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# KALPA

CPCRI Newsletter

## From the Director's Desk



provide more options to farmers for selling their produce, for this an online platform would be set up wherein farmers can sell and buy commodities across the country. This will boost the income and improve availability, moderating price rise.

Information technology based television channels for farming community play a vital role in digital media, locally relevant information has to be broadcast in media to make effective impact on the farming community. To maximize the potential, more channels & software applications on IT platforms to be developed, making use of the satellite technology and also internet domains on agriculture have to be strengthened to empower the agri-extension officials and NGOs. Geographic information system, weather forecasts, market intelligence, decision support system, stock inventory and management information systems are to be revitalized for catering the needs of farming for national development.

Mutual benefits are, technology percolating to the farmyards on one hand and the farmers obtaining global identity on the other. It helps to bring the farming from backyard farming to the showcased contract farming. Community networking and market networking are the two main arena to be strengthened for the sustainability of the plantation sector, towards this extent the IT professionals, government planning departments, progressive IT savvy farmers and NGOs must come forward to build a strong rurally rooted digital India.

### Digital information culture

Digital information for the use of farming community will serve in two different angles. One is the knowledge base angle, providing the information for farming community to increase productivity of the crop. Second is social angle, creating awareness among the farming community that their necessity in national development which bridges the gap between technology creation and technology utilization.

Presently, the digital media is in use sparsely spread across, but not achieving the anticipated results. SMS based tips and alerts to the farmers are given by the KVK Alappuzha since last two years in the title "Haritha Vruthantham- SMS Service". Digital Mandis of Haryana model for dissemination of AGMARKNET data on pricing of agricultural produce through SMS/ voice calls on mobile will simplify the process of access to information and remove the barrier of time and distance by providing required market information to the farmers at their fingertips. Recently, Govt. of India approved setting up of an online facility called "Digital India" that will

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## RESEARCH HIGHLIGHTS

### Promising brown dwarf coconut selection

A robust, early flowering brown dwarf selection made from the Surinam Brown dwarf (SUBD) accession in the field gene bank at CPCRI, RC, Kidu was found promising. This selection starts bearing early, by about 4-5 years after planting. The inflorescence of the selection is long and more robust with more fruit set (10-15 fruits/bunch). The fruits are medium in size, oval in shape and brownish green in colour. The husk content of the fruits is lower and the tender nut water is around 775 ml. Considering the higher initial yield, higher tender nut water content and dwarf plant habit, this robust brown dwarf selection has immense potential and is to be effectively utilized in the coconut varietal development programme. Planting material of this selection have been generated and efforts to evaluate this brown dwarf selection for its reaction against abiotic/ biotic stress is underway, especially its tolerance to cold and moisture stress conditions. The

hybrid Malayan Dwarf x Surinam Dwarf was reported to be less susceptible to wilt disease at the Surinam Agricultural Experiment Station in Surinam.

V. Niral and B. Augustine Jerard

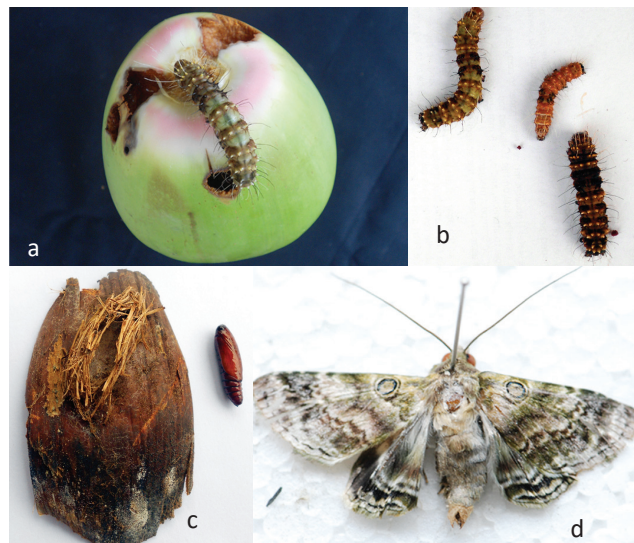


Brown dwarf coconut selection at RC, Kidu

### Emergence of nut borer in coconut

Emergence of nut borer, *Cyclodes omma* (Noctuidae : Lepidoptera), an occasional pest was noticed during May-June in the Institute farm at Kayamkulam feeding on immature nuts and inducing button-shedding. The pest was first noticed in CGD palms. Different stages of hairy caterpillars bore into the meristematic tissues surrounding the tepel and make prominent and typical bore holes. Caterpillars construct fibrous cocoon around the crown region. Adult moths are ochre-green tinged with bi-layered ring spots towards apical margin.

A. Josephraj Kumar and Chandrika Mohan



Nut borer, *Cyclodes omma* : a. Caterpillar boring tendernut, b. Caterpillars, c. Pupa and its niche, d. Adult noctuid moth

### Arecanut rain guard

A prototype of rain guard developed to protect the arecanut bunches from fruit rot disease. Five different models of rain guards were fabricated using galvanized iron sheet, fibre sheet and UV resistant polythene sheet. Performance study showed that



Rain guards for arecanut bunches to prevent fruit rot disease



among the models, UV resistant polythene sheet was more suitable and cost effective.

A field trial was initiated at CPCRI Regional Station, Vittal to study the efficacy of mechanically preventing

rain drops from falling on arecanut bunches using 'rain guards' and thereby protecting it from fruit rot disease.

