



CPCRI News



Views and News on Advances in Coconut, Arecanut and Cocoa



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Entrepreneurship Development on Sustainable Coconut based Technologies

A training programme on 'Entrepreneurship development on sustainable coconut based



Shri Oommen Chandy, Hon'ble Chief Minister of Kerala addressing the gathering at CPCRI, Kasaragod

technologies' was conducted at CPCRI Kasaragod on 18-04-2013, in which 75 farmers and entrepreneurs from Kasaragod District participated. Shri Oommen Chandy, Hon'ble Chief Minister was the chief guest in the valedictory function of the programme. Dr. George V. Thomas, Director, CPCRI presided over the valedictory function. A technical bulletin on coconut varieties from CPCRI was released by the Chief Minister during the function.

Hon'ble Chief Minister visited the field experiments at CPCRI. He showed interest in technology

developed for neera collection and the Agro Processing laboratory.

Business Planning and Development (BPD) unit launched at CPCRI

A Business Planning and Development (BPD) unit sanctioned under the National Agricultural Innovation Project (NAIP) of Indian Council of Agricultural Research was inaugurated at Central Plantation Crops Research Institute, Kasaragod on 07-06-2013. Shri P.S. Muhammed Sagir, IAS, District Collector, Kasaragod inaugurated the BPD unit. Mr. Ashok Kumar Thekken, Managing Director KERAFED was the guest of honour. Dr. George V. Thomas, Director, CPCRI presided over the inaugural function. Dr. P. S. Pandey, National Co-ordinator, NAIP, ICAR, New



Hon'ble District Collector of Kasaragod Shri P.S. Muhammed Sagir, IAS inaugurating the Business Planning and Development Unit

Delhi presented the details of the ICAR sponsored NAIP project to support Business Planning and Development (BPD) unit. Dr. Pandey released a brochure on BPD at CPCRI. Mr. Thomas Mathew, Formerly Chief Coconut Development Officer, Coconut Development Board, and Mr. N. Gopalan, AGM, NABARD offered felicitations. A panel discussion on agri-business opportunities in coconut and cocoa sector was conducted as a part of the launching programme. Over 100 entrepreneurs from Karnataka, Kerala and Tamil Nadu attended the launch programme.

Brainstorming Session on *Ganoderma* Disease

A Brainstorming session on *Ganoderma* disease management in coconut and arecanut was held at CPCRI Kasaragod on 01-06-2013. Dr. B. Srinivasulu, Director of



*Dignitaries at the dias during the Brainstorming session on *Ganoderma* disease*

Research, Dr. Y.S.R. Horticultural University, inaugurated the session. He emphasised the need to adopt IDM strategies to contain *Ganoderma*. Dr. George V. Thomas, Director CPCRI presided over the function. Dr. R. Bhaskaran, Rtd. Professor, Coconut Research Station, Vepankulam, TNAU, