

## From the Director's Desk



Greetings!

**I**t is a matter of great joy and pride for the institute to be associated with Swasraya Bharat 2015 under the aegis of the Swasraya Bharat Mission. A cascade of events was planned and most of them have been conducted with lot of fervor and vigor. The highlight of the events was the participation of school students and rural youth who came forward in droves to attend all the programmes. In this

connection, I take this opportunity to thank the school principals, teachers and the students without whose cooperation and amiability it would have been impossible to conduct Swasraya Bharat 2015. More importantly, I would like to thank the Collector, Kozhikode District for formally launching the event, for his encouragement and support. Of course, the Conveners and members of various committees from ICAR-IISR and KVK, Peruvannamuzhi have played a pivotal role in ensuring the success of all the events.

The recently held AICRPS workshop and the Interface meeting with the industry on cardamom have also been a great success. Besides, reviewing the progress made by various institutes, several new varieties and technologies have been proposed for release, which I seriously hope will bring a new culture of innovation into the system and will help in connecting better with the NE states of our country. This will subsequently help in including several niche areas of spice cultivation, where opportunities and skill sets for the future exists. While the interface meeting further reaffirmed our commitment for a strong interchange across the Scientist-Industry paradigm, the Group Meeting on Cardamom stressed the need for a proactive approach to deal with the plethora of problems facing cardamom cultivation. I congratulate the Project Coordinator and his team for their sincere efforts in success-



### IN THIS ISSUE

Research Update	2
Personalia	2
News and Events	3
Transfer of Technology	5
Krishi Vigyan Kendra	7
Publications	7



fully organizing the workshop, group meeting and the Scientist-Industry Interface meeting.

Apparently, it has been a collective effort and a common thread across all these events is Team Work. Therefore, I believe the silver bullet for the overall development of this institute will be to immediately realize that what we do today as individuals can be done faster and more efficiently by working as a team. The bottom line is that being part of team is no longer an option but critical and essential for the success of an individual as well as the organization.

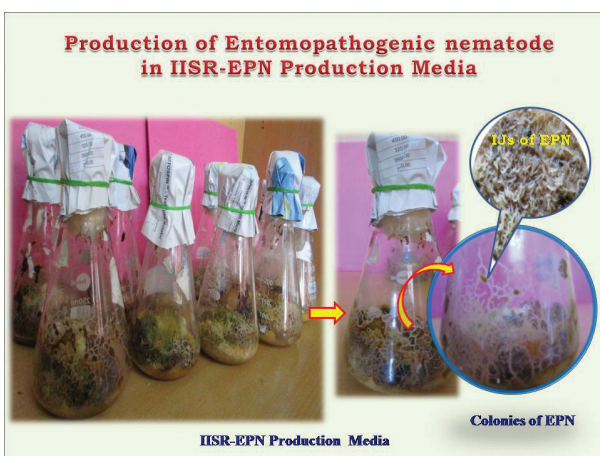


M Anandaraj

## Research Update

### New media developed for production of entomopathogenic nematodes

A new artificial media was developed for the production of infective juveniles of entomopathogenic nematodes. The flasks were filled with media mixture and sterilized. After cooling the flask to room temperature, infective juveniles were introduced and sealed. The colonies of entomopathogenic nematodes started appearing on the walls of the flasks 2 weeks post inoculation. By this technique about 18 lakh infective juveniles of EPN have been recovered from a single flask. This media named as IISR-EPN Production Media, is successful in multiplying the infective juveniles of EPNs at low cost. Most of the ingredients for this media are cheaper and locally available. Hence, farmers can easily prepare them for the control of insect pests such as shoot borer infesting ginger and turmeric.



### Germplasm collection and exchange

Eighteen nutmeg accessions, an equal number of cultivated black pepper accessions and a putative wild type *Zingiber officinale* were collected during a recent farmer



Putative wild type of *Z. officinale*

participatory germplasm collection undertaken in Thrissur, Kottayam and Idukki districts of Kerala. A rare nutmeg type with compact erect canopy was also collected from Idukki district.



