



# SPICES NEWS



Indian Institute of Spices Research  
Marikunnu (P.O.), Calicut, Kerala, India. [www.spices.res.in](http://www.spices.res.in)

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## Outstanding ICAR Institution award for IISR

The Institute bagged prestigious **Sardar Patel Outstanding ICAR Institution Award** for the year 2009 for its outstanding performance in agricultural research, extension and education. This is the second time Indian Institute of Spices Research, Calicut, is being adjudged as the best ICAR Institution. The award was given in recognition to the contribution in five major areas like conservation of largest germplasm and microbial collection in the world, good agricultural practices, application of GIS in spice biodiversity, introduction of office automation software and excellent transfer of technologies. The Institute had bagged the coveted award in the year 1999 earlier. Dr V A Parthasarathy, Director of the Institute received the award during the ICAR foundation day and award ceremony held at NASC complex, New Delhi.



Dr V A Parthasarathy, Director, receiving award from Sharad Pawar, Union Minister for Agriculture, Consumer Affairs, Food & Public Distribution

### Inside

01 **Research update**

02 **Personalia**

07 **News and Events**

10 **Transfer of Technology**

12 **Publications**

## Research update

### Cardamom

Field Gene Bank of cardamom was enriched with 103 new accessions, of which 73 accessions were collected from KAU, Pampadumpara and 30 accessions from RRS, Mudigere. Sixty seven accessions of cardamom were screened under natural conditions for leaf blight and rhizome rot resistance.

Based on electron microscopic studies the causal agent of *kokke kandu* disease showed a close resemblance with the *Nano virus*. Primers were designed to confirm the presence of *Nano virus* in the samples infected with *kokke kandu* disease, and *Carla virus* in the samples infected with *Nilgiri Necrosis* disease.

### Management of Leaf Spot Diseases

One hundred isolates of *Colletotrichum* were characterized based on morphological characters, of which, five *Colletotrichum gloeosporioides* isolates infecting black pepper and cardamom were short listed for pathogenicity studies. Three *C. gloeosporioides* isolates resistant to Bordeaux mixture and Carbendazim were collected from three black pepper plantations in Kodagu. Three fungicides, one plant extract and two *Trichoderma* spp. were promising in laboratory bioassays and are being evaluated in the field.

### Rhizome rot and root-rot pathogens of cardamom and their antagonists

Surveys were carried out in Wayanad and Idukki districts of Kerala, Valparai in Tamil Nadu and Hassan and Kodagu districts of Karnataka and thirty isolates of *Trichoderma* spp. were isolated from the soil samples. Forty two fungi were isolated from the rhizome-rot and root-rot disease affected samples collected from different locations during the survey. The fungi included *Rhizoctonia solani*, *Fusarium oxysporum*, *Fusarium solani*, *Fusarium* spp., *Colletotrichum* spp., *Pythium vexans*, *Botryodiplodia theobromae* and six unidentified cultures.

### Outreach Project on *Phytophthora*

*Phytophthora capsici* ESTs were completely assembled and annotated. A total of 223 SSR markers were identified for *Phytophthora* diversity analysis. Gene mining for elicitors, NBS-LRR resistance genes has been done. Extracellular effector proteins were identified in *P. capsici* through EST mining and secretome analysis. Studied the mode of interaction of Glucanase Inhibitor Protein (GIP) from *P. capsici* with plant endo- $\beta$ -1, 3-glucanases through structural and docking studies.

Two new tools were developed and added to the PhytoFuRa portal ([www.phytofura.net.in](http://www.phytofura.net.in)). They are **Phytolib**, a bibliographical service from Indian Institute of Spices Research, Calicut, on latest literature on *Phytophthora*, *Fusarium* and *Ralstonia*, and **PhytoPD**, a repository of Polymerase Chain Reaction primer sets for the identification and detection of *Phytophthora* species.

### Characterization of Banana bract mosaic virus infecting cardamom:

Coat protein gene of five isolates of Banana bract mosaic virus (BBrMV) infecting cardamom were cloned and sequenced. Sequence analysis with all available BBrMV isolates infecting banana and cardamom showed an identity ranging from 83-100% and 95-100% with nucleotide and amino acid sequence respectively. In a survey of 76 cardamom plantations in 41 locations of Kerala, Karnataka and Tamil Nadu, incidence of the disease ranged from 0-15%. A reliable RT-PCR based method was also developed for detection of the virus in plants.

### Application of Microorganisms in Agriculture and Allied Sectors

The strains GRB 68 (*Serratia marcescens*) and GRB 35 (*Bacillus amyloliquefaciens*) were found to enhance the sprouting of rhizomes besides reducing the soft rot and bacterial wilt in ginger. Antibiotic obtained from GRB 68 was found to inhibit *Phytophthora capsici*, *Pythium myriotylum* and *Ralstonia solanacearum*.

Three rhizobacterial isolates (BRB 3, BRB 13 and BRB 23) with different combinations of NPK was found to promote the growth in black pepper plants. The results on growth parameters revealed that the treatments 100% N + 100% P + 100% K+ BRB 3 and 100% N + 100% P + 100% K+ BRB 13 showed maximum height followed by 100% N + 100% P + 75% K + BRB 23.

## Personalialia

### Awards/ Honours/ Recognitions

#### Anandaraj M

Fellow, Indian Society for Seed Spices.

Scroll of Honour by Indian Phytopathological Society for the services rendered as President, Southern Zone.

#### Devasahayam S

Fellow, Indian Society for Plantation Crops.

### **Jiby M V & Ishwara Bhat A**

M J Narasimhan Academic Merit Award for the research paper entitled 'Development of *Agrobacterium* mediated transformation protocol and transgenic lines of black pepper for resistance against viruses', presented at the Indian Phytopathological Society Annual Meeting, Gujarat Agricultural University, Anand, 14 – 16 December, 2010.

