

From the Director's Desk



While the Honorable Prime Minister's Cleanliness campaign (Swachh Bharat Abhiyan) got off to a rollicking start across the country, at IISR it was treated with utmost seriousness and we did vow to keep the campus beautiful and clean at all times. Cleanliness is not only about keeping out façade wastes

like garbage, paper, empty bottles, foul-smelling substances, and tree litter from our campus, but it also entails being mentally clean. The Hindi Fortnight celebrations were also conducted with great enthusiasm and the Hindi cell of our institute deserves special accolades for their untiring and diligent efforts in ensuring that we use Hindi in all our official dealings.

We also need to work for the furtherance of technologies that are relevant by conducting scientific exchanges that would help encourage changes that can put the plantation sector on a more sustainable path and stimulate overall development. Therefore, the upcoming PLACROSYM XXI is an important step towards defining requirements and makes it timely to discuss achievements, future opportunities and challenges and provide guidance on future priorities in this sector. I sincerely request all of you to actively participate in this global event and make it a great success.

Overall, it has been an exciting journey of self discovery and unprecedented growth for the institute with immense contributions from all the staff. However, I still feel that we need to muster the collective strength to draw attention to the systemic challenges faced by spice growers. For this to happen, we must garner all our resources to provide a specific perspective to present and future science of spices production. In this context, our new methods of disease free planting material production using pro-trays and vertical column method has assumed great significance. I take great pride in reiterating that the vertical column



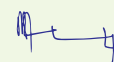
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method of black pepper planting material production and pro-tray method in ginger are the first of its kind pioneered by IISR.

We have also embarked on empowering the tribal farmers under the aegis of the Tribal Sub-Plan of ICAR. This gives us the much needed leeway to educate them on scientific cultivation of spice crops as well as distributing critical inputs. Therefore, in this plan period, I am optimistic that the institute will make critical forays in a sustained and coordinated way by developing and disseminating technologies that are self sustaining & robust, besides providing explicit guidance to any individual or organization interested in moving towards spices production.



M Anandaraj

Research update

LAMP and real-time LAMP for rapid identification of transgenic black pepper

A loop-mediated isothermal amplification (LAMP) and real-time LAMP based assays were developed for quick and sensitive detection of transgenic black pepper plants. The assay successfully detected the transgenic plants whereas no cross-reaction was recorded with non-transgenic plants. The assays were validated by testing putative transformants of black pepper. The results clearly showed that LAMP and real-time LAMP assays can provide a rapid and simple approach for screening transgenic black pepper plants.

Promising endophytic fungal isolates from popular cardamom varieties

The endophytic fungal isolates from cardamom varieties viz., IISR Vijetha, IISR Avinash and Appangala-1 were evaluated for antagonistic efficacy against *Fusarium oxysporum*, *Rhizoctonia solani* and *Pythium vexans* under *in vitro* conditions. Isolates from Appangala 1 was inhibitory to all the 3 pathogens, while that of IISR Avinash was inhibitory to *F. oxysporum* and *P. vexans* and that of IISR Vijetha was promising against *F. oxysporum*.

Appangala 2 – A new cardamom variety

A high yielding cardamom hybrid, Appangala 2 resistant to Cardamom mosaic virus (CdMV) or katte with average yields of 927 kg/ha has been developed. It was evolved by crossing high yielding local cultivar (CCS 1) with 'katte' virus resistant genotype (NKE 19). The variety is recommended for release in Karnataka in the XXV AICRPS workshop held at UBKV, Pundibari, West Bengal during 25-27 September 2014.



Appangala 2 cardamom variety

Farmers participatory nutmeg germplasm collection

In farmer participatory germplasm collection, 20 elite nutmeg accessions were collected from farmers plot located at Ernakulam, Kottayam and Idukki districts of Kerala. One of the collections is a high yielding variety named 'Punnathanam' evolved through selection for bold fruit, seed and high yield over the years. Fruits are very bold (50 dry nuts weigh 1 kg and mace from 250 fruits yield 1 kg dry aril).