Compact canopy type nutmeg collected from Idukki

Based on the Material Transfer Agreement, 16 ginger genotypes were supplied to Anand Agricultural University, Gujarat and, four *Curcuma* spp. to University of Madras, Chennai.

### Rejuvenation of cardamom germplasm at ICAR-IISR, RS, Appangala

In an endeavor of rejuvenation of cardamom germplasm, 405 small cardamom accessions conserved at the germplasm repository of ICAR-IISR, RS, Appangala had been replanted.

## Personalia

### Awards/ Honours/ Recognitions

#### Anandaraj M

Dr M. Anandaraj, Director, ICAR-IISR, Kozhikode has been entrusted with additional charge of Director, ICAR-Indian Institute of Horticultural Research, Bengaluru by the Indian Council of Agricultural Research, New Delhi and has assumed the charge of additional Director of ICAR-IISR w.e.f. 4 September 2015.

#### Jayashree E

External Examiner, final examination of Ms. Padmavathi D, M.Tech student of KCE&T, KAU, Tavanur, 20 August 2015.

#### John Zachariah T

Chairman, Technical Staff Assessment Committee, ICAR-CPCRI, Kasaragod, 8 September 2015.





### Kandiannan K

Chairman, Technical Staff Assessment Committee - Category I & II, ICAR-CPCRI, Kasaragod, 7 September 2015.

### Santhosh J Eapen

Examiner, M.Phil. (Bioinformatics), Dept. of Bioinformatics & Computational Biology, University of Kerala, Thiruvananthapuram, 4 September 2015.

Reviewer, Applied Soil Ecology, World Journal of Microbiology and Biotechnology, Journal of Microbiology, Biotechnology & Food Sciences.

### Sasikumar B

Resource person, II Refresher course in Biotechnology, University of Calicut, 6 August 2015.

### Best poster award

The research paper entitled, 'Comparison of the volatile oil composition of four popular varieties of large cardamom (*Amomum subulatum* Roxb.) - a future crop from India' authored by Vijayan A K, Leela N K, Akshitha H J, Rahul P Raj, Utpala Parthasarathy & Nirmal Babu K won the best poster presentation award in III International Symposium on Underutilized plant species exploration and conservation for future organized by ISHS held at AC & RI, Madurai, 5-8 August 2015.

### Training attended

#### Lijo Thomas

ICAR Summer School on Analytical techniques for decision making in agriculture at ICAR- NIAEPR, New Delhi, 16 July - 5 August 2015.

### Radio talk

#### Manoj P S

Enhancing yield of banana through HDP and use of micronutrients, 8 July 2015.

#### Deepthi A

Interview with successful entrepreneurs of CDB supported mechanized coconut climbing training programmes, 8 July 2015.

#### Aiswariya K K

Interview with successful farmers in Apiculture, 6 August 2015.

#### Mariya Dainy M S

Importance of soil testing, 6 August 2015.

### Pradeep B

Cage culture, 3 September 2015.

Interview with Mr. Manoj, successful fish farmer, 3 September 2015.

## News and Events

### Seminar on Attracting and Retaining Youth in Agriculture

An awareness seminar on ARYA (Attracting and Retaining Youth in Agriculture) was organized by ICAR-IISR, Kozhikode and Swadeshi Science Movement, Kerala on 16 September 2015 at ICAR-KVK, Peruvannamuzhi as a part of Swasraya Bharat 2015. The programme was inaugurated by Mr. K Sunil, President, Chakkittapara Grama Panchayath and Dr. M Anandaraj, Director, ICAR-IISR, Kozhikode presided over the function. A brief description on Swasraya Bharat mission 2015 was given by Dr. R Jayaprakash, Secretary General, Swasraya Bharat 2015. Dr. B Sasikumar, Scientist in-charge, KVK and Mr. Anilkumar, AEO, Perambra felicitated the function and Dr. P Rathakrishnan, Programme Coordinator, KVK conveyed the vote of thanks. A total of 150 participants including students from 14 schools, teachers, young Agri-entrepreneurs attended the programme. This interactive seminar included lectures on innovative practices in agriculture, indigenous animal husbandry practices and ornamental fish culture. An exhibition was also organized at KVK to showcase the recent technologies in agriculture and allied sectors.