### **Krishnamoorthy B**

Hindi Protsahan Puraskar – 2010.

### **Parthasarathy V A**

Expert, Consultative Group, Geographical Indications Registry, Government of India, Ministry of Commerce & Industry, Controller General of Patents, Designs, Trade Marks, ST Road, Guindy, Chennai.

Expert, Dr R S Paroda Committee on ARS Disciplines.

### **Rashid Pervez**

Best Participant Award of the ICAR sponsored Summer School on 'Advances in Entomopathogenic Nematodes for Eco-Safe and Economic Pest Management', Rajasthan College of Agriculture, MPUA & T, Udaipur, Rajasthan, 14 September – 4 October 2010.

### **Riju A, Sithara K, Balaji S, Suja SN, Sathyanath V, Dhanya KP, Anil Paul, Shamina A& Eapen SJ**

Best Research Paper (Poster) Award for the paper entitled 'PASSCOM – A database of secondary metabolites of spices' in the National Consultative Meet on Bioinformatics in Horticulture (Hortinformatics – 2010), IISR, Calicut, 11–12 October 2010.

### ***Deputation abroad***

#### **Krishnamurthy K S**

Deputed for NAIP sponsored International training on 'Sensor-based applications including bioindicators (Horticulture)' to the Department of Agricultural and Biological Engineering, Purdue University, West Lafayette, Indiana, USA, 15 July – 14 October 2010.

### **Shamina Azeez**

Deputed for NAIP sponsored Overseas Training programme in Nutraceuticals (Horticulture), to the Department of Food Sciences Louisiana State University, Baton Rouge, USA, 19 August-21 November, 2010.

### **Srinivasan V**

Deputed for NAIP foreign training on 'Carbon sequestration and Climate change' to the Carbon Management and Sequestration Centre (CMASC), Ohio State University, Columbus, Ohio, USA, 15 July 2010 – 14 October 2010.

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

#### **All scientists**

National Consultative Meet on Bioinformatics in Agriculture (Hortinformatics-2010), IISR, Calicut, 11 – 12 October 2010.

Symposium on Changing Plant Disease Scenario in Relation to Climate Change, Indian Phytopathological Society (Southern Zone), IISR, Calicut, 22 – 23 October 2010.

#### **Ankegowda S J**

Participated in a team for evaluation of plant varieties of spices for the sixth biennial competition of National Innovation Foundation, 26 September – 1 October 2010.

Farmer-Scientists' Interaction in Krishi Utsav programme, Hethur Hobli of Saklespura, Hassan District, 14 October 2010.

Farmer-Scientist Interaction in Farmers' Seminar organized by Hassan Planters Association, Hosur, Shanivarsanthe, Hassan District, 2 November 2010.

Krishimela – 2010 organized by Agriculture Research Station and Forestry College, Ponnampet, UAS, Bangalore, 3 – 4 December 2010.

#### **Ankegowda S J**

##### **Bhat A I**

##### **Devasahayam S**

International Pepper Community-Pepper Technology Meeting, Cochin, organized by IPC,

Jakarta and Spices Board, India, 10 November 2010.

**Ankegowda S J**  
**John Zachariah T**  
**Kandiannan K**  
**Senthil Kumar R**

XXI Group meeting of AICRP (Spices), NRC for Seed Spices, Ajmer, 5–6 July 2010.

**Anandaraj M**  
**Bhat A I**  
**Chempakam B**  
**Kandiannan K**  
**Parthasarathy V A**  
**Rajeev P**  
**Srinivasan V**  
**Utpala Parthasarathy**

International Conference on Coconut Biodiversity for Prosperity, CPCRI, Kasaragod, 25–28 October 2010.

**Bhat A I**

Role of Transgenics in Shaping Indian Agriculture, IARI, New Delhi, 23 July 2010.

**Biju C N**  
**Santhosh J Eapen**

Meeting on Showcasing of Potential Technologies of Institute for Commercialization at Horticulture-Industry meet, IIHR, Bangalore, 11 November 2010.

**Chempakam B**  
**Dinesh R**  
**Parthasarathy V A**  
**Thankamani C K**

Meeting on 'Sugandhi'-Integrated Pepper Development Project, RARS, Ambalavayal, 3 September 2010.

**Devasahayam S**

Brainstorming Meeting on Making IPM Effective in India, New Delhi, 29 September 2010.

Consultative Meeting on Centre-State Technology Partnership, Trivandrum, 6 November 2010.

Zonal Institute Technology Management Committee Meeting, Kochi, 10 December 2010.

**Dinesh R**

Project Launch Workshop on Soil-based nutrient management plan for different agro ecosystems of Kerala, Trivandrum, 4 August 2010.

Consortium Advisory Committee meeting on Multienterprise farming models to address the agrarian crisis of Wayand District, RARS, Ambalavayal, 27 September 2010.

**Dinesh R**  
**Srinivasan V**

Interface meeting for data sharing, management, strengthening, and integration of databases, NASC Complex, New Delhi, 23 – 24 November 2010.

**Hamza S**  
**Suseela Bhai R**

Research-Extension Interphase, KVK, Ambalavayal, 19 November 2010.

**Jacob T K**

Training on Employer's perspective on labour-related laws. NAARM, Hyderabad. 11-13 November 2010.

**Jayarajan K**

Sensitization cum Training Workshops for the Nodal Officers of PIMS-ICAR, NAARM, Hyderabad, 25 October 2010.

Interactive Meet on Information and Communication Technology in ICAR, NASC Complex, New Delhi, 3 – 4 November 2010.

**John Zachariah T**

CAC and CIC meeting of NAIP on Cryogenic grinding, IASRI, New Delhi, 29 – 30 July 2010.

Workshop on Post Harvest Management organized by Kerala Social Service Forum, AMOS Centre, Kottayam, 30-31 August 2010.

