11-13 March 2011.

*Spices for specialty in Agriculture*, The Golden jubilee celebrations, Mysore University, Mysore, 16 March 2011

*Conservation and utilization of microbes for management of plant diseases*, National conference on Harnessing Biodiversity for Biological Control of Crop Pests organized by NBAll, Bangalore, 25 May 2011.

### Biju C N

*Pest and disease management in black pepper*, CRC, Appangala, 3 February 2011.

*Disease management in black pepper*, Regional Seminar on black pepper, Sishu Vihar, Madikeri, 11 March 2011.

*Scientific cultivation practices in ginger*, Training programme on Spices and Precision Farming cum Exposure visit of farmers organized by ATMA, Kannur District, Kerala at Cardamom Research Centre, Appangala, 17 March 2011.

## Dinesh R

*Varieties and production management of Turmeric*, SIRD Complex, Kahikuchi, Guwahati, Assam, 3 March 2011.

## Eapen S J

*In silico tools and their applications*, Short-term Training on Application of Genomics and Bioinformatics in *Phytophthora/Ralstonia* Research, IISR, Calicut, 10 February 2011.

*Black pepper: Pests and Diseases*, Farmers' Seminar, MSSRF, Kalpetta, 22 February 2011.

*Integrated Pest and disease management in ginger and turmeric*, NHM sponsored farmers' training, KVK, Peruvannamuzhi, 24 February 2011.

*Mendeley, an open source tool to manage scientific literature and documents*, IISR, Calicut, 25 March 2011.

*Molecular Phylogeny*, NAIP sponsored National training Course on Current Approaches and Applications of Bioinformatics in Agricultural Research, CTCRI, Trivandrum, 29 March 2011.

*Nematode problems in spices and their management*, State level training on Pest and Disease Management in Spice Crops, ICAR Research complex, Goa, 20 April 2011.

*Application of bioinformatics in biological control of crop pests*, National Symposium on Harnessing Biodiversity for Biological Control of Crop Pests, NBAll, Bangalore, 26 May 2011.

## Jayashree E

*Value addition in Black Pepper*, Organized by MS Swaminathan Research Foundation, Pudukkottai, Wayanad, 17 May 2011.

*Value addition in Black Pepper at farm level*, Jointly organized by MS Swaminathan Research Foundation and Wayanad Agricultural and Rural Development Association, Kalpetta, Wayanad, 25 March 2011.

*Post harvest technology and value addition in ginger and turmeric*, Training programme on Production management and post harvest technology of ginger and turmeric, ATIC, IISR, Calicut, 10 March, 2011.

*Value addition of spices*, 'Technology Clinic' conducted by District Industries Centre, Malappuram, 28 February 2011.

*Value addition in spices*, Regional Agricultural Research Station, KAU, Ambalavayal, Wayanad, 25 February 2011.

*Post harvest processing and value addition of ginger, turmeric, cinnamon and garcinia*, Training programme on Integrated approaches for en-



hancing the production of ginger, turmeric, cinnamon, garcinia and value addition in spices, jointly organized by National Horticultural Mission and Krishi Vigyan Kendra, IISR, Peruvannamuzhi, 24 February 2011.

*Post harvest processing and value addition of black pepper and nutmeg*, Training programme on Integrated approaches for enhancing the production of black pepper and nutmeg, jointly organized by National Horticultural Mission and Krishi Vigyan Kendra, IISR, Peruvannamuzhi, 17 February 2011.

*Value addition of spices*, Technology Clinic for the Industrial Entrepreneurs on Agro Food Based Products conducted by District Industries Centre, Kozhikode, 9 February 2011.

*PHT and value addition of spices*, Training programme on *Management and post harvest technology of ginger and turmeric* for farmers from Jalgoan District, Maharashtra, ATIC Hall, IISR, Calicut, 12 January 2011.

Participated in the field publicity campaign on *Aflatoxin management in nutmeg* organised by Spices Board, Cochin and delivered lectures on Nutmeg processing and aflatoxin management at various places from first week of June to third week of June 2011 as follows:

Ponkunnam	Kottayam
Edakunnu, Angamali	Ernakulam
Priyaram near Chalakudy	Ernakulam
Meenakshipuram, Pollachi	Coimbatore
Erattupettah	Kottayam
Adimali	Idukki
Kanjoor, Kaladi	Ernakulam
Koorachundu	Calicut
Thiruvambady	Calicut

#### **Kandiannan K**

*Scope of Certified Seed Production in Spices*, District Level Seminar on Quality Planting Material Production and Certification of Vegetables and Spices Organized by National Horticultural Research and Development Foundation and KVK, Chakkittapara, Calicut, 6-7 January 2011.

*Scientific Cultivation of Ginger*, for farmers of Jalgaon Dist, Maharashtra during Training on Production Management and Post Harvest Technology of Ginger and Turmeric, IISR, Calicut, 10-12, January 2011.