Punnathanam nutmeg variety developed by Mr. Varkey Thomman, Konnathady, Idukki

New programme on plant health management in black pepper

Area wide Integrated Pest Management for wilt disease in black pepper, a project funded by State Planning Board with IISR as the nodal centre was launched in three districts (Kozhikode, Idukki and Wayanad) of Kerala.

Personalia

Awards/ Honours/ Recognitions

Ankegowda S J

Co-Chairman in Crop Management session of XXVth AICRPS Workshop at UBKV, Pundibari, West Bengal, 25-27 September 2014.

Bhat A I

Expert (Plant Pathology), Selection Committee under CAS for ARS Scientists of ICAR-CPCRI, Kasaragod, 31 July 2014.





Resource Person, Summer School on Advances in Molecular diagnostics of emerging plant diseases for biosecurity, ICAR-IIHR, Bengaluru, 12 August 2014.

John Zachariah T

Expert (Plant Biochemistry), Selection Committee under CAS for ARS Scientists of ICAR-CPCRI, Kasaragod, 31 July 2014.

Chairman in Crop Management session of XXVth AICRPS Workshop at UBKV, Pundibari, West Bengal, 25-27 September 2014.

Saji K V

Panelist in the session plant genetic resources and biotechnological approaches in National Seminar on 'Sustainability and profitability of coconut, arecanut and cocoa farming – Technological advances and way forward' at ICAR-CPCRI, Kasaragod, 22-23 August 2014.

Suseela Bhai R

Nominated as member of the expert group for development of microbiological standards on spices.

Utpala Parthasarathy

Awarded NABS- Best Woman Scientist for the year 2013. PPV&FRA member for expert committee for on-site DUS testing of spices varieties.

Participation in Symposia/ Seminars/ Workshops/ Conferences/ Meetings

Aarthi S

Training programme on Conventional breeding strategies and potential use of molecular markers in breeding, AVRDC - The World Vegetable Center, South Asia, ICRISAT campus, Hyderabad, 19 May 2014 to 19 August 2014.

Akshitha H J

Training programme on Analysis of the relationship between changes in soil moisture status and component processes of drought stress response in rice genotypes with contrasting drought tolerance, ICAR-IARI, New Delhi, 19 May 2014 to 19 August 2014.

Anandaraj M

EFC meeting of Horticultural Science Division Institutes, ICAR, New Delhi, 7-9 July 2014.

Visit to turmeric MLT experimental plots, Erode, 18 July 2014.

NABS EC meeting and Seminar, Tiruchengode, 19 July 2014.

Selection Committee Meeting, KAU, Vellayani, 24 July 2014.

Annual Group Meeting of AICRP on Palms at DOR, Hyderabad, 27-28 July 2014.

ICAR Foundation Day celebrations and interactive meeting of VCs and Directors, ICAR, New Delhi, 29-30 July 2014.

EC meeting of Indian Phytopathological Society and one day National Seminar on 'Biology and application potential of fungi' at University of Madras, Chennai, 11 August 2014.

Group meeting of the Network project on High Value Compounds, IISR, Kozhikode, 12 August 2014.

Group meeting of the Network project on Organic Horticulture, IISR, Kozhikode, 13 August 2014.

KAU EC meeting, Trichur, 14 August 2014.

Meeting of the BIS Spices and Condiments Sectional Committee FAD 9, Kochi, 22 August 2014.

National Seminar on "Sustainability and profitability of coconut, arecanut and cocoa farming – technological advances and way forward and ISPC EC meeting, CPCRI, Kasaragod, 23 August 2014.

Meeting of Heads of Department (Hort.) of NE States to organize TSP & NEH programmes, Guwahati, 27 August 2014.

ICAR RC, Umiam, Shillong, 28 August 2014.