**Johnson George K**

Task force meeting for finalization of DUS test guidelines on plantation crops, CPCRI, Kasargod, 28-29 June 2010.

Consultation meeting on Biotechnology Research in ICAR, NASC Complex, New Delhi, 26-27 July 2010.



Genomic applications in Plant breeding and Genetics, GKVK, Bangalore, 2 July 2010.

Review workshop on the conduct of DUS test, NAARM, Hyderabad, 11–12 August 2010.

**Johnson George K  
Parthasarathy VA**

Project Appraisal Committee Meeting and Review of the projects funded by PPV&FRA, NASC Complex, New Delhi, 14 September 2010.

**Krishnamoorthy B**

Fourth Sixth Town Official Language Implementation Committee Meeting, Calicut, 27 September 2010.

XII Meeting of Scientific Advisory Committee of KVK, 25 June 2010.

**Leela N K**

Launch of Nexera - Next generation UHPLC systems, Spincho Biotech, Kochi, 17 September 2010.

**Parthasarathy VA**

Dr R S Paroda Committee Meeting on ARS disciplines, New Delhi, 26 November 2010.

Agricultural Seminar and Conference of Officers, Chennai, 24 November 2010.

ICAR-Industry Meet, New Delhi, 28-29 July 2010.

National Symposium on Molecular Approaches for Management of Fungal Diseases of Crop Plants, Bangalore, 28 December 2010.

Global Conference on *Musa*, NRC Banana, Trichy, 10-11 December 2010.

**Rajeev P**

National ATIC review committee meeting, NASC Complex, New Delhi, 3 July 2010.

The Public-Private interface organized by ICAR, IIHR, Bangalore, 10 November 2010.

IV Indian Horticulture Congress, NPL, New Delhi, 18–21 November 2010.

**Santhosh J Eapen**

Meeting of Research guides, Kannur University, Mangattuparamba, Kerala, 10 June 2010.

One day Partners Meet of National Agricultural Bioinformatics Grid, NBPGR, New Delhi, 7 August 2010.

Brainstorming on Bioinformatics, NBAIM, Bangalore, 9 August 2010.

Doctoral Committee Meeting, School of Life Sciences, Kannur University, Palayad, Tellicherry, 15 September 2010.

**Suseela Bhai R**

**Thankamani C K**

Group meeting on Pepper Rehabilitation Package for Wyanad District, Wyanad, 3 November 2010.

**Thankamani C K**

Review meeting of NHM Scheme, Hyderabad, 4 – 5 August 2010.

National Seminar on Resource management approach towards livelihood security, Bangalore, 2 – 4 December 2010.

***Participation in trainings***

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**Aboobacker Koya V K**

**Jacob T K**

Training programme on Application of labour laws, NAARM, Hyderabad, 8 - 9 November 2010.

**Jayarajan K**

Training programme on SAS software packages, UAS, GKVK, Bengaluru, 13 December–18 December 2010

**Jayashree E**

**Suseela Bhai R**

General Management Programme for Middle & Senior Level Women Scientists, ASCI, Hyderabad, 22 November - 3 December 2010.

**Praveena R**

Training programme on Viral Genomics and Transgenic Development, IARI, New Delhi, 8 - 28 September 2010

**Rashid Pervez**

ICAR sponsored Summer School on Advances in Entomopathogenic Nematodes for Eco-Safe and Economic Pest Management, Department of

Nematology, Rajasthan College of Agriculture, MPUAT, Udaipur, Rajasthan, 14 September – 4 October 2010.

### Santhosh J Eapen

Training programme on 'Unlocking the Power of Knowledge Management in the Smart Enterprise' I I M, Kozhikode, 16 - 18 August 2010.

### Utpala Parthasarathy

DST Sponsored programme on Science Administration and Research Management, ASCI, Hyderabad, 6-17 September 2010.

### *Lectures delivered*

#### Anandaraj M

*Biopriming of planting materials with PGPR and induced systemic resistance*, International Conference on Coconut Biodiversity for Prosperity, CPCRI Kasaragod, 25-28 October 2010.

*Bioformulations and their prospects for commercialization*, Winter school on Harnessing the potential of biopesticides against pests and diseases, its implications in sustainable crop protection, TNAU, Coimbatore, 19 October 2010.

*Management of soil borne diseases*, TNAU, Coimbatore, 20 November 2010.

*Journey of seed spices*, Lecture delivered for the Officers of Bodoland Development Authority, Assam, NRC Seed Spices, Ajmer, 6 December 2010.

*New advances in wilt management in banana*, Global conference in banana, NRC Banana, Trichy, 10-13 December 2010.

*Genetic diversity in Phytophthora – the Oomycete plant pathogen*, National Conference on Perspective in the Plant Health Management, Anand Agricultural University, Anand, Gujarat, 15 December 2010.

#### Ankegowda S J

*Scientific cultivation practices in black pepper*, Seminar organised by Rotary Club, Saklespura, 7 December 2010.

*Scientific cultivation practices of black pepper, ginger and cardamom*, organized by Agriculture

Research Station and Forestry College, Ponnampet, UAS, Bangalore, 3 – 4 December 2010.

### Chempakam B

*Coconut oil – facts and fallacies*, International Conference on Coconut Biodiversity for Prosperity, CPCRI, Kasaragod, 25 – 28 October 2010.

### Hamza S

*Importance of soil health management*, Research-Extension Interface conducted by State Agricultural Department, KVK, Ambalavayal, 19 November 2010.

### Leela N K

*Spices-chemistry and functional properties*, Department of Chemistry, Little flower College, Guruvayur, 7 December 2010.

### Santhosh J Eapen

*Scientific Publishing - Tools from the Internet*, Workshop on Scientific Methods and Writing, CIFNET, Kochi, 7 July 2010.

*Orienting towards Open Access Publishing*, Workshop on Scientific Methods and Writing, CIFNET, Kochi, 7 July 2010.