*Inauguration of ARYA seminar*

### Nakshathra Vanam at ICAR-IISR, Peruvannamuzhi

Nakshthra vanam has been set up at the Research farm of the Institute at Peruvannamuzhi. Twenty seven saplings of trees representing the 27 stars of the Malayalam



calendar were planted with saplings supplied by the Kerala Forest Department.



*Butea monosperma ('Plas') of Pooram star in the Nakshathra vanam*

### Dairy Unit at Chelavoor Campus

As a part of network project on organic farming funded by Indian Institute of Farming System Research (IIFSR), Modipuram, a farming system unit with spices (turmeric), milch animals, fodder crops (Hybrid Napier grass, CO-3, CO-4, Congo signal grass and DHN-6) as well as vegetables is established at Chelavoor Campus of ICAR-IISR. The dairy unit established with the technical collaboration of ICAR-KVK, Peruvannamuzhi comprises of two Jersey cross bred cows and a desi breed (Kasaragod dwarf).



*Kasaragod dwarf cow and calf*

### Integrated Farming System day at KVK, Peruvannamuzhi

A model Integrated Farming System (IFS) functioning at KVK, Peruvannamuzhi, comprising of upland rice (Vaisakh); tubers like cassava (Sree Padmanabha), elephant foot yam, colocasia, dioscorea; fruit crops like banana, citrus; spices black pepper, ginger and turmeric; vegetables such as cucurbits, amaranthus, curry leaf, cowpea, brinjal, lady's finger, ivy gourd along with milch animals and fishes has sparked interest among farmers, youth

and house wives. The integrated farming system day was observed on 29 September 2015 at KVK and many farmers attended the programme. Stem cuttings of the cassava variety, Sree Padmanabha were distributed to farmers on the occasion.



*Cassava and fish harvest on the IFS day at ICAR-KVK, Peruvannamuzhi.*

## Hindi News

### Hindi Week 2015

Hindi Day was celebrated on 14 September 2015 and Hindi Week from 15-19 September 2015. Hindi week inauguration was held on 14 September 2015 under the president ship of the Director Dr M. Anandaraj, Dr Rashid Pervez Sr. Scientist and Hindi officer delivered welcome address and Dr B. Sasikumar proposed vote of thanks. During this period, various Hindi competitions viz., caption writing, hindi poem writing, hindi song, memory test, humorous incident, hindi noting & drafting, hindi anthakshari were conducted for the staff members and prizes were distributed to the winners during the valedictory function held on 19 September 2015 by Dr Amandeep Kaur, IFS, Divisional Forest Officer, Kozhikode, who was the chief guest. Institute official language magazine Masaloon Ki Mehak was released on this occasion.



*Release of Masaloon Ki Mehak during Valedictory function*





## Hindi Workshop

A Hindi workshop was organized at ICAR-IISR, Kozhikode, to popularize official language on 16 September 2015. Ms. S. Maya, Manager (OL), Vijaya Bank, Kozhikode delivered a lecture on Hindi Noting and Drafting.

## TOLIC Activity

Dr Rashid Pervez, Hindi Officer and Ms. Prasannakumari, Senior Technical Officer attended TOLIC Sub Committee meeting held on 3 August 2015 at SBT, Eranielam. Dr Rashid Pervez, Ms. Prasannakumari, and Mr. K. G. Jegadeesan attended Rajbhasha Seminar conducted by Town Official Language Implementation Committee, Kozhikode at Hotel Malabar Palace, Kozhikode on 10 August 2015.

# Transfer of Technology

## Field visits

### Santhosh J Eapen & Sussela Bhai R

Visited farmers' plots at Omassery, Anakkampoil and Muthappanpuzha, Kozhikode district, 16 September 2015.