Visit to black pepper plantations and Black Gold League training facilities, Sakleshpur, 31 August 2014.

PLACROSYM XXI Working Committee Meeting, IISR, Kozhikode, 03 September 2014.



Meeting convened by DG in connection with the visit of DG, FAO at ICAR, New Delhi, 8-9 September 2014.

Selection committee meeting at ASRB, New Delhi, 22 September 2014.

Anandaraj M & Ankegowda S J

135th Annual General Body Meeting of Codagu Planters' Association, Madikeri, 30 August 2014.

Aarathi S, Akshitha H J, Anandaraj M, Ankegowda S J, John Zachariah T, Nirmal Babu K, Prasath D, Sasikumar B, Sharon Aravind, Thankamani C K & Utpala Parthasarathy

Annual group meeting of AICRPS (XXV Workshop) at UBKV, Pundibari, West Bengal, 25-27 September 2014.

Ankegowda S J

Regional Consultative Forum for Coorg District at CCRSS, Chettalli, 6 September 2014.

Technical committee of experts to study and appraise the Integrated projects for production of quality pepper and Byadagi chilli in Karnataka proposed by Spices Board, Kochi for Karnataka State Horticulture Mission Agency for financial assistance from Govt. of India, under the Mission for Integrated Development of Horticulture (MIDH) at Lal Bagh, Bengaluru, 11 September 2014.

Ankegowda S J, Jayashree E, John Zachariah T and Leela N K

One day users' meet on Quality estimation of spices by electronic means at Hotel Bolgatty Palace & Resort, Kochi, Organized by C DAC, Kolkata; ICAR-IISR, Kozhikode and Spices Board, Kochi, 22 July 2014.

Biju C N

Workshop for discussing and finalizing IPM package at NIPHM, Hyderabad, 25 August 2014.

Special session on problems and prospects of cardamom in Sugandhagiri area of Wayanad district for the tribal beneficiaries during the one day training programme on 'Production technology for black pepper' organized by ICAR-IISR, Kozhikode, 19 September 2014.

Dinesh R & Srinivasan V

Launch workshop of ICAR Network project on Micronutrient Management in Horticultural Crops, ICAR-IIHR, Bengaluru, 10 September 2014.

Hamza S & Suseela Bhai R

Review meeting of the project Sugandhi Pepper Rehabilitation Package for Wayanad, KVK, Ambalavayal, 28 August 2014.

Jacob T K

Joint meeting on pesticide residues in spice crops, Spices Board, Kochi, 12 July 2014.

John Zachariah T

Scientific committee on quality of spices (SCQSS) of co-dex, Spices Board, Kochi, 4 July 2014.

Meeting on the preparation on forthcoming Global Agri meet of KSIDC Govt. of Kerala, Hotel Crowne Plaza, Kochi, 4 July 2014.

Group meeting of the workers of Phytochemicals/High value compounds, ICAR-IISR, Kozhikode, 12 August 2014.

Working committee meeting of PLACROSYM XXI, ICAR-IISR, Kozhikode, 3 September 2014.

Kandiannan K & Umadevi P

121st Annual Conference of UPASI at Coonoor, Tamil Nadu, 8 September 2014.

Leela N K

National Conference on Pre-/Post-harvest losses & value addition in vegetables, at ICAR-IIVR, Varanasi, 12-13 July 2014.

11th National Steering Committee Meeting of eAgriEn Programme, C-DAC, Kolkata, 4-5 August 2014.

Workshop-cum-demonstration of LCMS-QTOF & GC-MSMS at Centre of Excellence, Agilent Technologies Pvt. Ltd., Bengaluru, 12 September 2014.

Rajeev P

Review meeting of Wayanad Special Package, RARS, Ambalavayal, 21 July 2014.





Workshop on Action plan preparation for spices development in NE states, ICAR-CPCRI RC, Kahikuchi, 27 August 2014.