A.C. Mathew and M. Chaitra

## New coccid scale on cocoa leaves

In a recent survey conducted at Vittal on cocoa, occurrence of a coccid *Icerya* sp. was reported from the leaves of cocoa plant. So far this soft scale insect was not reported from cocoa. It resembles a mealy bug with elongated tentacles emerging from the lateral side of the body and is confined mostly on the midribs on the under surface of the leaves. Feeding induces yellowing on leaves in severe cases.

Chandrika Mohan and A. Josephrajikumar



*Icerya* sp. infesting cocoa leaves

## Management of stem bleeding disease of coconut

Technology for the management of stem bleeding disease of coconut using organics tested by KVK, Alappuzha in field trials was accepted for "POP recommendations – Crops, 2015" for Kerala state by the Kerala Agricultural University. The management package includes swabbing the lesions on the trunk with *Trichoderma viride* paste (1g ml<sup>-1</sup>) and basal

application of lime @1 kg palm<sup>-1</sup>year<sup>-1</sup> followed by application of neem cake (5 kg palm<sup>-1</sup>year<sup>-1</sup>) – organic manure (FYM / Vermicompost) mixture fortified with *Trichoderma* (1%) after two weeks of lime application.

G. Lekha, P. Muralidharan and  
P. Anithakumari

### AWARD/ HONOURS

KVK, Alappuzha was rated as one of the best KVKs of Zone VIII by the Zonal Project Directorate based on the activities of 2014 -15 during the Annual Review Workshop (2014- 15) held at University of Agricultural & Horticultural Sciences, Shimoga from 20th to 23rd May, 2015.

### NEW PROJECT SANCTIONED

ICAR-CPCRI has been identified as a partner for execution of work under Component-I-PGR Management and Use in the NBPGR sanctioned Plan Scheme "Consortium Research Platform on Agro-biodiversity". Dr. V. Niral, Principal Scientist (Genetics), is the Collaborating Centre Principal Investigator for the project.



Stem bleeding symptoms and field level treatment using *Trichoderma*

## IMPORTANT EVENTS ORGANISED

### Establishment of coconut seed gardens in Open Prison

ICAR-CPCRI has initiated establishment of coconut seed gardens in two open prisons located at Nettukaltheri (Trivandrum) and Cheemeni (Kasaragod) in Kerala State aiming for large-scale production of coconut hybrids in the future. The programme is taken up as a joint venture of ICAR-CPCRI and Department of Prisons, Govt. of Kerala. Shri Ramesh Chennithala, Hon'ble Minister for Home & Vigilance, Govt. of

Kerala inaugurated the first phase of the programme at Open Prison, Nettukaltheri on 19<sup>th</sup> May 2015. Dr. P. Chowdappa, Director, ICAR-CPCRI, Mr. T. P. Senkumar, Director General of Police, Kerala State, Dr. V. Krishnakumar, Head, ICAR-CPCRI, Regional Station, Kayamkulam were present. The programme is aimed at production and distribution of released coconut hybrids, engaging the prison inmates.



Shri Ramesh Chennithala, Hon'ble Home Minister, Govt. of Kerala inaugurating coconut seed garden



Dr. P. Chowdappa, Director, ICAR-CPCRI planting coconut seedling at Open Prison

### Annual Group Meeting of AICRP on Palms

The 24<sup>th</sup> Annual Group Meeting of All India Coordinated Research Project on Palms (AICRPP) was held at ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI), Goa from 26<sup>th</sup> to 28<sup>th</sup> May, 2015. The Annual Group Meeting was inaugurated by Mr. Manoj Kumar Sahoo, IAS, Secretary, Agriculture, and Govt. of Goa. Mr. Manoj Kumar Sahoo appreciated the concept of AICRP as a platform for sharing ideas for carrying out research for overall development of the sector at ground level. He urged that consolidated efforts are required from all the stakeholders to the

problems of farmers. Meeting was presided over by Dr. N.P. Singh, Director, ICAR-CCARI, Goa, Dr. S.K. Sharma, Director, ICAR-CIAH, Bikaner and Dr. P. L. Saroj, Director, ICAR-DCR, Puttur were present. Dr. H.P. Maheswarappa, Project Coordinator (Palms) presented a report of the AICRP on Palms. The plenary session was held on 28<sup>th</sup> May 2014 under the chairmanship of Dr. N.K. Krishna Kumar, DDG (Hort. Sci.), ICAR, New Delhi and Dr. P. Chowdappa, Director, ICAR-CPCRI and Dr. P. Kalidas, Actg. Director, IIOPR, Pedavegi were present on the occasions.



Dr. N.K. Krishna Kumar, DDG (HS) addressing the scientists of AICRP on Palms



Coconut hybrid LCT x CCNT with superior yield and thick kernel



Evaluation of coconut hybrid with high nut yield, copra output and oil yield with 14 cross combinations since 1986 in different AICRP centres, resulted in identification of a superior high yielding cross combination, LCT x CCNT at AICRP-Palms centre, Veppankulam (TNAU, Tamil Nadu). This hybrid was recommended for release during 24<sup>th</sup> Annual Group

meeting of ICAR-AICRP on Palms held at ICAR- CCARI, Goa during 26-28 May 2015 as VPM 5 for cultivation in Tamil Nadu state. The mean nut yield of the hybrid was 161 nuts/palm/year which is 62.6 and 43.8 per cent higher than ECT and VHC 1, respectively and copra content of 149.8 g/nut with an oil content of about 70% was recorded.