### Kandiannan K

Visited Attappady Co-operative Farming Society, Attappady to observe the growth of black pepper rooted cuttings supplied under TSP and suggest for improvement, 10 September 2015.

## Lectures Delivered

### Anandaraj M

Delivered a lecture on the role of IISR in developing black pepper technologies and the global pepper scenario in Black pepper seminar organized by Krishika and BGL at Mudigere on 22 August 2015. Over 1000 planters participated and a good feedback on the use of micro nutrients in black pepper was received.



*Dignitaries (above) and farmers (below) at the BGL seminar*

## Ankegowda S J

Black pepper and cardamom cultivation, farmers meeting organized by Coffee Board, Madikeri at Kakabe, 13 July 2015.

Black pepper cultivation, farmers meeting organized by Coffee Board, Madikeri at Ballamavati, Kodagu, 6 August 2015.

Spices cultivation, farmers meeting at Malur, Chennapatana, 29 August 2015.

Black pepper cultivation, Black pepper seminar organized by Krishika and BGL at Mudigere, 22 August 2015.

Black pepper cultivation practices in arecanut cropping system, farmers meeting at Nattakal, Bellur, 6 September 2015.

Pepper cultivation in farmers meeting at Kesagodu, Belur, 8 September 2015.

Recent development in black pepper cultivation techniques, Annual General Body meeting of Agricultural Scientists Forum of Kodagu, 12 September 2015.

Black pepper cultivation, Kharif Sammelan organized by KVK, Gonikoppal, 15 September 2015.

### Bhat A I

Recent trends in molecular diagnostics of plant viruses. II refresher course in Biotechnology organized by UGC-Human Resource Development Centre, University of Calicut, Malappuram, 30 July 2015.

### Biju C N

Technologies in black pepper, Capacity building programme for LEAD farmers organized by ATMA, Wayanad at Kalpetta and Meenangadi, 22 & 23 July 2015.

### Jayashree E

Post harvest processing of nutmeg, farmers of FPO Jeevagam, Angamaly at ICAR-IISR, 16 July 2015.

Processing of turmeric, farmers from Maharashtra at ICAR-IISR, 13 August 2015.

### John Zachariah T

Processing of nutmeg and value addition, farmers at Melattur, Malappuram, 3 August 2015.

### Kandiannan K

Nursery raising of black pepper and diseases and pest management and Practical demonstration of propagation in black pepper, State level workshop on Cultivation of black pepper organized by Dept. of Horticulture, Govt. of Odisha at Koraput, Odisha, 2-3 September 2015.

Nursery management & practical session on nursery techniques, Capacity building programme on Production



management of major spices & coconut for field staffs and SRF's at ICAR-IISR, Kozhikode, 28 September 2015.

### Praveena R

Disease management in spices, farmers from Maharashtra at ICAR-IISR, Kozhikode, 12 August 2015.

Crop health management, for Agriculture Officers and Assistants at Nalanda Auditorium, Kozhikode, 26 September 2015.

### Rajeev P

Advances in propagation and scientific cultivation in ginger and turmeric in farmers meet organized by the Peerumed Development Society at Peerumed, Idukki, 3 September 2015.

Scientific cultivation of nutmeg in farmers meet organized by Kudumbasree project at Karuvarakundu, Malappuram, 29 September 2015.

### Success story

Mr. Ramaprasad Reddy, an young IT professional turned farmer, of Telengana is reaping good benefits from Prathibha turmeric and the variety released by ICAR-IISR has become very popular among Andhra and Telengana farmers.



*Mr. Ramaprasad Reddy's Prathibha plot (85 days old) at Zahirabad*

### Technology inputs and Advisory services from ATIC

Nine hundred and nineteen farmers availed advisory services of ATIC during April-June, 2015. Apart from this, 303 students from different schools and colleges were given exposure visit to the activities and facilities of the institute. The advisory services were provided using diverse channels like e-mails, phone calls, personal visits, etc. The total revenue generated from the sale of technology and information products was Rs. 308165.