Seminar on Black pepper production management under TSP for Sugandhagiri Tribal Scheme, Wayanad, 19 September 2014.

Training Workshop on Production management in black pepper under TSP, Pudur Panchayat, Attappadi, Palakkad, 22 September 2014.

MTA Meeting, ATMA, ICAR-IISR, 23 July 2014 & 25 September 2014.

Saji K V

National Seminar on Sustainability and profitability of coconut, arecanut and cocoa farming – Technological advances and way forward, ICAR-CPCRI, Kasaragod, 22-23 August 2014.

Santhosh J Eapen

26th Annual Research Council Meeting of ICRI, Spices Board, Kochi, 09 July 2014

Combined Executive Committee Meeting of Bioinformatics centers, CPCRI, Kasaragod, 08 August 2014

PLACROSYM XXI Working Committee Meeting, IISR, Kozhikode, 03 September 2014

Senthil Kumar C M

Two weeks Refresher Course on Agricultural Research Management for directly recruited Senior/Principal Scientists, NAARM, Hyderabad, 14-26 July 2014

ICAR Borer Project Launching and Technical Workshop, IIHR, Bengaluru, 18-19 August 2014

ORP on sucking pests launching programme, IIHR, Bengaluru, 10 September 2014

Suseela Bhai R

ATMA meeting, ICAR-IISR, Kozhikode, 24 July 2014

Awipm project launching at Rajakkad, Vyapara Bhavan, Rajakkad, 21 August 2014.

Awipm project launching at Haritavidya Thamarassery, 3 September 2014.

Umadevi P

Training on Next generation sequencing (NGS)-Bioinformatics and Data analysis at AU-KBC Research Center, Madras Institute of Technology, Anna University, Chennai, 15-19 July 2014.

Utpala Parthasarathy

National Seminar on Biodiversity Conservation - Status, future and way forward at KSR College of Technology, Tiruchengode, 19-20 July 2014.

Radio talk

Ankegowda S J

Pepper cultivation practices in post monsoon season, AIR, Madikeri, 4 August 2014.

Cardamom cultivation practices in post monsoon season, AIR, Madikeri, 4 August 2014.

Prakash K M

Interview on scientific cultivation of ginger, 17 July 2014.

News and events

AICRPS Workshop held at UBKV, Pundibari

The 25th AICRPS Workshop was held at Uttar Banga Krishi Viswa Vidyalaya at Pundibari, Cooch Behar from 25th to 27th September 2014. The three days workshop started with inaugural session followed by six technical sessions and ended with plenary session. Dr. S. K. Malhotra, Horticulture Commissioner and ADG (Hort. II), ICAR was the Chief Guest and Prof. Biswanath Bandyopadhyay Hon Vice Chancellor, Uttar Banga Krishi Viswa Vidyalaya, Pundibari presided over the inaugural and plenary sessions.

During the workshop, 11 booklets on Spices technology in Tamil, Telugu, Kannada, Oriya and English were released. Five varieties, two in small cardamom (one from Pampadumpara, KAU and another from ICAR-IISR resistant to kotte disease), two in coriander (one from Uttar Pradesh and another from Rajasthan) and one fenugreek



variety (recommended for Andhra Pradesh and Telangana region) were released during the workshop. Nine technologies for various states were recommended.



Inaugural function of the AICRPS workshop in progress

Group meeting of the Network projects on High Value Compounds and Organic Horticulture

The Institute being the nodal centre for the new Network projects on Phytochemicals/High Value Compounds and Organic Horticulture which are approved in 12th EFC, organized a group meeting of all the workers of the Network project on High Value Compounds on 12 August 2014 and Organic Horticulture on 13 August 2014 at IISR, Kozhikode to discuss and fine-tune technical programme and immediate plan of action such as SRFs recruitment, equipments purchase etc. Director, IISR is the co-ordinator of the projects and the total outlay is Rs 25 crores for High Value Compounds and Rs 3 crores for Organic Horticulture.