## 'Kalparasa' launched at Goa

'Kalparasa' a fresh, hygienic and unfermented energy drink from coconut inflorescence has been launched for its collection and sale in Goa by Dr. N.K. Krishna Kumar, Deputy Director General (Hort. Sci.), ICAR on 28-05-2015 in the brand "Nanu kalparasa". Shri Krishna Plantations, Goa signed a memorandum of Agreement with ICAR-Central Plantation Crops Research Institute (ICAR-CPCRI) for its collection using Coco-sap chiller technology and the fresh unfermented juice devoid of preservatives and other additives will be sold in resorts and local markets. Dr. N.K. Krishna Kumar appreciated the Kalparasa drink being rich in its nutrients and other phytochemicals like minerals, amino acids, vitamins and antioxidants makes it not only an ideal health drink but also could be a best sport drink. He handed over the bottled kalparasa named as 'Nanukalparasa' to the Chairman of Nanu Enterprises Mr. Crisna (Bhau) Naik. Dr. P. chowdappa, Director, CPCRI, Kasaragod gave a detailed account



Dr. N. K. Krishna Kumar, DDG (H.S.), ICAR, New Delhi, launching Nanu Kalparasa at Goa

of innovations made in Kalparasa collection, its quality standards, value addition, marketing and financial benefits. He emphasized that switching to kalparasa tapping provides multiple advantages to the economy, environment, farmer and consumer. Mr. Orlando Rodrigues, Director of Agriculture released a technical bulletin on 'Kalprasa- Collection and Value addition' published by the Institute. Dr. N.P. Singh, Director, Central Coastal Agriculture Research Institute, Goa felicitated the function. Dr. K.B. Hebbar, Head, PB&PHT Division, CPCRI, Kasaragod demonstrated the collection of Kalparasa using Coo-sap chiller.

## Participatory demonstration on management of root (wilt) disease of coconut

Participatory demonstration project on "Integrated management package for root(wilt) disease of coconut" was launched by Dr. N.K. Krishna Kumar, DDG (Hort. Sci.), ICAR, New Delhi on 31-05-2015, being implemented by ICAR-CPCRI RS, Kayamkulam in seven southern districts of Kerala and one district of Tamil Nadu. In the key note address, Hon'ble DDG stressed the importance of developing entrepreneurship among coconut farmers and put forward a road map for research and development in coconut. Dr P. Chowdappa, Director, ICAR-CPCRI presided over the function. During the occasion, Dr. T. Janaki Ram ADG (HS I), Dr. H. P. Maheswarappa, Project Coordinator, (AICRP Palms) and stakeholders from local government



Dr. N.K. Krishna Kumar, DDG (H.S.), ICAR, New Delhi, launching participatory demonstration project

institutions were present. Six publications (centenary series 2-7) were released during the occasion. About 75 farmers from various panchayaths and extension officials attended the programme.



## CPCRI Newsletter

Dr. N. K. Krishnakumar, DDG (Hort. Sci.) also visited State Planning Board funded project 'Area-wide participatory pest and disease management project sites and interacted with the farmers. The ICAR officials and farmers discussed on the various technologies evolved by ICAR-CPCRI in enhancing the health and yield of coconut palms in RWD endemic areas. The farmers in project area shared their successful experience of participatory community management of field problems of coconut like improvement of health of palms and yield by 120 % by adopting integrated root (wilt) disease management practices.



Dr. N.K. Krishnakumar, DDG (H.S.), ICAR, New Delhi, addressing the farmers at Bharanicavu, Alappuzha

## Stakeholders meet on arecanut disease management

A stakeholder's meet on "Disease management in arecanut with special emphasis on fruit rot (Mahali/ Koleroga)" was held at ICAR-Central Plantation Crops Research Institute (ICAR-CPCRI), Regional station Vittal on 09-04-2015. Dr. K. S. Ananda, Head, CPCRI, RS, Vittal delivered introductory remarks. Dr. P. Chowdappa, Director, ICAR-CPCRI in his inaugural address emphasized the need to create awareness among farmers on use of bio-formulations for the control of fruit rot disease of arecanut. The Institute will be taking up demonstration and experimentation. He assured that a committee will be formed to monitor the progress.

A demonstration on preparation of Bordeaux mixture and rain guards for the management of the disease were made during the occasion. More than 100 stakeholders including farmers, agriculture officials and media personnel had participated in the programme.

Dr. H. P. Maheshwarappa, Project Coordinator, AICRP on Palms, CPCRI, Kasaragod, Mr. Manchi Srinivas Achar, President, All India Areca Growers Association, Puttur and Dr. D. C. Chowta, Progressive farmer, Meeyapadavu, Manjeshwara offered felicitations.

Dr. Vinayaka Hegde, Head, Crop Protection, CPCRI, Kasaragod presented the management practices for fruit rot disease and action plan for managing the disease.

## ASPIRE-2015 for inspired research excellence

ASPIRE-2015 crash course was held at ICAR-CPCRI, Regional Station, Kayamkulam on 16-05-2015. Sixty-eight +2 students around Kayamkulam participated in the programme. In tune with the ICAR's twin major initiatives "Farmer First" and "Student Ready" to accelerate agricultural research and development, ASPIRE-2015 programme was designed to infuse farming instincts among the budding talents at school level. Dr. K. Muralidharan, Acting Head, Division of Social Sciences, ICAR-CPCRI, Kasaragod addressed the students and urged to take up agriculture as a passion in their career. A Training manual - "Gleanings in Agriculture" and "E-manual" (CD) containing the lecture notes and power point presentations were released during the programme.