*Scholarly Publishing: an open access policy for IISR*, IISR, Calicut, 17 September 2010.

*Biology to Bioinformatics*, Winter School on Vistas in Marine Biotechnology, CMFRI, Kochi, 20 October 2010.

### Utpala Parthasarathy

*A Comparative study of coconut area of coastal and inland riverine ecosystem with satellite imagery*, International Conference on Coconut Biodiversity for prosperity, CPCRI, Kasargod, 25 – 28 October 2010

## TV Programme

### Chempakam B

Nutritional and Nutraceutical properties of turmeric, Shalom TV, 26 December 2010.

### John Zachariah T

Nutritional and Nutraceutical properties of ginger, Shalom TV, 28 November 2010.

**John Zachariah T**  
**Sasikumar B**

'Prathibha turmeric' - Success story of Mr. Nabeel, Gundalpet, Karnataka, 'Harithakeralam' Jeevan TV, 23 September 2010.

**Leela N K**

Nutritional and Nutraceutical properties of cardamom, Shalom TV, 21 November 2010.

**Sasikumar B**

Nutritional and Nutraceutical properties of black pepper, Shalom TV, 12 December 2010.

**Radio talk**

**Aiswariya K K**

Integrated pests and disease management in Banana (Mal.), AIR, 4 November 2010.

Ways to control residual effect of pesticides in vegetables (Mal.), AIR, 14 November 2010.

**Ankegowda S J**

Planting and after care in cardamom and black pepper (Mal.), AIR, 15 June 2010.

**John Zachariah T**

Food adulteration and synthetic food colours (Mal.), AIR, Calicut, 21 October 2010.

**Mathew P A**

Grafting techniques in nutmeg improve productivity (Mal.), AIR, Calicut, 27 October 2010.

**Pradeep B**

Breeding and culture of Ornamental fishes (Mal.), AIR, Calicut, 19 October 2010.

**Prakash K M**

Control of soft rot and other diseases of ginger (Mal.), AIR, Calicut, 19 July 2010.

Bush pepper cultivation technique (Mal.), AIR, Calicut, 16 October 2010.

**Rajeev P**

Scientific cultivation of turmeric (Mal.), AIR, Calicut, 3 December 2010

**Santhosh J Eapen**

Biological control in spices (Mal.), AIR, Calicut, 7 November 2010.

**Sasikumar B**

Ginger varieties from IISR, Calicut (Mal.), AIR Calicut, 27 November 2010.

**Shanmugavel S**

Broiler goat rearing (Mal.), AIR, 3 November 2010.

**News and events**

***Workshop of AICRP on Spices***

The XXI Workshop of All India Co-ordinated Research Project on Spices was held at National Research Centre on Seed Spices, Ajmer, Rajasthan, during 5–6 July 2010. Dr H P Singh, Deputy Director General (Horticulture), ICAR, New Delhi, inaugurated the workshop. Dr H P Singh, DDG (Hort.) in his inaugural address stressed the need for reorientation of co-ordinated research on spices to address emerging challenges like climate change that may affect agriculture particularly horticulture in temporal and spatial scale in long term. Dr M M Anwar, Director, NRCSS welcomed the dignitaries. Dr Umesh Srivastava, Asst. Director General (Hort. II), ICAR and Dr G B Raturi, former Director, NRCSS, felicitated the delegates. Dr Umesh Srivastava stressed the importance of spices in Indian economy and urged to enhance the productivity.

Dr M Anandaraj, Project Co-ordinator (Spices), highlighted various new research programmes undertaken and the accomplishments made by AICRPS in the 34 research centres located in 21 States of India under 21 State/Central Universities (SAU's) and Research Institutes.



AICRPS in progress

One variety of fennel RF-145 from SKN College of Agriculture, Jobner, Rajasthan was considered for National release, to the States of Rajasthan, Gujarat, Uttar Pradesh, Haryana and Bihar. New technologies identified for transfer to extension agencies included management of *Phytophthora* foot rot in black pepper and management of soft rot in ginger under both organic and inorganic farming systems; management of blight and wilt of cumint; production technology for fennel, coriander and fenugreek using *Rhizobacteria* and technology for off-season production of coriander during summer.

### ***National Symposium on Changing Plant Disease Scenario in Relation to Climate Change***

A National Symposium jointly organized by the Indian Phytopathological Society (Southern Zone) and Indian Institute of Spices Research, Calicut, was held on 'Changing plant disease scenario in relation to climate change', at the Institute during 22–23 October.

Dr V A Parthasarathy, Director, Indian Institute of Spices Research, Calicut, inaugurated the symposium and gave inaugural address on 'Geophytopathology'. Dr M Anandaraj, Zonal President, gave presidential address on the topic, 'Challenges posed by climate change for plant pathologists'.

Seventy delegates representing various Research Institutes, Colleges and Universities from Karnataka, Kerala and Tamil Nadu participated.



Dr V A Parthasarathy, Director, Indian Institute of Spices Research, Calicut, lighting the lamp during the inauguration of symposium

### ***Inauguration of New Administrative Block***

Dr H P Singh, DDG (Hort.) inaugurated the new administrative block at Chelavoor campus on 11 September 2010.



Dr H P Singh, DDG (Hort.) lighting the lamp during the inauguration of New Administrative Block

### ***Institute Research Committee Meeting***

Midterm IRC meeting was held during 30 November -1 December 2010 and the progress of all on-going research projects of the Institute, including externally funded projects was discussed under the chairmanship of Dr. V. A. Parthasarathy, Director, IISR, Calicut.