Dr M. Anandaraj addressing the workers of High Value Compounds group

District level seminar on Soil nutrient management organized at IISR

Indian Institute of Spices Research hosted the District level seminar on soil nutrient management on 25th July, 2014. The seminar was held under the aegis of Department of Agriculture, Government of Kerala and was inaugurated by Dr. M Anandaraj, Director, Indian Institute of Spices Research. The objective of the seminar was to sensitize the officials of the Department about the need to maintain soil fertility and productivity. The seminar laid emphasis on soil nutrient management for the soils of Kozhikode district based on the results from extensive studies on the soil fertility status conducted across the district. was attended by 130 officials from the Department of Agriculture.

Monthly Technology Advisory meetings held at IISR

Two monthly technology advisory meetings of ATMA were held at IISR on 23rd July and 25th September, 2014. The meeting was attended by officials of the Agriculture Department, Government of Kerala and Agricultural Technology Management Agency. The advisory team consisting of Scientists from IISR and Subject Matter Specialists from KVK, IISR addressed the issues raised in the meetings. The meeting decided to explore the possibilities of conducting field visits along with MTA meeting to get first hand information of major problems and to gain more visibility among the farmers.

Consultancy Processing Cell

Dr Ankegowda S J, Head, CRC, Appangala made Consultancy visit to Oland Plantation, Kullakamby, The Nilgiris on spices cultivation on 10 August 2014.

News from Library

Four issues of the electronic version of 'AGRI titbits' were published. 42 CeRA requests were catered online. Subscription to CAB Direct and EBSCO Discovery tool were renewed. 260 bound volumes of journals and 13 Technical Reports were added to the library stock. 28 external users and 930 internal users made use of the library facilities.





हिन्दी अनुभाग

राजभाषा कार्यान्वयन समिति की बैठक

संस्थान की राजभाषा कार्यान्वयन समिति की बैठक डॉ. एम. आनन्दराज, निदेशक की अध्यक्षता में दिनांक 14 जुलाई 2014 को संपन्न हुई। जिसमें राजभाषा कार्यन्वयन की गतिविधियों पर चर्चा हुई। दिनांक 29 सितम्बर 2014 को राजभाषा कार्यान्वयन समिति की विशेष बैठक आयोजित की गयी जिसमें डॉ. सुनिता यादव, उपनिदेशक (कार्यान्वयन), क्षेत्रीय कार्यान्वयन कार्यालय, कोच्चि ने संस्थान की राजभाषा कार्यान्वयन का निरीक्षण किया।

हिन्दी कार्याशाला

संस्थान में हिन्दी टिप्पणी एवं मसौदा लेखन को बढ़ाने के लिए दिनांक 26 सितम्बर 2014 को एक हिन्दी कार्याशाला आयोजित की गयी जिसमें श्रीमती एस. माया, प्रबन्धक (राजभाषा), विजया बैंक, कोषिकोड ने हिन्दी टिप्पणी एवं मसौदा लेखन पर व्याख्यान दिया इस कार्याशाला में कुल 28 अधिकारियों एवं कर्मचारियों ने भाग लिया।