*Production Management in Ginger and Turmeric* for the farmers from Punjab under National Horti-

culture Mission, IISR, Calicut, 10-11 March 2011.

#### **Parthasarathy V A**

*Office Automation*, Directorate of Oil Seeds Research, Hyderabad, 19 April 2011.

*Crop Improvement and Genomics*, National Seminar on Climate Change and Food Security: Challenges and Opportunities for Tuber Crops, CTCRI, Trivandrum, 20-21 January 2011.

#### **Pervez R**

*Use of molecular tool for identification of nematodes*, Summer training on Techniques in Biochemistry, Biotechnology and Bioinformatics, IISR Calicut, 21 May 2011.

#### **Prasath D**

*Real-time PCR*, Short-term training on Application of genomics and bioinformatics in *Phytophthora* and *Ralstonia* research, 10 February 2011.

*Improved production technologies in spices*, Training programme on spices production technologies, TNAU, HRS, Thadiyankudisai, 4 March 2011.

#### **Praveena**

*Technologies for production of Disease Free Planting Materials in Ginger and Turmeric*, National Consultative meeting on Production of Disease Free Quality Planting Material Propagated through Tubers and rhizomes, CPRI, Modipuram, 4-5 March 2011.

#### **Rajeev P**

*Economics of production, marketing and export of ginger and turmeric*, Workshop on Production management and Post harvest technology in major spices, Assam, 3-5 March 2011.

#### **Saji K V**

*Traditional varieties of black pepper*, Farmers training programme, Community Agro Biodiversity centre, M S Swaminathan Research foundation, Kalpetta, 22 February 2011.

#### **Shamina A**

*Oxidative damage in living systems and potential for the use of phytochemicals as antioxidants and nutraceuticals* and practical demonstrations on 'Estimation of antioxidant potential in plant extracts', NAIP (ICAR) National Training course - Biotechnological approach for the enhanced production of nutraceuticals in fruits and vegetables of arid zone, Central Institute of Arid Horticulture, Bikaner, Rajasthan, 23-24 February 2011.

*Functional Foods and Nutraceuticals*, 'Oxidative damage in living systems and potential for the use of phytochemicals as antioxidants and nutraceuticals' and practical demonstrations on 'Assay of antioxidant po-



tential in plant extracts, Summer training in Biochemistry, Biotechnology and Bioinformatics, IISR, Calicut, 5 May 2011.

#### **Srinivasan V**

*Varieties and production management of Ginger*, SIRD complex, Kahikuchi, Guwahati, Assam, 3 March 2011.

#### **Thankamani C K**

*Planting material production of black pepper, ginger and turmeric*, Seminar on Quality planting material production in major spices- Certification and Distribution of Vegetables and Spice crops, Calicut, 6 January 2011.

*Organic farming-principles*, National Seminar on Fruit and vegetable crop production, organized by Vegetable Fruit Promotion Council (VFPC), Kerala, Vellanoor, 22 January 2011.

*Organic farming*, Seminar on Land, Water, Biomass

management for pepper farmers, organized by CWRDM, Calicut, Meenangadi, 9 February 2011.

*Good agricultural practices for the production of ginger, turmeric and tree spices*, Farmers seminar in connection with flower show organized by DASD, Calicut, 10 February 2011.

*Integrated approaches for enhancing production of black pepper*, Training Programme organized by DASD in collaboration with KVK, Calicut, 15 February 2011.

*Integrated approaches for enhancing production of ginger and turmeric*, Training Programme organized by DASD in collaboration with KVK, Calicut, 23 February 2011.

*Varieties and crop management*, Seminar on Land, Water, Biomass management for pepper farmers, CWRDM, Calicut, 29 March 2011.

## **News and events**

### **Dr. V. A. Parthasarathy superannuates from ICAR**



Dr V A Parthasarathy Director, Indian Institute of Spices Research, Kozhikode superannuated on 30 June 2011 from ICAR service. Dr Parthasarathy has more than 30 years of research experience in horticulture, plantation crops and spices. During his tenure as Director, several infrastructure facilities, viz., Central facility for advanced research in molecular biology, Insect biocontrol laboratory, Scientists' hostel and Library and administrative block were established at the Institute. Dr Parthasarathy was also instrumental in many IT initiatives at the Institute such as office automation, e-library, web portal, etc. The Institute was adjudged as outstanding ICAR institution in 2009 and awarded the prestigious Sardar Patel Outstanding Institution award.

#### **News from Bioinformatics Centre**

The Bioinformatics Centre in collaboration with the PhytoFuRa group organized a short-term training on 'Application of Genomics and Bioinformatics in *Phytophthora/Ralstonia* Research' exclusively for the project staff of PhytoFuRa from 8-17 February 2011. During the period, the spice germplasm database, 'Spice Genes', was thoroughly modified with advanced graphical tools and data on turmeric and ginger germplasm were added.