### ***Vigilance Awareness Week***

The Vigilance Awareness week was observed during 25 October–2 November 2010 at the Chelavoor campus, Experimental Farm, Peruvannamuzhi, and Cardamom Research Centre, Appangala. The programme was initiated on 25



October 2010 with a pledge by all the staff to eradicate corruption in all spheres of life. Posters on vigilance awareness were prominently displayed at the Institute and its centres. Competitions on slogan writing, cartoon drawing, quiz, elocution and debate were held for the staff on the occasion. An essay competition for school children was also held at Peruvannamuzhi. The valedictory functions at Peruvannamuzhi and Appangala were held on 1 November 2010. The valedictory function at Calicut was held on 2 November 2010 and Ms C Sunitha, General Manager (Telecom), BSNL, Calicut, was the Chief guest, who also distributed prizes to the winners of various competitions. Dr V A Parthasarathy, Director, presided over the function.

### ***Institute Management Committee Meeting***

Fifth meeting of VI Management Committee of the Institute was held on 3 December under the chairmanship of Dr V A Parthasarathy, Director, IISR, Calicut.

### ***Institute Joint Staff Council***

The VIII IJSC (2010-2013) of the Institute was constituted on 2 August 2010 with Sri K G Jegadeesan as Secretary (Staff side) and Sri V C Sunil as CJSC Member. The newly constituted IJSC met twice, on 20 September and 14 December under the chairmanship of Dr V A Parthasarathy, Director, to discuss various issues related to staff.

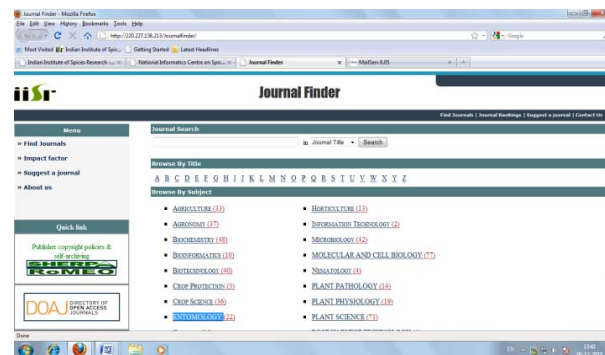
### ***Consultancy Processing Cell***

The revenue generation through Consultancy Processing Cell (CPC) was around Rs. 1.27 lakhs from analysis of soil and manure samples for different nutrients, and analysis of biochemical and biocontrol agents.

### ***News from library***

Six issues of the electronic version of 'AGRI titbits' were published during the period under report and access through internet was activated. DSpice, the institutional repository was registered in ROAR (Registry for Open Access Repositories) and made completely online. Digitization of books was initiated using the Greenstone software. *Journal Finder*, a tool that helps authors to choose

appropriate journal for submission of research papers was made available through the library website. Library added 55 books, 25 technical reports and four project reports during the period. Around 156 external users and 3200 internal users made use of the library facilities.



Home page of Journal Finder

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

The Executive Committee meeting of the Centre was held on 20 August 2010. Sri S Raghavan, Joint Secretary, DBT, New Delhi attended the meeting.



Dr H P Singh, DDG (Hort.) lighting the lamp during the inauguration of Hortinformatics 2010

The centre in collaboration with Department of Biotechnology, New Delhi, organized two-day National Consultative Meet on Bioinformatics in Horticulture (Hortinformatics 2010) during 11–12 October 2010. The Meet was inaugurated by Dr H P Singh, Deputy Director General (Horticulture), ICAR, New Delhi. Dr. Singh released the publication, 'Bioinformatics: An Agricultural Perspective', brought out as a souvenir. The PASSCOM database was launched. The PLASBID database was updated by adding information on new reports.

## SARANI- Staff Recreation Club

A special felicitation programme was arranged on 17 July 2010 by the recreation club when the Institute bagged the 'Sardar Patel Outstanding ICAR Institution Award' for the second time for its outstanding performance in agricultural research, extension and education. Onam was celebrated with gaiety on 17 August 2010. A floral carpet was laid out and several competitions and games were organized, which were followed by the traditional Onam feast. A farewell party was arranged on 29 September 2010, on the occasion of the superannuation of Sri C Padmanabhan, Assistant Administrative Officer.



## हिन्दी अनुभाग

जुलाई से दिसम्बर 2010 का अवाध म 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 रूचि पैदा करने के लिये हिन्दी कार्यशाला का 18 अक्टूबर 2010 में आयोजन किया जिसमें श्री. एन. अरविन्दाक्षन, कर्मचारी भविष्य निधि कार्यालय, कालिकट ने "हिन्दी टिप्पणी एवं मसौदा लेखन" के बारे में व्याख्यान दिया। संस्थान में 14 सितम्बर 2010 को हिन्दी दिवस मनाया गया। इस अवसर पर संस्थान के अधिकारियों तथा कर्मचारियों ने हिन्दी में काम करने की प्रतिज्ञा ली। संस्थान में 1 से 8 नवम्बर 2010 तक हिन्दी सप्ताह मनाया गया। इस दौरान विभिन्न प्रकार की प्रतियोगिताओं जैसे अन्ताक्षरी, टिप्पणी एवं मसौदा लेखन, अनुच्छेद पठन एवं लेखन, हिन्दी गीत, स्मरण परीक्षा का आयोजन किया गया। समापन समारोह की मुख्य अतिथि श्रीमती सेलिन वर्गीस, प्रबन्धक