Dr. K. Muralidharan, Acting Head, Division of Social Sciences addressing the students



## HUMAN RESOURCES DEVELOPMENT

### Deputation Abroad

Dr. Chandrika Mohan, Principal Scientist attended the FAO sponsored international workshop on control and management of red palm weevil at Riyadh, Saudi Arabia, during 10-12 May 2015.

### Training within India

Name & Designation	Training Programme	Place & Duration
Dr. Ravi Bhat, Head, Crop Production, CPCRI, Kasaragod	Management Development Programme on Leadership Development (a pre-RMP programme)	ICAR- NAARM, Hyderabad 16-06-2015 to 27-06-2015
Smt. K.T.K. Sheenakumari, Smt. Rupa Manikandan, Shri Narayana Naik, Smt. K. Preethi, Shri Paulson Sam George, Smt. Madhavikutty, Smt. Annamma N. Topino, Shri N. Lakshmana, Smt. Jayashree K., Shri Ashwin Reghunath, Shri T. J. Saji, UDCs, Smt. Remya T.R., Shri T.K. Gangadharan, Shri P.K. Pramodkumar, Shri Jayarajan V., Shri Ratan Singh, Shri Umesh Kumar, Shri Dinesh, Shri Mohd. Haneefa, Shri Lakshminarayana, Shri Arun N.K. Raj, Shri S.B. Moharana, Shri. Deepak Meena, LDCs	Administrative training	CPCRI, Kasaragod 22-06-2015 to 24-06-2015

## PUBLICATIONS

### Research Articles

Jaganathan, D. and Nagaraja, N. R. 2015. Perception of farmers about arecanut based multispecies cropping system. *Indian Res. J. Extension Edu.* **15**(2): 49-54.

Jerard B.A., Niral V., Samsudeen K., Nair RV., Jayabose C and George V. Thomas. 2015. Development of a Dwarf x Tall coconut hybrid 'Kalpa Samrudhi'. *J.Plantation Crops*, **43**(1):46-52.

Manoj P. Samuel and Abraham C. Mathew. 2015. 'Techno-Economic evaluation of a Multi-Media Vertical Flow Filter for Roof water Harvesting'.

*Intl. J.Curr. Res. in Biosciences and Plant Biol.* **2** (7): 10-19.

Nath, J.C., Deka, K. K., Saud, B.K. and Maheswarappa, H.P. 2015. Intercropping of medicinal and aromatic crops in adult coconut garden under Brahmaputra Valley Region of Assam. *J. Plantation Crops*, **43** (1):17-22.

Rajesh, M.K., Sabana, A.A., Rachana, K.E., Shafeeq Rahman, Jerard, B.A. and Anitha Karun 2015. Genetic relationship and diversity among coconut (*Cocos nucifera* L.) accessions revealed through SCoT analysis. *3 Biotech*, DOI 10.1007/s13205-015-0304-7.

Srinivasan, T., Chitra, N., Chalapathi Rao, N.B.V. and Maheswarappa, H.P. 2015. Damage by coconut defoliator, *Phalacra vidhisara* Walker (Drepanidae: Lepidoptera). *Insect Environment*, **20** (4): 106-108.

### Books/Reports

ICAR-CPCRI, 2015. Annual Report 2014-15, ICAR- Central Plantation Crops Research Institute, Kasaragod-671124, Kerala, India, 126p.

### Papers presented in Conference

Chandrika Mohan, Josephraj Kumar, A., Krishnakumar, V. and Chowdappa, P. 2015. Current



status of red palm weevil management in India. Lead paper presented in FAO sponsored 'International workshop on control and management of red palm weevil', Riyad, May 10-12, 2015, Book of abstracts p 4.

Muralidharan, P. 2015. Organic Farming in coconut – Scope, Constraints and Strategies. Abstracts of the 4<sup>th</sup> International Congress on Kerala Studies – Regional Seminar (5) on "Integrated Farming", 28<sup>th</sup> April, Palakkad. pp35(in Malayalam).

### Popular Articles

Ananda, K. S. and Nagaraja, N. R. 2015. Adikeyalli Sudhaarita Kubja Sankarana Taligalu (Kannada). *Negila Miditha*. **1**(4): 21.

Jeena Mathew, Abdul Haris, A and Krishnakumar, V. 2015. How to manage heavy metal pollution in soil?. *Kerala Karshakan e-journal*, June 2015. pp:44-47.

Jissy George and Muralidharan, P. 2015. Highly priced tender jackfruit. *Karshakashree* **21** (4) :52-54 (in Malayalam).

Jissy George and Muralidharan, P. 2015. Koozha type Jackfruit - not to be wasted. *Karshakashree* **21** (6):53-54 (in Malayalam).

Jissy George and Muralidharan, P. 2015. Wonder products from Oriental Pickle Melon. 2015. *Karshakashree*. **21**(5) :48-49 (in Malayalam).

Jissy George 2015. A processed Jackfruit - A thousand rupees. *Karshakashree*. **21** (4) :54-55(in Malayalam).

Jissy George 2015. Jack fruit recipes for the control of diabetes. *Malayala Manorama Weekly*. **60** (17):31(in Malayalam).