### Capacity Building Programme for SRFs and field assistants

ICAR- IISR conducted a Capacity Building Programme for SRFs and field assistants working under various externally

funded projects during 28-29 September 2015. The two day training programme titled "Training programme on production technology of major spices and coconut" was intended to equip the personnel working in the projects with a basic understanding of the advanced production technologies in cultivation of major spice crops and coconut. Lectures on plant genetic resources, crop improvement, agronomic management practices, soil health management and technological advancements in spice crop cultivation were organized in the training programme.

### New recruits of Spices Board visit IISR

As a part of induction training programme titled "Bharat Darshan", a 28 member group from Spices board comprising of newly recruited staff from various offices of the board visited ICAR-Indian Institute of Spices Research on 17th August, 2015. The visiting group was provided an orientation to the activities of the institute. The group visited the research labs of the institute and got familiarized with the latest technological developments in spices research.

### Interstate training programme organised

ICAR-Indian Institute of Spices Research organized a three day Interstate training programme on improved production technology for major spices during 11-13 August 2015. The training sponsored by the Agricultural Technology Management Agency (ATMA) of Ratnagiri district in Maharashtra was attended by 19 farmers from Dapoli region of Ratnagiri district. The training programme was inaugurated by Dr. M Anandaraj, Director, ICAR-IISR. The farmers were provided training on latest production technology of spice crops and field visits were also arranged. The trainees were provided with e-learning materials and video based learning material for easy comprehension along with the traditional print version of the learning material.



*Field visit of trainees*

### Training programme organized for personnel from Raj Bhavan, Goa

A four day training programme on advanced cultivation practices of major spices was organized for staff members





of the estate management at Raj Bhavan, Goa during 8-11 September 2015 at IISR campus. The training gave more stress to practical sessions with several hands on training sessions on nursery plant propagation and crop protection techniques of major spice crops suitable for Goa.

## Participation in Exhibitions

### South Indian Agri Fest at Kannur

ICAR-IISR participated in the South Indian Agri Fest and State Farmer's Day celebration organized by Department of agriculture, Government of Kerala. The exhibition was held during 16-26 August 2015 at Kannur. The exhibition included participants from major public and private sector organizations involved in agricultural research and development. The IISR stall attracted large number of visitors during the event.

### Exhibition on Plantation and spices technologies

Participated in the exhibition on Plantation and spices technologies organized in connection with III International Symposium on *Phytophthora* held at ICAR-IIHR, Bengaluru during 8-10 September 2015.



Curious foreign visitor (right) at IISR exhibition stall

## Krishi Vigyan Kendra

### Front Line Demonstration

KVK conducted the following FLDs

1. Demonstration of pro-tray technique of ginger
2. Demonstration of use of PGRR encapsulated bio-capsules for management of soft rot of ginger
3. Demonstration of IISR Power mix for higher yield and quality in ginger
4. Seed production of pearlspot fish in fresh water area
5. Production and marketing of value added products

### On Farm Testing

The following OFTs are in progress

- a. Culture of Asian Seabass (*Lates calcarifer*) in brackish water ponds

- b. Performance evaluation of IISR nutrient mix on yield of black pepper

- c. Performance evaluation of grafted black pepper

## Training Programmes

A total of 25 training programmes were organized for farmers, rural youth and extension functionaries. 1253 persons attended the programmes. KVK participated in 3 exhibitions, attended 58 field visits and provided 227 consultancy services. Total revolving fund generation was Rs 673715.

## Publications

### Research papers

Chuan-Rui Zhang, Ettannil Jayashree, Paramasivam Suresh Kumar & Muraleedharan G Nair 2015 Antioxidant and antiinflammatory compounds in nutmeg (*Myristica fragrans*) pericarp as determined by *in vitro* assays. *Natural Product Communications* 10: 1399-1402.

### Books edited

Eapen S J, Praveena R & Umadevi P (Eds.) 2015 Phyto-FuRa Annual Report 2014/15. ICAR-Indian Institute of Spices Research, Kozhikode, 102p.