हिन्दी पखवाडा

संस्थान में हिन्दी पखवाडा 15-29 सितम्बर 2014 तक मनाया गया। हिन्दी पखवाडे का उद्घाटन समारोह 15 सितम्बर 2014 को डॉ.एम. आनन्दराज निदेशक की अध्यक्षता में सम्पन्न हुआ। जिसमें डॉ. राशिद परवेज़, वरिष्ठ वैज्ञानिक एवं हिन्दी अधिकारी ने हिन्दी पखवाडे की रूपरेखा प्रस्तुत की। श्रीमती एन. प्रसन्नाकुमारी वरिष्ठ तकनीकी अधिकारी ने धन्यवाद ज्ञापित किया। हिन्दी पखवाडा के दौरान कुल 12 प्रतियोगिताये आयोजित की गयी जिसमें 237 प्रतिभागियों ने भाग लिया। हिन्दी पखवाडा का समापन समारोह 29 सितम्बर 2014 को डॉ. एम. आनन्दराज, निदेशक महोदय की अध्यक्षता में संपन्न हुआ। इस समारोह डा. सुनिता यादव, उपनिदेशक (कार्या.) क्षेत्रीय कार्यान्वयन कार्यालय, कोच्चि) मुख्य अतिथी थी। उन्होंने विभिन्न प्रतियोगिताओं के विजेताओं को पुरस्कार वितरित किये तथा अपने सम्बोधन में विश्व में हिन्दी की बढ़ती लोकप्रियता के बारे में बताया। इस अवसर पर डॉ. एम आनन्दराज, निदेशक ने संस्थान में राजभाषा का अधिक उपयोग करने पर बल दिया। समारोह का संचालन डॉ. राशिद परवेज़ ने किया तथा उन्होंने हिन्दी पखवाडे की आख्या प्रस्तुत की। अंत में श्रीमती एन. प्रसन्नकुमारी ने धन्यवाद ज्ञापित किया।

प्रकाशन

तिमाही में मसाला समाचार खण्ड 25 भाग 2 तथा अनुसंधान के मुख्य अंश 2013-14 का प्रकाशन किया गया। संस्थान की राजभाषा पत्रिका मसालों की महक के तृतीय अंक को प्रकाशित करके दिनांक 29 सितम्बर 2014 को हिन्दी पखवाडा समापन समारोह में मुख्य अतिथि द्वारा विमोचित किया गया।



राजभाषा पत्रिका मसालों की महक के द्वितीय अंक का विमोचन

News from SARANI

The Onam festival and the Annual club day of SARANI was celebrated grandly on 4th September, 2014. Various competitions were held and prizes were distributed. Onam sadhya was served to the entire staff by the SARANI. Varieties of entertainment programmes by the staff were also held.

Distinguished visitors

Dr. S.K. Malhotra, ADG (Hort. II) and Horticulture Commissioner, GOI, 25 August 2014.

Mr. Ramesh Tenkil, CGM, NABARD visited KVK, Peruvannamuzhi on 3 July 2014.

Transfer of Technology

Technology inputs and Advisory services from ATIC

Five hundred and sixty six farmers (including 22 farmers from other states) availed advisory services of ATIC during July-September. Apart from this 237 students from different schools and colleges were given orientation on



spices research programmes in the country. Six farmer groups benefited from sponsored exposure visits to the Institute.

Sale of technology products

Revenue of Rs. 1,63,368 was generated through sale of planting material and Rs 24,225 was generated from sale of bio control agents to farmers. Micronutrient mixtures worth Rs. 12,300 were sold during July-September 2014. The total revenue generated from the sale of technology and information products was Rs 2,00,643.

Training Programmes

A week long orientation programme was conducted for the newly recruited personnel of ICAR-IISR and KVK during 7-11 July 2014 at ICAR-IISR main campus, Chelavoor.

A one day training programme on spice crops was organized for 30 Progressive farmers and 10 technical personnel from Nilgiris district on 12th August 2014.

Training programme for tribal farmers from Sugandhagiri, Wayanad

The institute organized a one day training programme on "Production technology of black pepper" on 19th September, 2014 for a group of 26 tribal farmers and their field coordinators from Sugandhagiri area of Pozhuthana panchayat in Wayanad district. The beneficiary selection was facilitated by Jeevana, an NGO based at Wayanad and coordinated by Tribal Rehabilitation and Development Mission (TRDM) of Government of Kerala. The training programme consisted of lectures on nursery management, field management and plant protection of black pepper and also field visit.