(राजभाषा), स्टेट बैंक आफ त्रावणकोर, कालिकट एवं सचिव, नगर राजभाषा कार्यान्वयन समिति, कालिकट ने प्रतियोगिताओं के विजेताओं को पुरस्कार वितरित किये। संस्थान में गत वर्ष राजभाषा में अत्यधिक कार्य करने के लिये श्री बी. कृष्णमूर्ति एवं श्रीमती पी. वी. साली को हिन्दी प्रोत्साहन पुरस्कार 2010 तथा डा. उत्पला पार्थसारथी को राजभाषा प्रोत्साहन पुरस्कार 2010 से सम्मानित किया। राजभाषा को प्रोत्साहित करने हेतु तिमाही राजभाषा कार्यान्वयन योजना के अन्तर्गत संस्थान की श्रीमती सी. के. बीना को प्रथम, श्री. के. जी. जगदीशन को द्वितीय तथा श्रीमती पी. वी. साली को तृतीय पुरस्कार से सम्मानित किया गया। नगर राजभाषा कार्यान्वयन समिति द्वारा आयोजित संयुक्त हिन्दी समारोह में संस्थान के कर्मचारियों, सुश्री पी. वी. साली, सुश्री पैना के. एस, सुश्री ई. के. चिंचु, श्री आई. उणिनायर ने भाग लिया।

नगर राजभाषा कार्यान्वयन की उपसमिति की बैठक में डा. राशिद परवेज ने 8 अगस्त 2010 तथा श्री. बी. कृष्णमूर्ति एवं सुश्री एन. प्रसन्नकुमारी ने नराकास की 48 वीं बैठक में 27 सितम्बर 2010 को स्टेट बैंक आफ त्रावणकोर, कालिकट में आयोजित बैठक में भाग लिया। सुश्री एन. प्रसन्नकुमारी ने 29 सितम्बर 2010 को आकाशवाणी, कालिकट द्वारा आयोजित राजभाषा संगोष्ठी में भाग लिया। जनवरी-जून 2010 का "मसाला समाचार" तथा दालचीनी पत्रिका को 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 किया।

## Transfer of Technology

### Agricultural Technology Information Centre

During the period under report three hundred and forty one farmers availed advisory services from the centre. Thirteen farmers' groups comprising of





496 farmers from various states visited the centre. Six hundred and thirty students belonging to thirteen students groups visited the centre as a part of academic tour.

Planting material worth Rs 42,308, bioagents for Rs 3,336 and publications worth Rs 27,940 were sold through the centre. The Institute participated in two farmer fairs - Coconut Biodiversity Fare held in connection with the 'International Conference on Coconut Biodiversity for Prosperity' at Central Plantation Crops Research Institute, Kasaragod, during 24–27, October 2010 and 'Technology Showcasing' at the ICAR-Private Sector Interface at IIHR, Bangalore, on 11 November 2010.

## Krishi Vigyan Kendra

### Front Line Demonstration (FLD)

During the period under report ten FLDs namely, bush pepper production technology, demonstration of HYVs of pepper, demonstration of seed production of HYVs of turmeric, broiler goat rearing, supplementation of bypass fat to dairy cattle, popularisation of *Pangasius sutchi* (Tiger shark or *Assam vaala*) for freshwater fish culture, induced breeding of fresh water fishes using Gonadotropin releasing hormone GnRH, integrated disease management of *Phytophthora* foot rot of black pepper in farmers fields, value added products from pepper-pepper in brine, and value addition and product diversification of nutmeg pericarp are in progress at the Institute.

### On Farm Trial (OFT)

Five on-farm trials viz., assessment of performance of *Viswasree* nutmeg grafts and *Njalipoovan* banana under irrigated coconut garden, induction

of flowering in *Olour* mango through paclobutrazol, growth rate in calves feeding with efficient microbes (EM), use of live feed in rearing of ornamental fishes and culture of fresh water fishes using low cost feed are also in various stages of progress.

### Farmers' Training

A total of 90 on-campus training courses were organized in various disciplines of Crop production, Crop protection, Fisheries, Home Science and Animal Husbandry in which 2465 farmers/farm women participated.

### NAIP Mass media

Under the project, 'Mobilising Mass media support for sharing Agroinformation', a media visit to the



farm of Abdul Nabeel who had taken large scale cultivation of *Prathiba* variety of turmeric at Gundalpet in Karnataka was organized on 14

September 2010. Following this another media visit was organized on 30 October 2010 to the farms of four farmers of Kodagu district in Karnataka, who had taken up technology management and advisory services from



Cardamom Research Centre, Appangala.

Journalists from leading news papers and TV channels participated in the visit and wide coverage was given in News papers and TV channels. The third media visit was organized on 29th December 2010, in collaboration with CPCRI, Kayamkulam Station to four farmers fields who have successfully adopted coconut-based integrated farming and post harvest technologies.

## Publications

### Review

Sasikumar B (2010) Vanilla breeding - a review. *Agricultural Reviews* 31:139-144.

### Research articles

Asish G R, Utpala Parthasarathy & Nithya N G (2010) Standardization of DNA isolation and PCR parameters in *Garcinia* spp. for RAPD analysis. *Indian Journal of Biotechnology* 9: 424-426.

Bhai R S, Sithara Raj & Kumar A (2010) Influence of soil pH and moisture on the biocontrol potential of *Trichoderma harzianum* on *Phytophthora capsici* – black pepper system. *Journal of Biological Control* 24 (2):153-157.

Bhai R S, Eapen S J, Anandaraj M & Saji K V (2010) Identification of *Phytophthora* and nematode resistant source from open pollinated progenies of black pepper (*Piper nigrum* L.) using a modified protocol. *Indian Journal of Agricultural Sciences* 80 (10): 893-897.

Bhai R S & Joseph Thomas (2010) Compatibility of *Trichoderma harzianum* (Rifai.) with fungicides, insecticides and fertilizers. *Indian Phytopathology* 63(2): 145-148.

Devasahayam S, Jacob T K & Abdulla Koya K M (2010) Screening of ginger (*Zingiber officinale* Rosc.) germplasm for resistance to shoot borer (*Conogethes punctiferalis* Guen.) (Lepidoptera: Pyralidae). *Journal of Medicinal and Aromatic Plant Sciences* 32: 137-138.

Dhanya K & Sasikumar B (2010) Molecular marker based adulteration detection in traded food and agricultural commodities of plant origin with special reference to spices. *Current Trends in Biotechnology & Pharmacology* 4: 454-489.

Dinesh R, Srinivasan V, Hamza S, Parthasarathy V A & Aipe K C (2010) Physico-chemical, biochemical and microbial properties of the rhizospheric soils of tree species used as supports for black pepper cultivation in the humid tropics. *Geoderma* (Elsevier) 158: 252-258.

Jacob T K & Devasahayam S (2010) Incidence of *Erythrina* gall wasp (*Quadrastichus erythrinae* Kim), an invasive insect pest on *Erythrina* spp. in major black pepper (*Piper nigrum* L.) areas in Kerala and Karnataka, India. *Journal of Plantation Crops* 38: 161-164.

Parthasarathy V A, Dinesh R, Srinivasan V & Hamza S (2010) Integrated nutrient management in major spices. *Indian Journal of Fertilizers*, 6:110-128.

Retheesh S T & Bhat A I (2010) Simultaneous elimination of *Cucumber mosaic virus* and *Cymbidium mosaic virus* infecting *Vanilla planifolia* through meristem culture. *Crop Protection*, 29: 1214-1217.

Siju S, Dhanya K, SyamKumar S, Sheeja T E, Sasikumar B, Bhat A I & Parthasarathy V A (2010) Development, characterization and utilization of genomic microsatellite markers in turmeric (*Curcuma longa* L). *Biochemical Systematics and Ecology* 38: 641-646.

Suseela Bhai R, Eapen S J, Anandaraj M & Saji K V (2010) Identification of *Phytophthora* and nematode resistant source from open pollinated progenies of black pepper (*Piper nigrum*) using a modified protocol. *Indian Journal of Agricultural Sciences* 80(9):893-897.

Veena S S, Anandaraj M & Sarma Y R (2010) Variability in the sensitivity of *Phytophthora capsici* isolates to potassium phosphonate. *Indian Phytopathology* 63(1):71-75.

### Popular articles

Pervez R, Eapen S J & Devasahayam S (2010) Keetnashak sutrakrimi: safilta ki kunzi. *Malabar Jyoti*, pp. 37-38.

Sasikumar B (2010) Black pepper varieties from IISR, Calicut, Harithabhoomi, 1(7):9.

Srinivasan V & Pervez R (2010) Kalimirch ki javik kheti. *Spices India* (Hindi), 6: 10-12.



## Books

Prasath D, Dinesh R, Eapen S J, Kumar A, Rema J & Parthasarathy V A (2010) *Bioinformatics: An Agricultural Perspective*. Indian Institute of Spices Research, Calicut, Kerala, 116p.

Singh H P, Parthasarathy V A & Nirmal Babu K (2011) *Advances in Horticulture Biotechnology (1-4 Vol.)*. Westville Publishing House, New Delhi.

## Book chapters

Eapen S J (2010) Bioinformatics applications in biotechnology. In: *Vistas in Marine Biotechnology*, CMFRI, Kochi, pp. 93-98.

Parthasarathy V A & Kandiannan K (2010) Spices in coconut garden. In: C V Ananda Bose (Ed.) *In a Nutshell- Essays on Coconut*. Coconut Development Board, Kochi, pp. 67-87.

Sharma Y R, Thomas J, Sasikumar B & Varadarasan S (2010). Vanilla production in India. In: E Odoux and M Grisoni (Eds.), *Vanilla*, CRC Press, Boca Raton, Taylor and Francis, pp. 286-326.

Suseela Bhai R & Eapen S J (2010) Integrated management of diseases of important spice crops. In: H R Sardana, O M Bambawale and D Prasad (Eds.) *Sustainable Crop Protection Strategies Vol. I*, Daya Publishing House, New Delhi, pp 282-333.

## Extension pamphlet

Eapen S J (2010) *Bioinformatics at IISR*, Indian Institute of Spices Research, Calicut, 7 p.

Eapen S J (2010) *Proceedings and Recommendations of Hortinformatics 2010*, Indian Institute of Spices Research, Calicut, 14 p.

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

XXXV PepperTech Meeting, Kochi, 10 November 2010.

- Bhat A I. Virus Diagnostic and Planting Material Production.
- Parthasarathy V A, Devasahayam S, Dinesh R, Anandaraj M & Krishnamoorthy B. Overview of black pepper research and development programmes in India.

HortScience Congress, New Delhi, 17– 19 November 2010.

- Rajeev P & Sasikumar B. Entrepreneurship Development of Farmers – A case study of Turmeric seed farm in Kerala.

International conference on coconut for biodiversity and prosperity, CPCRI, Kasragod, 28th October 2010.

- Bhat, A.I. 2010. Characterization of phytoplasma infecting spice crops.

National Conference on Horticultural Biodiversity for Livelihood, Economic Development and Health Care, UAS, Bangalore, 29 – 31 May 2010.

- Senthil Kumar R, Krishnamoorthy B, Prasath, D, Ankegowda, S J, Biju, C N, Usharani T R & Praveena R. Variability in cassia [*Cinnamomum cassia* (Blume)] at 1<sup>st</sup> coppicing under high altitude and high rainfall Kodagu region of Karnataka, Swadesh Prem Jagriti Sangosthi - 2010, p122.

National Seminar on tree spices at Vivekananda Kendra Seminar Hall, Kanyakumari, Tamil Nadu, 5 – 7 March, 2010.

- Parthasarathy V A, Krishnamoorthy B & Rema J. An overview of genetic resources in tree spices. pp 5-21.

National Consultative Meet on Bioinformatics in Horticulture, (Hortinformatics – 2010), IISR, Calicut, 11 – 12 October 2010.

- Riju A, Sithara K, Balaji S, Suja S N, Sathyanath V, Dhanya K P, Anil Paul, Shamina A & Eapen S J. PASSCOM – A database of secondary metabolites of spices.