#### **Research Advisory Committee meeting**

Research Advisory Committee of the Institute for the period 2011-2013 was constituted with Dr. S. B. Dandin, Vice Chancellor, University of Horticultural

Science, Bagalcot as Chairman and Dr. K.V. Ramana, Former ADG (Plantation Crops) and PC (Spices); Dr. Umesh Srivastava, Asst. Director General (Hort.II); Dr. B.B. Vashishtha, Former Director, NRC (Seed Spices); Dr. Anil Kumar, GB Pant University of Agriculture and Technology, Pantnagar, Uttarkhand; Dr. R. Samiyappan, Director, CPMB, TNAU, Coimbatore; Dr. N.K. Mohan, Ex-Head, HRS, Kahikuchi; Dr. V.A. Parthasarathy, Director, IISR, Calicut; Sri. M. J. Ummen and Sri. G. Rathikumar as members, and Dr. B. Chempakam as the Member Secretary. The first meeting of the RAC was held during 26-27 April 2011. Major recommendations evolved from the discussions include Registration of farmers' varieties with PPV & FRA, bio-



prospecting of genes/alleles through functional genomics, commercialization of micro-rhizome technology, developing diagnostic kits (genus specific/species specific) for *Phytophthora* spp., emphasis on secondary agriculture including mechanization of spice processing, working out economic optimum levels of response for targeted yield trial in black pepper, studies on impact of successful technologies in terms of economic return and biotic and abiotic response of spice crops to climate change scenario.

### **Institute Research Committee Meeting**

Institute Research Council meeting was held on 28th April 2011 to discuss the progress of all Institute and externally funded research projects. Dr. V A Parthasarathy, Director, IISR, Calicut, chaired the meeting and all Head of Divisions reviewed the progress of the projects.

### **News from Human Resource Development**

Summer training on Biochemistry, Biotechnology and Bioinformatics was organized during 5 May–4 June 2011, which was coordinated by Dr Pervez Rashid and Dr Utpala Parthasarathy.

### **Institute Management Committee Meeting**

The sixth meeting of the sixth IMC was held on 21 June 2011 under the chairmanship of Dr.V.A.Parthasarathy, Director, IISR, Calicut. Mr.V.Mohanam, Member Secretary & Administrative Officer, IISR, Calicut and Dr. Umesh Srivastava, ADG (Hort II), ICAR, New Delhi attended the meeting along with other members.

### **Institute Joint Council Meeting**

The 3<sup>rd</sup> and 4<sup>th</sup> meetings of VIII IJSC of the Institute was held on 30 March 2011 and 27 June 2011 respectively under the chairmanship of Dr.V.A. Parthasarathy, Director, IISR, Calicut. The action taken report of earlier meeting was presented and new agenda items were also discussed.

### **Consultancy Processing Cell**

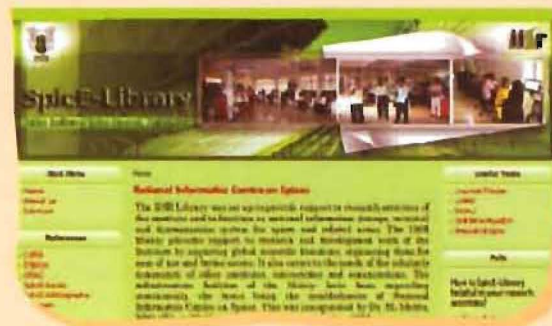
The revenue generation through consultancy activities was around Rs. 1.00 Lakh from analysis of soil and manure samples for different nutrients, analysis of biochemical and biocontrol agents and training MSc students.

### **News from SARANI**

New Year day was celebrated on 1 January 2011 and Dr V A Parthasarathy, Director, IISR, Calicut

delivered new year message. Sarani arranged farewell functions on the occasion of the superannuation of the staff and transfer of Sri V L Jacob, Assistant Finance and Accounts Officer to CIBA, Chennai.

### **News from library**



A book exhibition was arranged during 9-10 March 2011. The spicE-library website was modified with links to more digital resources and databases. Six issues of the electronic version of 'AGRI titbits' were published. The scope of digital institutional repository Dspice was widened with the Institute publications, annual reports, research highlights, spices news etc. Mendley, an open source tool to manage scientific literature & documents was introduced and demonstrated. Library added 109 books, 12 technical reports, 5 theses and one project report during the period. Around 152 external users and 3250 internal users made use of the library facilities.

### **Women's day**



International Women's Day was celebrated at the Institute on 5 March 2011. Mrs. K. P. Sudheera, a well-known Malayalam writer, was the Chief Guest. Dr. V. A. Parthasarathy, Director, IISR, Calicut and Chairman, Committee on Gender Based Issues and Dr. J. Rema, Vice Chairperson, spoke during the occasion. Mrs. C. K. Beena, Secretary, proposed vote of thanks.