Lekha, G. and Muralidharan, P. 2015. Management of coconut stem bleeding disease using organics. *Indian Nalikera Journal*. **6** (6):40- 41 (in Malayalam).

Maheshwarappa, H. P., Basavaraju, T. B., Sumitha, S. and Geetha Kumari A., 2015, Research findings of ICAR- All India Co-ordinated Research Project on Palms in Karnataka. *Bharatiya Thengu Patrike*, **26**(1), 8-11 (in Kannada).

Mathew, A.C. and Thamban, C. 2015. Virgin coconut oil production process. *Karshakasree*, March pp 48-51.

Rajeev M.S. and Muralidharan, P. 2015. Rain shelters for vegetable cultivation. *Kerala Karshakan*. **60**(11):29-30 (in Malayalam).

Thamban, C. and Samsudeen, K. 2015. Quality planting material production for sustainable development of coconut sector: Strategies and linkages. *Indian Coconut J*. **57** (12):22-26.

Thamban, C. and Subramanian, P. 2015. Kerasamrudhi veendedukkan manninte arogyaparipalanam. *Indian Nalikera J*. **6** (6): 34-36 (in Malayalam).

### Technical bulletin

Krishnakumar, V., Merin Babu, Thomas, R.J., Josephraj Kumar, A., Anithakumari, P., Vinayaka Hegde and Chowdappa, P. 2015. Root (wilt) disease of coconut-Bench to bunch strategies. Technical bulletin No. 91, Centenary publication No. 2, ICAR-CPCRI, Kasaragod p 28.

### Extension folder

Anithakumari, P., Merin Babu, Josephraj Kumar, A. and

Chandran K. P. 2015. Field guide for coconut farmers (In Malayalam).

Chandrika Mohan, Sunny Thomas, Shanavas, M. and Josephraj Kumar, A. 2015. Red palm weevil (In Malayalam), Centenary publication No. 5, ICAR-CPCRI, Regional Station, Kayamkulam.

Anithakumari, P., Chandran K.P., Merin Babu and Josephraj Kumar, A. 2015. Community management model – Red palm weevil of coconut. Extension folder (In Malayalam)

Jeena Mathew and Abdul Haris, A. 2015. Nutritional disorders in coconut and their management (In Malayalam), Centenary publication No. 4, ICAR-CPCRI, Regional Station, Kayamkulam.

Maheshwarappa, H.P. and Sumitha, S. 2015. ICAR-AICRP at a glance. Extension folder. AICRPP, CPCRI. p.8.

### Training Manual

Josephraj Kumar, A., Chandrika Mohan, Merin Babu and Krishnakumar, V. 2015. Training manual on *Gleanings in Agriculture –Edifying knowledge to blossom farming in student's minds*, ASPIRE, May 16, 2015 ICAR-CPCRI, Regional Station, Kayamkulam 33p.

### E publications

Eco-friendly technologies enhanced profits in Rice production in Kuttanad, (<http://www.icar.org.in/en/node/8800>).

Muralidharan, P. 2015. Promoting eco – friendly technologies in Rice production in Kuttanad, Kerala, AESA blog.- Goodpractices 9:May,2015:6p (<http://www.aesa-gfrs.net/Resources/file/Murali-GP-15%20May-2015.pdf>).



## TRANSFER OF TECHNOLOGY

### Training-cum-Workshop on 'Convergence of extension initiatives in plantation sector for inclusive development'

A training-cum-workshop on 'Convergence of extension initiatives in plantation sector for inclusive development' was held at ICAR-CPCRI, Kasaragod during 15-17 June 2015. Dr. R.Muralidhara Prasad, former Associate Director of Extension, Kerala Agricultural University, Thrissur, inaugurated the programme. Dr. P. Chowdappa, Director, CPCRI presided over the inaugural function. Extension officers from Rubber Board, State Department of Agriculture and ATMA (Agricultural Technology Management Agency) attended the programme.



Dr. R.M. Prasad inaugurating the workshop

#### Training programmes

A training programme on Coconut Production Technology was organized at CPCRI, Kasaragod for the farmers under the VFPCCK unit Kottiyoor, Kannur district on 24-04-2015.

On campus training programme on 'Soil & water conservation and low cost water harvesting techniques for West Coast region' for B.Tech. (Agri.Engg.) Students of Kerala Agricultural University from 14-05-2015 to 05-06-2015 at Kasaragod.

A batch of final year agricos from College of Horticulture, Vellanikara, Thrissur were exposed to various activities of the Regional Station, Kayamkulam from April 23-29, 2015. In addition, the students presented a brief project proposal about the emerging farmer's issues identified by them during the survey.

Training cum demonstration was organised at CPCRI Regional Station, Vittal on 09-04-2015. Training was imparted to farmers on 'Areca nut climbing using Chemberi model climbing machine'. Fixing of the areca nut rain guard would be very easy this way since

both the hands of the climber would be free to fix the rain guard.



Climbing areca palm using climbing device with safety attachment

Working of the safety attachment developed by the institute that provides fool proof safety to the areca nut climbers was also demonstrated.

Areca nut harvesting and spraying using a machine developed by an innovative farmer, Shri Prasanth Thattari, also was shown to the farmers gathering.



Areca nut harvesting and spraying machine

A Stakeholders meeting on "Disease management in areca nut with special emphasis on yellow leaf disease" was organised at Agricultural and Horticultural Research Station, Sringeri, Karnataka on 18-5-2015.