Training programme for Attappady tribal farmers

The programme was organized in Anakkal Uruvikasana Committee hall on 22nd September, 2014. Thirty tribal family members from Anakkal hamlet attended the programme. Training programme consisted of lectures on scientific cultivation of black pepper by Dr V. Srinivasan, Principal Scientist, IISR and also on plant protection measures by Dr S.J. Eapen, Principal Scientist, IISR. The programme was organized with the active support of Assistant Director of Agriculture, Attappady Block, Department of Agriculture and Krishi Bhavan, Pudur.

Training programme for tribal farmers from Meenangadi, Wayanad

IISR, in collaboration with Community Agrobiodiversity Centre of MS Swaminathan Research Foundation organized a one day training programme on "Production technology of Black pepper" at Panchayat Hall, Meenangadi, Wayanad district on 26th September, 2014. The training was attended by 60 tribal farmers (40 women and 20 men) of Meenangadi village panchayat. Dr. K M Prakash, KVK, Peruvannamuzhi and Dr. Reshmy Vijayaraghavan, KVK, Ambalavayal were the resource persons for the training programme.



Tribal farmers of Attappady receiving black pepper planting material in pro-trays



Participants (from Sugandhagiri) of training programme on black pepper production technology

Krishi Vigyan Kendra

Front Line Demonstration

The following FLDs are in progress

- Demonstration of shade tolerant HYVs of black pepper
- Popularization of pepper production through bush





- pepper production technology
- Popularization of bucket biofilter in maintaining water quality of ornamental fish culture tanks
 - Popularization of grass carp for controlling submerged aquatic weeds
 - Demonstration of Gramasree layer chicks
 - Value added product of spices and coconut inflorescence with branding and marketing
 - Formulation of homemade rations for livestock and fishery
 - Integrated farming system
 - Demonstration of PGPR encapsulated bio-capsules for management of soft rot in ginger
 - Demonstration of high yielding foot rot tolerant variety of black pepper
 - Production and marketing of value added products
 - Demonstration of upland rice variety Vaisakh.

On Farm Testing

The following OFTs are in progress

- Performance evaluation of sandless nursery mixture for black pepper serpentine nursery
- Management of *Phytophthora* foot rot of black pepper
- Evaluating the growth performance of fishes using different feeds
- Assessment of transplanting technique of for ginger using pro-trays

Trainings conducted

KVK conducted a total of 36 training programmes including 25 for farmers, 10 for rural youth and one for extension functionaries and the total number of participants was 1067.

KVK nominated women SHG wins National Award

The women Self Help Group 'Oruma' of Velampanchayat of Kozhikode district bags the National Award (II prize) for the year 2012 for organic vegetable cultivation. The president of the SHG, Smt. Beena Babu received the award from World Food Prize winner Dr. Sanjaya Rajaram in the award ceremony held at Mumbai on 13 September. The technical advisories for undertaking vegetable cultivation was provided by Krishi Vigyan Kendra,

Peruvannamuzhi. The Oruma group was nominated for the award by KVK and the award report was also prepared by the Kendra.

Publications

Research papers

Bhat A I, Sasi S, Revathy K A, Deeshma K P & Saji K V 2014 Sequence diversity among badnavirus isolates infecting black pepper and related species in India. *Virus Disease* 25: 402-407.

Darshana C N, Praveena R, Ankegowda S J & Biju C N 2014 Morphological variability, mycelial compatibility and fungicidal sensitivity of *Colletotrichum gloeosporioides* causing leaf spot of ginger (*Zingiber officinale* Rosc.). *Journal of Spices and Aromatic Crops* 23: 211-223.

Dinesh R, Anandaraj M, Kumar A, Subila K P, Bini Y K & Aravind R 2014 Native multi-trait rhizobacteria promote growth and suppress foot rot in black pepper. *Journal of Spices and Aromatic Crops* 23: 156-163.

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Papers presented in symposia/ seminars/ workshops /conferences

Anandaraj M, Plant health management, National Seminar on Sustainability and profitability of coconut, areca nut and cocoa farming – technological advances and way forward at ICAR-CPCRI, Kasaragod, 23 August 2014.