## Externally aided project

Title of project	Investigators	Funding agency	Period	Outlay (Rs. Lakh)
DNA barcoding to discriminate traded spices from their adulterants	B Sasikumar & TE Sheeja	Ministry of Food Processing Industries, GOI.	2 yrs	28.466

### XXII National Group Meeting of AICRPS

The All India Coordinated Research Project on Spices (AICRPS) XXII Annual Workshop was held at S. K. Rajasthan Agriculture University, Durgapura Campus, Jaipur, during 18-19, June 2011.

Dr. H.P. Singh, Deputy Director General (Horticulture), ICAR inaugurated the two days workshop and Dr. M.P. Sahu, Director of Research, RAJAU welcomed the dignitaries. Dr. Umesh Srivastava, Asst. Director General (Hort.), ICAR; Dr. S.B. Dandin, Vice Chancellor, UHS, Bagalkot and Dr. A.K. Dahama, Vice Chancellor, RAJAU addressed the delegates. Dr. H.P. Singh in his inaugural address remarked that the role of AICRPS has become more significant than before under the scenario of climate change. Conservation of land, water and nutrients is the focus of XII Plan. Mechanization has to be given importance substituting labour.

Dr. M.Anandaraj, Project Co-ordinator (Spices) presented the salient achievements of AICRPS during the previous year. Eight location specific technologies developed in various spices during 2010-11 were highlighted.

The Workshop was attended by over 100 spices research workers from 34 centres. The research work carried out during 2010-11 at the 34 centres was presented in different technical sessions and discussed.

### हिन्दी सैल

जनवरी से जून 2011 की अवधि में राजभाषा कार्यान्वयन समिति की तिमाही बैठकें दो बार आयोजित की गईं। बैठक की अध्यक्षता संस्थान के निदेशक डा. वी. ए. पार्थसारथी ने की। संस्थान के अधिकारियों एवं कर्मचारियों को हिन्दी के प्रति रुचि पैदा करने के लिये दो हिन्दी कार्यशालाओं का आयोजन किया। प्रथम कार्यशाला दिनांक 10 फरवरी 2011 को आयोजित की गयी जिसमें श्री. एन. अरविन्दाक्षन, कर्मचारी भविष्य निधि कार्यालय, कालिकट ने "राजभाषा नियम एवं उनका अनुपालन" के बारे में व्याख्यान दिया तथा द्वितीय दिनांक 17.06.2011 को आयोजित की गयी जिसमें श्री. ओ. विजयन, हिन्दी अधिकारी, आकाशवाणी, कालिकट ने "राजभाषा कार्यान्वयन में कम्प्यूटर की उपयोगिता" के बारे में व्याख्यान दिया।

नगर राजभाषा कार्यान्वयन समिति की उपसमिति तथा अर्धवार्षिक बैठक में श्रीमती एन. प्रसन्नकुमारी, डा. राशिद परवेज़ तथा श्री बी. कृष्णमूर्ति ने भाग लिया। नराकास द्वारा 16.02.2011 को आयोजित ओरियन्टेशन कार्यक्रम में श्री बी. कृष्णमूर्ति, दिनांक 16 मार्च 2011 को आयोजित हिन्दी कार्यशाला में श्रीमती एन. प्रसन्नकुमारी तथा दिनांक 09 जून 2011 को आयोजित कम्प्यूटर में यूनिकोड की स्थापना कार्यशाला में डा. राशिद परवेज़ ने भाग लिया।

नराकास की 47 वीं बैठक में संस्थान को वर्ष 2009-10 के लिये राजभाषा कार्यान्वयन जैसे, हिन्दी पत्राचार, राजभाषा नियमों का अनुपालन, हिन्दी कार्यशालाओं का आयोजन, हिन्दी दिवस एवं हिन्दी सप्ताह का आयोजन तथा हिन्दी प्रकाशनों जैसे मसाला समाचार (अर्धवार्षिक), अनुसंधान के मुख्य अंश (वार्षिक) काली मिर्च दालचीनी, वैनिला तथा जायफल पत्रिकायें तथा लोकप्रिय लेखों के लिये नराकास राजभाषा कार्यान्वयन पुरस्कार 2010 प्राप्त हुआ।

गत छमाही में मसाला समाचार (जुलाई-दिसम्बर 2010) का द्वितीय अंक, संस्थान की वार्षिक रिपोर्ट का सार हिन्दी में प्रकाशित किया। राजभाषा कार्यान्वयन सम्बन्धी दो तिमाही रिपोर्ट तैयार करके भारतीय कृषि अनुसंधान परिषद, नई दिल्ली, नगर राजभाषा कार्यान्वयन समिति, कालिकट तथा उप निदेशक (कार्यान्वयन) क्षेत्रीय कार्यान्वयन कार्यालय, कोचिन को प्रेषित की गयी।



## Brain storming on Genomics and Bioinformatics



▲ Dr. H.P. Singh DDG (Hort.) Inaugurating Brain storming on Genomics and Bioinformatics at the main campus on 25 June 2011.