A farmers workshop on 'Areca nut based multispecies cropping system and plant protection' was organized at Balepuni, Bathwal taluk, Dakshina Kannada, Karnataka on 19-05-2015.

Dr. Arun Kumar Sit conducted one off farm training programme on "Scientific areca nut cultivation at Panbari, Maynaguri block, Jalpaiguri on 09-06-2015 in which, 40 areca nut growers had participated.



Entrepreneurs training on organic farming at Kahikuchi, Assam

## Scientist - Farmer Interface Programme on Coconut and Arecanut farming

A Scientist-Farmer Interface Programme was organised on Coconut and Arecanut at Velliangiri near Coimbatore in Tamil Nadu on 07-05-2015 in collaboration with Uzhavan Farmer Producer Company and Isha Foundation. Dr. P.Chowdappa, Director, ICAR-CPCRI inaugurated the interface Programme. Scientists interacted with farmers on various aspects of Crop Improvement, Crop Production, Crop Protection and Product diversification in coconut and arecanut, in which about 200 farmers participated.



Dr. P. Chowdappa inaugurating the interface programme

## Coconut seedling distribution

ICAR-CPCRI Regional Station, Kayamkulam distributed 12,696 seedlings to 1510 farmers during the coconut seedling distribution mela conducted at ICAR-CPCRI, Regional Station, Kayamkulam during 2-5th June 2015. Nearly 1700 farmers registered at this Regional Station during 1st week of March 2015 for coconut seedlings.

## Radio/TV programme

Interview on 'Bharanikkavu model-Area wide Community-based red palm weevil management' on 13-04-2015 at AIR, Thiruvananthapuram by Dr.P. Anithakumari, Principal Scientist (Agrl. Extension).



Distribution of coconut seedlings at CPCRI, RS, Kayamkulam

She also participated in a phone-in programme on 'Experiences in field level pest and disease management in coconut farmer's gardens' on 29-05-2015 at Doordarshan, Thiruvananthapuram.

An interview on "Integrated nutrient management in coconut" with Dr. H.P. Maheswarappa, Project Coordinator (Palms) was broadcast by AIR, Mangaluru on 24-6-2015.

"Hello Akashvani" Live Phone-in programme for answering farmers' questions related to coconut cultivation on 05-06-2015 at AIR, Thiruvananthapuram by Dr.V.Krishnakumar, Head, R.S. Kayamkulam.

A live phone-in programme on "Cultural operations in plantation garden during rainy season", in which Dr.Arun Kumar Sit, Sr. Scientist, RS, Mohitnagar participated at AIR, Siliguri on 28-05-2015.

He also participated in two live interactions on "Black pepper cultivation in plantation garden" on 20-05-2015 in North Bengal region and "Cultural Operation in arecanut garden during rainy season" on 29-06-2015 at Uttarbanga Channel, Siliguri.

Dr.Arun Kumar Sit served as a resource person for two programme on "Production of good quality planting material of arecanut and black pepper and methods of black pepper planting in arecanut stands" telecasted by Doordarsan Kendra, Jalpaiguri on 30-06-2015.



## Exhibitions

Exhibition stall of ICAR-CPCRI was arranged at Isha Yoga centre, Coimbatore in connection with stakeholders interface programme on coconut and arecanut farming on 07-05-2015.

ICAR-CPCRI participated in the National Seminar-cum-Exhibition on Coconut at Thirupathisaram, Nagercoil hosted by KVK Kanyakumari district on 30.6.15. Sri Pon Radhakrishnan, Hon'ble Minister for road transport and shipping transport, inaugurated the programme. Dr. N.K. Krishna Kumar, DDG (H.S.) and Dr. P. Chowdappa, Director were present in the programme.



Shri Pon Radhakrishnan, Hon'ble Minister for Road Transport and Shipping and Dr. N.K. Krishna Kumar, DDG (H.S.), ICAR, New Delhi, visiting CPCRI pavillion

## Women cell activities

Success stories of the women entrepreneurs with technical and input support of KVK-Alappuzha were telecasted in "Noorumeni" programme of Farm Information Bureau, Govt. of Kerala on Dooradarshan.

Field oriented off-campus training programme was provided to women farmers' group members of Chunakkara gramapanchayth on 4th and 5th



Training of women group members in coconut plant protection and surveillance at Bharanikavu

June, 2015 at Bharanikavu on ' Pest and disease surveillance and field problem diagnosis'. The coconut plant protection and surveillance group members of Bharanikkavu panchayath, Agricultural Officer, Krishibhavan, Bharanikkavu and Chunakkara, ICAR-CPCRI scientists imparted practical skills and field visits to farmers gardens also arranged.

## KVK, Kasaragod

### Training programmes

KVK has carried out various on-campus and off-campus training programmes on apiculture, IPM in paddy, organic cultivation, soil and water conservation, mini set techniques in tuber crops and value addition. A total number of 557 persons benefitted from 14 different programmes.

### On farm trials

On farm trials on performance evaluation of dwarf varieties of coconut, management of rhinoceros beetle in coconut, and micronutrient management in pepper using the IISR micronutrient mixture was initiated in farmers plots of four different panchayats.

### Frontline demonstrations

A total of 38 demonstrations were initiated on organic cultivation of paddy management of bud rot disease using Trichoderma cake, management of Phytophthora foot rot disease in black pepper and mini set techniques in ginger, turmeric and elephant foot yam in different farmers' plots.