National Seminar on Resource management approach towards livelihood security, Bangalore, Karnataka, 2 – 4 December 2010.

- Thankamani C K, Kandiannan K & Hamza S. Intercropping medicinal plants in black pepper garden.

Symposium on Changing Plant Disease Scenario in

Relation to Climate Change. Indian Phytopathological Society (Southern Zone), IISR, Calicut, 22 – 23 October 2010.

- Bhat A I. Diagnostic needs in a changing disease scenario. pp 28.
- Biju C N, Praveena R, Ankegowda S J, Darshana C N & Jashmi K C. Influence of weather factors on the incidence of anthracnose disease of black pepper incited by *Colletotrichum gloeosporioides*. pp 50.
- Jiby M V & Bhat A I. Development of *Agrobacterium* mediated transformation protocol and transgenic lines of black pepper for resistance against viruses. pp 36.
- Kumar A, Prameela T P, Suseela Bhai R, Siljo A, Biju C N & Anandaraj M. New record of bacterial wilt of small cardamom (*Elettaria cardamomum* Maton) caused by *Ralstonia solanacearum* Yabuuchi (Smith) and its functional & genotypic characterization. pp 42.
- Kumar A, Raaijmakers J M & Eapen S J. Multilocus Sequence Typing of tropical plant-associated *Pseudomonas aeruginosa*: a genotypic tool for selection of biocontrol strains. pp 34.
- Praveena R, Biju C N, Senthil Kumar R, Darshana C N & Jashmi K C. Screening of cardamom accessions against chenthall disease incited by *Colletotrichum gloeosporioides* (Penz.) Penz & Sacc. pp 52.
- Sangeeth K P & Suseela Bhai R. Development and formulation of effective biofertilizers for management of black pepper and cardamom. pp 37.
- Siljo A, Bhat A I, Biju C N & Venugopal M N. Characterization of the virus associated with chlorotic streak, a new disease of cardamom in India. pp 46.

### M Phil Thesis

Student	Title	University	Guide
Simi Mohan	Micropropagation and Molecular characterization of <i>three Species of Garcinia</i> .	Bharathidasan University, Trichy	Utpala Parthasarathy

- Sindhu S, Suseela Bhai R & Chempakam B. *Pseudomonas* sp. as bacterial antagonists against *Aspergillus flavus*. pp 38.
- Sreeja K, Anandaraj M & Suseela Bhai R. Isolation of endophytic fungi from black pepper (*Piper nigrum* L.) and evaluation for their biocontrol potential against *Phytophthora capsici*. pp 58. Suseela Bhai R, Lamya Moideen, Sangeeth K P, Sreeja K & S J Eapen. Effect of consortium of biocontrol agents and biofertilizer organisms in Vermicompost towards disease suppression and plant growth. pp 51.
- Vinitha K B, Anandaraj M & Suseela Bhai R. Metalaxyl-mancozeb sensitivity of *Phytophthora capsici* isolates from Black pepper (*Piper nigrum* L.). pp 58.

### Externally aided projects

Title of project	Investigators / Co-ordinators	Outlay
Sugandhi- Integrated pepper development project for Wayanad District	Team of Scientists from IISR	₹50.00 lakhs
Soil based plant nutrient management plan for agro-ecosystem of Kerala	Dinesh R, Srinivasan V & Hamza S	₹28.35 lakhs

## Ph D awarded

Name	Title of thesis	University	Guide
Jaleel K	Molecular and biochemical Characterization of ginger germplasm.	Acharya Nagarjuna University, Guntur	B Sasikumar
Dhanya K	Detection of probable plant based adulterants in selected powdered market samples of spices using molecular techniques.	Mangalore University, Mangalore	B Sasikumar
Aravind R	Studies on endophytic colonization of bacteria in black pepper ( <i>Piper nigrum</i> L) roots against <i>Phytophthora capsici</i> and <i>Radopholus similis</i> .	Mangalore University, Mangalore	A Kumar

### New Appointment

Name	Designation	Date of Joining
Ms Chinchu E K	Stenographer Gr. III	21 June 2010
Ms Krishna Radhika	Scientist	17 Sept. 2010
Mr P N M Nair	Administrative Officer	3 Dec. 2010

### Promotion

Name	Promoted as	w.e.f
Mr Venugopalan C	Asst. Administrative Officer	1 Oct. 2010
Mr Subramanian R N	Asst. Administrative Officer	4 Nov. 2010

### Retirement



**Mr Padmanabhan C**  
Asst. Administrative Officer  
30 September 2010

### Transfer

Name	Designation	w.e.f
Dr Kumar A, Senior Scientist	Principal Scientist, IARI, New Delhi	19 November 2010

### Resignation

Name	Post	Date
Ms Jincy	Technical Assistant T3	11 June 2010

## Distinguished visitors

Indian Institute of Spices Research, Calicut		
Sri Sreeshan Raghavan	Joint Secretary, Dept. of Biotechnology, Govt. of India	20 August 2010
Sri V V Sadamate	Advisor (Agriculture), Planning Commission, New Delhi	2 October 2010
Dr H P Singh	DDG (Hort.), ICAR, New Delhi	11 October 2010
Dr S D Shikhamany	Vice-Chancellor, A P Horticultural University, West Godavari Dist., Andhra Pradesh	12 October 2010
Dr S A Patil	Former Director (IARI) & Presently Chairman, Karnataka Krishi Mission, Commissionerate of Agriculture, Bangalore	23 October 2010
Dr J Thomas	Director (Research), Spices Board, Cochin	3 September 2010
Cardamom Research Centre, Appangala		
Dr N K Tyagi	Member, ASRB, New Delhi	23 September 2010
Dr J Thomas	Director (Research), Spices Board, Cochin	21 October 2010
Dr Madhubangopal	National Fellow and Principal Scientist, Division of Agricultural Chemicals, IARI, New Delhi	10 December 2010

## Spices News

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