## Transfer of Technology

### Training on laboratory techniques

A short-term training on 'Isolation and Identification of Soil-borne Fungi and Nematodes Associated with Black Pepper' was organized at IISR, Calicut during 13-18 June 2011. Five research personnel of the Sugandhi project attended the programme.

### PhytoFuRa training

Indian Institute of Spices Research, Calicut, hosted a training programme on *Application of Genomics and Bioinformatics in Phytophthora/Ralstonia Research* during 8-17 February. The programme was inaugurated by Dr. V. A. Parthasarathy, Director. The training was conducted in two phases: Phase 1 covered Basics of Molecular Biology and Bioinformatics and Phase 2 dealt with Genomics and Proteomics. Seventeen Research fellows and one Scientist working in PhytoFuRa project participated in the training programme. Apart from the faculties of the Institute, Dr. R. Vishwanathan, SBI, Coimbatore, Dr. Vinod Scaria, IGIB, New Delhi, Dr. A. Kumar, IARI, New Delhi & Dr. R. Ramesh, ICAR-RC, Goa, also delivered lectures.

### Training of extension functionaries

Two training courses on production and post harvest technology of ginger and turmeric sponsored by the Maharashtra and Punjab State Horticulture Mission schemes were conducted during January and March 2011 respectively, in which 28 progressive farmers participated. Under

the Horticulture Mission for North Eastern and Himalayan States, one training workshop on *Production and post harvest technology of spices in Assam* was organized at CPCRI station, Kahikuchi, in March 2011. One orientation training programme for the newly recruited scientific and field staff was organized in April 2011.

### Technology inputs and Advisory services from ATIC

During the period under report, 2040 farmers including 403 from other districts of Kerala and 510 from outside state availed services from the centre through direct visit and 747 students visited the Institute on study tour. Out of the visits recorded, 16 farmers' groups were on exposure visit.

The centre generated Rs. 1,81,696 from the technology inputs including Rs.77540 from planting materials, Rs. 65106 from biocontrol agents and Rs. 3500 from diagnostic services, and Rs. 35550 from sale of publications. The centre also participated in two State-level Exhibition/Kisan Melas.

### Planting material distribution and training for Wayand district of Kerala

Under the consortium based project, 'Multi-enterprise farming models to the address the agrarian crisis of Wayanad District of Kerala funded by NAIP', 15,000 cuttings of IISR varieties of black pepper, namely, *Sreekara*, *Subhakara* and *IISR Thevam*, and fertilizer inputs were supplied to RARS, Ambalavayal for further multiplication and distribution to farmers. A training programme on IPM and IDM in black pepper and ginger was organized at Wayanad Social Service Society, Mananthavady, on 26 May 2011.

### Documentaries on farmers' success

As part of the NAIP project on *Mobilizing Mass Media Support for Sharing Agro-Information*, two documentary films were produced during the period. '*Prathibha Turmeric: A success story*', shot in English, Hindi and Malayalam languages, documents the success stories of Mr. P. Abdul Nabeel of Mepayur in Calicut and Mr. Chandra Sekhar Azad of Vijayawada who have been successfully cultivating the turmeric variety '*Prathibha*' for many years.

The second documentary film on '*Broiler Goat Rearing: Women Self Help Group shows the Way*' features the success story of Kaveri Self Help Group in Chakkittappara Panchayath of Calicut district in goat rearing with the active intervention of KVK, Calicut.



## Karshika Sankethika Darshanam 2011



The Institute organized a three day Kisan Mela and Agricultural Technology Expo, at the main Campus in Calicut during 27-29 January, 2011 as part of the NAIP Sub-Project, on Mobilizing Mass Media Support for Sharing Agro-Information. Mr K K Raghavan, Joint Rubber Production Commissioner, Rubber Board, Calicut, inaugurated the Mela and Dr V A Parthasarathy, Director, IISR, Calicut, presided over the function. Five innovative farmers, Mr Saji Mathew, Mr P Abdul Nabeel, Mr Binu Mathew and Mr K K Manoj and Smt Revamma Dharanidharan, belonging to different fields of agriculture, were felicitated. Two hundred selected farmers from Kozhikode district attended the Kisan mela. Fourteen research organizations and NGOs from all over the State show-cased their technologies in the exhibition, which attracted public and students.

### Krishi Vigyan Kendra

#### SAC meeting

Thirteenth Scientific Advisory Committee meeting of the Krishi Vigyan Kendra was held at IISR, Calicut on 23 June 2011, under the chairmanship of Dr. V.A.Parthasarathy, Director, IISR, Calicut.

#### Front Line Demonstration

Demonstration of various spice production technologies of IISR, namely, bush pepper cultivation, evaluation of High Yielding Varieties of black pepper, seed production of HYVs of turmeric, value addition in green pepper – pepper in brine, integrated disease management of *Phytophthora foot rot* of black pepper

and post AI administration of sterile ceftriaxone sodium on conception rate in milch cows, popularisation of tiger shark - Assam Vaala (*Pangasius sutchi*) for freshwater aquaculture and induced breeding of fresh water fishes using gonadotrophin releasing hormone are in progress, at farmers' fields.