A demonstration plot of papaya varieties was established in KVK with Arka Prabhath, Coorg honey Dew and Red Lady varieties. KVK also produced arecanut seedlings, papaya seedlings, drum stick seedlings, Annona seedlings and neem based bioformulations.

### Extension activities

KVK Kasaragod organized a convergence meeting of the heads of departments of Animal Husbandry, Dairy, Fisheries, Agriculture and ATMA on 9th April 2015 at KVK. Provided technology advisories through the Monthly Technology Advisory meet with ATMA and through helpline services.

KVK launched its activities at Mangalpadi Panchayath

A farmers' meet and awareness programme was conducted at Mangalpady panchayath. The programme was inaugurated by Shri P.B. Abdul Razak, MLA,



## CPCRI Newsletter

Manjeswar in which Dr. P. Chowdappa, Director, ICAR - CPCRI, delivered the key note address wherein he emphasized the benefits of timely management of crop pests and diseases at the onset of monsoon season as a pre kharif plan. Around 110 farmers attended the programme.

### KVK, Alappuzha

#### RAWE Programme

Final year B.Sc. (Ag.) students from College of Horticulture, KAU, Vellanikkara have undergone the KVK module of RAWA programme at KVK, Alappuzha from 30th April to 7th May, 2015. Various sessions were arranged for familiarizing them with the activities of KVK.

#### Skill training programme on "Vegetable Nursery Management"

A skill training programme on "vegetable nursery management" for Athulyam beneficiaries was conducted on 6th May 2015, at CPCRI (RS), Kayamkulam. Gramapanchayath members, literacy mission volunteers, and state department officials were present for the programme in which 75 rural women participated.

### Animal Health Camp

An Animal Health Camp was conducted at Muttar Panchayath on 20-04-2015. It was arranged as a continuation of the activities taken up under the "National Innovations in Climate Resilient Agriculture" project implemented by the KVK in Muttar village in which 27 animals were treated for infertility and 20 animals were examined for pregnancy. De-worming medicines and vitamin supplements were distributed to the farmers.



Animal health camp

## COMMERCIALIZATION OF TECHNOLOGY

During the period from January to July, 2015, seven technologies developed by the Institute were commercialised to entrepreneurs through MoA as per the detail given overleaf, an amount of ` 1.46 lakhs have been collected as technology transfer fees.



Dr. P. Chowdappa, Director handing over technology transfer MoA to Shri Gautham R., Tamil Nadu

## OBITUARY



Shri B. Rama

Director and staff mourn on the sudden demise of Shri. B. Rama, SSS of ICAR-CPCRI, Kasaragod, who breathed his last on 30<sup>th</sup> April, 2015 and Shri. O. Ramachandran, SSS of ICAR-CPCRI, Kasaragod, who breathed his last on 3<sup>th</sup> June, 2015. We pray the Almighty that the departed souls may rest in peace.



Shri O. Ramachandran



## Details of technology transfer and commercialization

Sl. No.	Technology	Date of licensing	Transfer fees ₹	Entrepreneurs
1	Virgin coconut oil (VCO) by hot process	10-04-2015	25000	Smt. K.V. Nalini, Vaiga Virgin Coconut Oil, Nileshtar, Kasaragad
2	Coconut de-shelling machine	17-04-2015	1000	Smt. S. Angalaeswari, NH 51 Kudikkadu, Tamilnadu
3	Collection of fresh and hygienic neera and production of natural coconut sugar	22-04-2015	10000	M/s Krishna Plantations (Pvt) Ltd, Margao, Goa, Pin 403601
		27-04-2015	10000	Shri Gautham R., Udumalpet, Tirupur, Tamilnadu
		28-04-2015	10000	Shri Arun Kumar, Udupi Taluk, Karnataka
		25-05-2015	10000	Shri K.P. Mohan Das, Hidayath Nagar PO, Kasaragad
4	Coconut chips	22-05-2014	10000	M/s Therthally Federation of Coconut Producers Society, Kannur
		26-05-2015	10000	Shri V.P. Raveendran, Pantheerankavu P.O., Calicut
5	Cryopreservation of coconut pollen	01-07-2015	50000	Shri Raam Mohan N.U., Palladam (TK), Tirupur, Tamil Nadu
6	Coconut leaf vermicomposting technology	2-07-2015	5000	
7	Utilization of <i>Metarhizium anisopliae</i> culture	2-07-2015	5000	
	Total		1,46,000	

## SEMINAR/ SYMPOSIA/ CONFERENCES/ WORKSHOPS ATTENDED

Name and designation	Title	Place and date
Dr. K.B. Hebbar, Dr. K. Muralidharan, Anitha Karun, Dr. Ravi Bhat, Dr. K.S. Ananda, Dr. V. Krishnakumar, Heads, Dr. V. Nirali, Dr. B. Augustine Jerard, P. Subrahmanian, Dr. Chandrika Mohan, Dr. A. Joseph Rajkumar, Dr. Elaine Apshara, Principal Scientists, Dr. Merin Babu, Scientist	24 <sup>th</sup> Annual Group meeting of AICRP on Palms	ICAR-Central Coastal Agricultural Research Institute, Goa 26-05-2015 to 29-05-2015
Dr. Chandrika Mohan, Principal Scientist	24 <sup>th</sup> Biocontrol workers group meeting of AICRP on Biological Control of Crops	TNAU, Coimbatore 02-06-2015 to 03-06-2015
Dr. C. Thamban, Principal Scientist	4 <sup>th</sup> International Congress on Kerala Studies	Palakkad 27-04-2015 to 28-04-2015
Dr. C. Thamban, Principal Scientist	Brainstorming session on 'Extension research in NARES of Kerala: Current progress and future perspectives'	ICAR-CTCRI, Thiruvananthapuram 18-04-2015