Dinesh R, Santhosh J Eapen, Senthil Kumar C M, Devasahayam S, John Zachariah T & Anandaraj M (Eds) 2015 Proceedings of International Symposium on Plantation Crops (PLACROSYM XXI), ICAR-Indian Institute of Spices Research, Kozhikode, Kerala, India, 102p.

### Technical bulletin

Pervez R & Prasannakumari N 2015 Masaloon ki Mehak (4th issue). ICAR-IISR, Kozhikode, 88p.

### Popular article

Anandaraj M & Suseela Bhai R 2015 Integrated management of *Phytophthora* diseases in spices. *Indian Horticulture* 60: 58-64

Ankegowda S J & Narendra Chaudhary 2015 ICAR-IISR, Regional Station at a glance. *Masaloon ki Mehak* 4:25-26.

Ankegowda S J 2015 Management of black pepper during rainy season. *Spice India (Kannada)* 28: 10-16.

Ankegowda S J 2015 Tips for black pepper cultivation in coffee based cropping system in Karnataka. *ASFK News letter*.

Bhat A I, Devasahayam S, Srinivasan V & Anandaraj M 2015 Viral and phytoplasmal diseases of black pepper. *Spices India* 28: 26-27.

Narendra Choudhury, Ankegowda S J, Biju C N, Sharon Aravind & Mahammed Faisal Peeran 2015 Production technology of small cardamom. *Masaloon ki Mehak* 4:42-47.



Pervez R & Devasahayam S 2015 Ketnasham Sutrkrimiyoony duara adarak ko hani pohchaney wale ket tana bedhak ka nyantran. Masaloon ki Mehak 4: 48-50.

Pervez R 2015 Adarak ke aushadhey gun (gharaloo nuskhey). Masaloon ki Mehak 4: 65-68.

Pervez R 2015 Adarak ki fasal ko sootrkrimiyoony duara utpan rog evam prabandhan. Spice India 28: 16-23.

Sharon Aravind, Ankegowda S J, Biju C N, Rajna S & Narendra Chaudhary 2015 Magical powers of golden goddess. Spice India 28: 24-27.

Sharon D'Silva, Sujatha A M, Biju C N & Ankegowda S J 2015 Shalkakeedangalude Aakramanam Rookshamayal Kurumulakinu Vipathu. Spice India (Malayalam) 28: 16-18.

Papers presented in symposia/ seminars/ workshops/ conferences

Eleven research papers were presented by ICAR-IISR researchers in various seminars / symposia during the period.

## Retirement



Mr C. Bhaskaran  
(SSS on 30-09-2015)

Name	Post	Date of joining
<b>New Appointment</b>		
Dr P. Ratha Krishnan	Programme Coordinator, KVK	19-08-2015
<b>Transfer</b>		
Mr M.P. Ramesh Kumar	Chief Technical Officer	Transferred from ICAR-CPCRI to ICAR-IISR, joined on 10-08-2015
Ms C.N. Divya	Assistant	Relieved from ICAR-IISR on 12-08-2015 to join at ICAR-NIVEDI, Bengaluru
<b>Resignation</b>		
Mr Anoop Joseph	SRF (Computer Science), PhytoFuRa	07-08-2015



## SPICES NEWS

A newsletter of Indian Institute of Spices Research

An Institution of Indian Council of Agricultural Research (ICAR),

Marikunnu P.O., Kozhikode-673 012, Kerala, India.

Phone: 0495-2731410, Fax: 0495-2731187

A PDF version of the newsletter is also available at

<http://www.spices.res.in/newsletter/index.php>

### Publisher

Anandaraj M  
Director,  
IISR Kozhikode.

### Editors

Krishnamurthy K S  
Senthil Kumar C M  
Rajeev P

### Cover design and Photo credit

Sudhakaran A

Typesetting : Deepthi P

Printed at: G K Printers, Kaloor, Cochin - 682 017. Phone : 0484 2340013. Email : gkcochin@gmail.com