#### On Farm Testing

On farm testing trials of performance evaluation of nutmeg variety *Viswasree* in coconut garden, white pepper production using bacterial fermentation, induction of flowering in Olour Mango through application of paclobutrazol in combination with INM and IPM, fertility in anoestrus cows following controlled Intravaginal Drug Release Device (CIDR), bio-seed assay for pregnancy testing in cattle, GNRH treatment and double AI for management of repeat breeding cows, use of live feed in rearing of ornamental fishes, culture of fresh water fishes using low cost feed and testing of value added products of nutmeg pericarp are at various levels of progress.

## Publications

#### Research papers

Ankegowda S J, Venugopal M N, Krishnamurthy K S & Anandaraj M (2011) Impact of basin irrigation on black pepper production in coffee based cropping system in high altitude, Kodagu, District, Karnataka. Indian Journal of Horticulture 68(1):71-74.

Dhanya K, Syamkumar S, Siju Senan & Sasikumar B (2011) SCAR markers for adulteration detection in ground chilli. British Food Journal 113 (5): 656-668.

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Elizabeth Thomas, Zachariah T J, Syamkumar S & Sasikumar B (2011) Curcuminoid profiling of Indian turmeric. Journal of Medicinal and Aromatic Plant Sciences 33: 36-40.

Jayashree E & Visvanathan R (2011) Physical and biochemical parameters of fresh and dry ginger (*Zingiber officinale* Roscoe). Journal of Spices and Aromatic Crops 20(1):14-21.



Jayashree E & Visvanathan R (2010) Studies on mechanical washing of ginger rhizomes (*Zingiber officinale*). Journal of Agricultural Engineering 47(4): 27-30.

Kandiannan K, Utpala Parthasarathy, Krishnamurthy K S, Thankamani C K, Srinivasan V & Aipe K C (2011) Modeling the association of weather and black pepper yield. Indian Journal of Horticulture 68(1): 96-102.

Kizhakkayil J and Sasikumar B (2011) Diversity, characterization and utilization of ginger: A review. Plant Genetic Resources:C&U, 9:464-477.

Nair R R, Shiva K N, Srambikkal, Anchu & John Zachariah T (2010) Characterization of open-pollinated seedling progenies of turmeric (*Curcuma longa* L.) based on chromosome number, plant morphology, rhizome yield and rhizome quality, Cytologia 75: 443-449.

Sindhu S, Chempakam B, Leela N K & Suseela Bhai R (2011) Chemoprevention by essential oil of turmeric leaves (*Curcuma longa* L.) on the growth of *Aspergillus flavus* and aflatoxin production. Food and Chemical toxicology, 49: 1188-1192.

Thankamani C K, Srinivasan V, Krishnamurthy K S & Kandiannan K (2011) Effect of *Azospirillum* sp. and nutrients on yield of black pepper, Journal of Spices and Aromatic Crops 20(1): 9-13.

### Popular articles

Arumuganathan T (2011) Innovation of a Nutmeg farmer (2011) Spice India 24(5): 26-27.

Arumuganathan, T (2011) Bush pepper for harvesting pepper in the upstairs, 101 Success stories, published by ATMA, Calicut and Mathrubhumi.

Arumuganathan, T (2011) Cheruvally style – A new hope for pepper cultivation, 101 Success stories, published by ATMA, Calicut and Mathrubhumi.

Arumuganathan, T (2011) Participatory seed production in ginger and turmeric – A Success story, 101 Success stories, published by ATMA, Calicut and Mathrubhumi.

Arumuganathan T (2011) A comprehensive model for nutmeg cultivation, 101 Success stories, published by ATMA, Calicut and Mathrubhumi.

Arumuganathan T (2011) Puthu Chittayil ee Adu Jeevitham, Madhyamam Daily, 4 February 2011.

Arumuganathan T (2011) Spawning Success Stories with backyard aquaculture, In: Farmers' notebook, The Hindu daily, 16 June 2011.

Arumuganathan T (2011) Backyard freshwater prawn hatchery: Scientific intervention paved the way for success, ICAR website: 20 June 2011.

Manoj (2011) New approaches in fish farming. Mathrubhumi, 18 February 2011.

Parthasarathy V A, John Zacharia T and Jayashree E (2011) Managing spices in a better way for marketing. Indian Horticulture, 56(3):33-40.

Pervez R & Eapen S J (2011) Kalimirch mein sutrkirmiyoon ki samsya evam samadhan. Phal Aur Phool (ICAR), pp.13-18.

Sasikumar B & Thankamani C K (2011) Prathibha's prathibha. Spice India, 24(4);13-16.

Thankamani C K (2011) Organic Ginger, Krishi-anakanam 15 (3&4): 75-76.