Anandaraj M & Kandiannan K, Spices research – an overview. In: 121st annual conference of UPASI at Coonoor, Tamil Nadu, 8 September 2014.

Leela N K, Nutraceuticals in spices, oral presentation in National conference on Pre-/post–harvest losses & value addition in vegetables at ICAR-IIVR, Varanasi, 12-13 July 2014

Utpala Parthasarathy, Application of GIS technologies in monitoring biodiversity - oral presentation in National seminar on Biodiversity conservation - status, future and way forward at KSR College of Technology, Tiruchengode, 19-20 July 2014.

Lectures delivered

Ankegowda S J

Scientific cardamom and black pepper cultivation, Organized by Hassan District Planters' Association at Hethur, Sakleshpur Taluk, 26 August 2014.

Black pepper cultivation, during the visit of farmers' group under National Horticulture Mission from Gudalur, Nilgiris District, 4 September 2014.

Agronomy of black pepper cultivation, during the visit of farmer's group from Kadaba village, Puttur at CRC, Ap





pangala, 17 September 2014.

Bhat A I

Diagnostics for pathogens infecting spice crops and loop mediated isothermal amplification (LAMP) for detection of viruses, ICAR sponsored summer school on 'Advances in Molecular Diagnostics of emerging plant Diseases for Biosecurity' held at ICAR-IIHR, Bengaluru, 12 August 2014.

Biju C N

Disease management in black pepper, during the visit of farmer's group from Kadaba village, Puttur at CRC, Ap-pangala, 17 September 2014.

Jacob T K

Integrated pest management in black pepper, training for Subject Matter Specialists of KVKs of South Zone at Bengaluru, 25 July 2014.

Integrated pest management in black pepper, ginger, turmeric and cardamom, training for Subject Matter Specialists of KVKs of South Zone at Pondicherry, 12 September 2014.

Pest and disease management in black pepper, training under Tribal Sub Plan (TSP) for tribal beneficiaries of Wayanad district at ICAR-IISR, Kozhikode, 19 September 2014.

Kandiannan K

Nursery management and establishment of black pepper, training under Tribal Sub Plan (TSP) for tribal beneficiaries of Wayanad district at ICAR-IISR, Kozhikode, 19 September 2014.

New Appointment

Name	Designation	Date
Manjula M S	JRF (DISC)	21-08-2014
Monica V	SRF (Phytofura)	23-08-2014

Promotion

Name	Promoted as	Date
Chandravally P K	Technical Officer	01-01-2014

Scope of intercropping maize with spices, Monthly ATMA meeting of Kozhiokode district at ICAR-IISR, Kozhikode, 25 September 2014.

Praveena R

Recent advances in plant protection in spices, for Technical staff, Krishi Vigyan Kendra, Gonikoppal at ICAR-IISR, Kozhikode, 17 July 2014.

Pest and disease management in black pepper and cardamom, during farmers meeting organized by Dept. of Agriculture, Nilgiris, Tamil Nadu under NHM at ICAR-IISR, Kozhikode, 12 August 2014

Santhosh J Eapen

Nematode problems in spices and their management, Class for newly recruited technical staff, IISR, Kozhikode, 11 July 2014

Why Discovery service – The IISR experience, EBSCO Launch and Learn, Thiruvananthapuram, 17 September 2014

AWIPM project – an introduction, Pepper Growers Meet, Rajakkad, Idukki, 21 August 2014

Pests and diseases of black pepper, Farmers Seminar, Pudur, Attappady, 22 September 2014

Others

DNA barcoding work published by Dr Sasikumar et al. is attracting several international readers. For details, please visit <http://dna-barcoding.blogspot.in/2014/01/true-cinnamon.html>



Retirement



Shri Venugopalan
AAO (31-8-2014)



Smt Gangu H.B.
SSS (31-8-2014)



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