## OTHER INFORMATION

### Hindi workshop

A Hindi workshop was conducted on 23-06-2015 at ICAR-CPCRI, Regional Station, Kayamkulam. Mr. M. Samraj, Hindi Officer, Southern Railway, Thiruvananthapuram was the Chief Guest, inaugurated



Mr. M. Samraj, Chief Guest addressing the participants of Hindi Workshop at Kayamkulam

the workshop. He demonstrated to the participants on the use of Hindi fonts through computer, enabling typing of Hindi alphabets, inscript keyboard and Google device for translating from English to Hindi in a lucid manner.

### Swachh Bharat activities

Extensive cleaning works around the institute building, auditorium as well as farm premises were conducted on the third Wednesday during April-June, 2015 and were made weed free.



## DISTINGUISHED VISITORS

Dr. N.K. Krishna Kumar, Hon'ble DDG (Hort. Sci.) and Dr. T. Janakiram, ADG(Hort.Sci.-I) visited the Regional Station, Kayamkulam on 31-05-2015 and reviewed the ongoing research programmes including field experiments. Dr. N.K. Krishna Kumar also harvested mature coconuts of Kalpa Sankara hybrid (33-month



Dr. N.K. Krishna Kumar, DDG (H.S.), ICAR, New Delhi, conducting ceremonial planting at CPCRI, RS, Kayamkulam

old palms) along with Director, ICAR-CPCRI and other scientists of the Regional station and undertook a ceremonial planting of Kalparaksha variety.

Dr. Gurbachan Singh, Chairman, ICAR-ASRB, New Delhi visited the Regional Station Kayamkulam on 08-06-2015 and interacted with the Scientists and Technical Officers.

Dr. Bhumidhar Barman, Hon'ble Minister of Revenue & Disaster Management, Administration Reforms and Training, Government of Assam visited CPCRI, RC, Kahikuchi on 06-04-2015. He visited nursery and experimental plot such as arecanut based cropping system, vermicompost unit and held discussions on mandate and achievements of the centre.



Dr. N.K. Krishna Kumar, DDG (H.S.), ICAR, New Delhi, harvesting mature nuts from Kalpa Sankara coconut hybrid





Dr. Gurbachan Singh, Chairman, ASRB being received by the Head Kayamkulam



Dr. Bhumidhar Barman, Hon'ble Minister visiting nursery at CPCRI, RC, Kahikuchi

## PERSONALIA

### Appointment

Name of the official	Designation	Location	w.e.f.
Smt. G. Panjavarnam	Scientist	CPCRI, Kasaragod	10-04-2015
Ms. Shameena Begum	Scientist	CPCRI, Kasaragod	10-04-2015
Dr. K.S. Karthika	Scientist	CPCRI, Kasaragod	10-04-2015
Mr. Bhavishya	Scientist	CPCRI, Kasaragod	10-04-2015

### Transfer

Name and designation	From (Place)	To (Place)	w.e.f.
Ms. U. Keerthana, Scientist	NBAIR, Bengaluru	CPCRI, Kasaragod	11-05-2015

### Retirement

Name	Designation	Place	Date
Shri B. KoraguNaik	Sr. Technical Assistant	CPCRI, Kasaragod	30-05-2015
Shri Poovani	SSS	CPCRI, RS, Vittal	30-04-2015
Shri Mohd. Ashraf	SSS	CPCRI, Kasaragod	30-04-2015
Smt. S.K. Mohini	SSS	CPCRI, RC, Kidu	30-05-2015
Shri A. Ramayya Gowda	SSS	CPCRI, RC, Kidu	30-05-2015
Shri A.G. Shreedhara Gowda	SSS	CPCRI, RC, Kidu	30-05-2015
Shri T.H. Nagaraj	AAO	CPCRI, RS, Vittal	30-06-2015

## Promotion

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri P. K. Vasu	Assistant, CPCRI, Kasaragod	AAO, CPCRI, Kasaragod	26-05-2015
Shri K.R. Nithianandan	Assistant, CPCRI, Kasaragod	AAO, CPCRI, Kasaragod	28-05-2015
Dr. K. Samsudeen	Senior Scientist (Eco. Bot.)	Principal Scientist (Eco. Bot.)	18-09-2013
Dr. S. Elain Apshara	Senior Scientist (Hort.)	Principal Scientist (Hort.)	28-07-2013
Dr. G.C. Acharya	Senior Scientist (Hort.)	Principal Scientist (Hort.)	20-07-2013
Dr. Regi Jacob Thomas	Senior Scientist (Hort.)	Principal Scientist (Hort.)	20-07-2013
Dr. M.K. Rajesh	Senior Scientist (Biotech. - Plant Sci.)	Principal Scientist (Biotech. - Plant Sci.)	30-11-2013
Dr. K. Subaharan	Senior Scientist (Ag. Entomology)	Principal Scientist (Ag. Entomology)	03-07-2013
Dr. A. Josephraj Kumar	Senior Scientist (Ag. Entomology)	Principal Scientist (Ag. Entomology)	08-10-2013
Dr. T. S. Manoj Kumar	Senior Scientist (AS&PE)	Principal Scientist (AS&PE)	04-06-2015



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