### Book chapters

Eapen S J (2010) Nematode infestation in spice cultivations. In: *Nematode Infestations Part II: Industrial Crops*. pp. 82-119. Eds. M.R. Khan and M.S. Jairajpuri, The National Academy of Sciences, Allahabad, India.

Kandiannan K & Thankamani C K (2011) Propagation Technologies of rhizomatous Spices. pp. 93-104. In : (B P Singh, V K Dua and Brajesh Singh (eds.) Production of Disease free quality planting material propagated through tubers and rhizomes, CPRI, Shimla.

Prasath D, Saxena R P & Anandaraj M (2011) Diseases of Coriander and their management. In: Plant Disease Management in Horticultural Crops, Eds. Shahid Ahamad, Ali Anwar and P K Sharma, Daya Publishing House, New Delhi, pp. 43-62.

Parthasarathy V A, Srinivasan V, Kandiannan K & Sheeja T E (2011) Status of Indian Spices and Scope in 21st Century. In: (EV Divakara Sastry, Dharendra Singh and S S Rajpur (eds.) Spices and Aromatic Plants: Status and Improvement. Pointer Pub., Jaipur. pp. 1-15.

Parthasarathy V A, Prasath D & Kandiannan K (2011) Seed production systems in ginger and turmeric – Present status and future prospects. pp. 17-24. In : (B P Singh, V K Dua and Brajesh Singh (eds.)



Production of Disease free quality planting material propagated through tubers and rhizomes, C P R I, Shimla.

Srinivasan V, Sangeeth K P, Samsudeen M, Thankamani C K, Hamza S, Zachariah T J & Kumar A (2010) Evaluation of organic management system for sustainable production of turmeric. In: Singh H P, George V Thomas (Eds.), Organic Horticulture - Principles, Practices and Technologies. Westville Publishing House, New Delhi, pp. 171-176.

### Training manual

Eapen S J, Bhai R S & Pervez R (2011) Isolation and identification of soil-borne Fungi and Nematodes Associated with Black Pepper, Training for research workers of Sugandhi Project, 29 pp.

### Papers presented in symposia/ seminars/ workshops /conferences

**45<sup>th</sup> Annual Convention of Indian Society of Agricultural Engineering and International Symposium on Water for Agriculture, Dr Panjab Rao Deshmukh Krishi Vidyapeeth, Akola, Nagpur, 17-19 January 2011.**

- Studies on Development of semi mechanical power operated brush type ginger peeler (Jayashree E & Visvanathan R).
- Studies on development of concentric drum brush type ginger peeler (Jayashree E & Visvanathan R).

**National Seminar on Climate Change and Food Security: Challenges and opportunities for tuber crops, CTCRI, Trivandrum, 20 - 22 January 2011.**

- Effect of die temperature and extruder screw speed on extrusion characteristics of cassava and

ginger blend (Evangelin F P P, Sheriff J T, Jayashree E & Zachariah T J).

**13<sup>th</sup> Indian Agricultural Scientists and Farmers Congress on Sustainable Developmental Strategies for Food Security, Biodiversity and Livelihood Security, Allahabad, 19-20 February 2011.**

- A new species of entomopathogenic nematode *Steinernema ramani* (Rhabditida: Steinernem-atidae) from ginger (*Zingiber officinale* Rosc.) (Per-vez R, Eapen S J, Devasahayam S & Jacob T K).

**Training Workshop on Increasing Production and Productivity of Major Spice Crops with Special Reference to Assam, 3-4 March 2011, Kahikuchi.**

- Integrated management of insect pests and diseases of spice crops (Devasahayam S).

**Production of Disease-free quality planting material propagated through tubers and rhizomes, CPRI, Modipuram (Meerut), 4-5 March 2011.**

- Seed production systems in ginger and turmeric – Present status and future prospects (Kandiannan K).
- Propagation Technologies of rhizomatous spices (Kandiannan K).

**Interactive Workshop Series-4, National Academy of Biological Sciences, PRIST University, Thanjavur, Tamil Nadu, 12-13 March 2011.**

- Advances in biotechnology of spices (Parthasarathy V A, Prasath D & Nirmal Babu K).

### PhD awarded

Name	Title of thesis	University	Guide
S T Rethesh	Development of transgenic vanilla ( <i>Vanilla planifolia</i> Andrews) resistant to <i>Cucumber mosaic virus</i>	Mangalore University	A I Bhat



**Silver Jubilee Symposium on Bioinformatics, Centre for Bioinformatics, Pondicherry University, Pondicherry, 2 February 2011.**

- EST based secretome analysis of burrowing nematode, *Radopholus similis* (Sangeetha K, Riju A, Rosana O B, Chandrasekar A, Reena N & Eapen S J).

**IFT Annual Meeting & Food Expo, Food Chemistry: Product development and Ingredient Innovation, New Orleans, Louisiana, USA, 11-14 June 2011.**

- Quality profile of black pepper during grinding and storage (Zachariah T J , Leela N K, Sangeetha P S).

**National consultation for Production and Utilization of Orchids, NRC for Orchids, Pakyong, E.Sikkim, India, 19-22 February 2011.**

- A GIS Interpretation of Diversity of Cymbidium Swartz in Sikkim (Barman D, Medhi R P, Utpala Parthasarathy, Jayarajan K & Parthasarathy V A).

**Second International Symposium on Underutilized Plant Species - Crops for the Future: Beyond Food Security, 27 June – 1 July, Kuala Lumpur, Malaysia.**

- Diversity of Indian Garcinia – A Medicinally Important Spice Crop in India (Utpala Parthasarathy, Nirmal Babu K, Senthil Kumar R, Asish G R, Simi Mohan & Parthasarathy V A).

## Promotion

Name	Promoted as	Posted at	w.e.f.
Dr. T. John Zachariah	Head , Division of Crop Production and Post Harvest Technology	IISR, Calicut	04-06-2011
Dr. K. M. Prakash	Subject Matter Specialist T-9	KVK, Peruvannamuzhi	10-12-2008

## Transfer

Name	From	To	w.e.f.
Dr. E. Jayashree , Scientist (Sr. Scale)	IISR, Experimental farm, Peruvannamuzhi	IISR, Calicut	09-05-2011
Dr. T. R. Usharani, Scientist	CRC, Appangala	IIHR, Bangalore	24-05-2011
Mr. P. N. M. Nair, Administrative Officer	IISR, Calicut	PDADMAS, Bangalore	07-05-2011
Mr. V. L. Jacob, AF & ACO	IISR, Calicut	CIBA, Chennai	04-04-2011
Mrs. M. Seema, LDC	IISR, CRC, Appangala	IISR, Calicut	09-06-2011



## New Appointments

Name	Designation	Date of joining
Dr. T. Arumughanathan	Programme Coordinator (KVK)	29-04-2011
Mr. V. Mohanan	Administrative Officer	09-05-2011
Mr. D. Chethan	LDC, CRC, Appangala	30-05-2011

## Retirement

Name	Designation	w.e.f.
Dr. V.A. Parthasarathy	Director	30-06-2011
Mr. P. K. Balan	Tractor Driver (T-I-3)	31-03-2011
Mr. M. Choyikutty	Skilled Support Staff	31-01-2011
Mr. P. Damodaran	Skilled Support Staff	28-02-2011
Mr. P. Kunhikrishnan	Skilled Support Staff	31-05-2011
Mr. E. K. Nanu	Skilled Support Staff	31-05-2011
Mr. P. Bhaskaran	Skilled Support Staff	31-05-2011
Mr. Chandran	Skilled Support Staff	30-06-2011

## Distinguished visitors

Ms. Sudha Midha	Adviser (Hort.), Dept. of Agrl. Co-operation, Ministry of Agric., Govt. of India	29.01.2011
Dr. Badri Singh Bhandari	Adviser, Dept. Agrl. Co-operation, Govt. of India	29.01.2011
Mr. Pramod Kumar	Assistant Director, Ministry of Statistics and Programme Implementation, Sardar Patel Bhawan, Sansad Marg, New Delhi	29.01.2011
Dr. Akira Miyazki	Scientist, Kochi University, Japan	28.02. 2011
Dr. Yoshinori Yamamoto	Scientist, Kochi University, Japan	28.02. 2011
Dr. Tetsushi Yoshida	Scientist, Kochi University, Japan	28.02. 2011
Dr. S. Ayyappan	Secretary, DARE & DG, ICAR, New Delhi	01.05.2011
Dr. H.P. Singh	DDG (Hort.), ICAR, New Delhi	26.06.2011

**Ms. Shyna K. S.**  
with  
**Dr. Deepesh K. P**  
1 May 2011.

*Wedding*



**Obituary**  
Shri. K.G. Poonacha  
Junior Technical Assistant T1  
CRC, Appangala  
7 May 11.



## DG visits IISR, Kozhikode



■ Dr. Ayyappan visiting the Experimental Farm, Peruvannamuzhi. Seen are Dr. Ayyappan (DG), Dr. P. A. Mathew, Dr. K. V. Saji, Dr. M. Anandaraj, Mr. B. Krishnamoorthi, Dr. V. A. Parthasarathy (Director), Dr. K. Kandianan and Mr. V. K. Abubacker.

Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi visited the main campus and Experimental farm, Peruvannamuzhi, during 30 April - 1 May 2011. Director General while addressing the Scientists and

staff members stressed the importance of secondary agriculture and the need for on-farm mechanization. He also visited the Krishivigyan kendra, Peruvannamuzhi.

## Retired Staff



Mr. Kunhikrishnan Mr. Bhaskaran Mr. Choyikutty Mr. Damodaran Mr. Balan Mr. Nanu Mr. Chandran

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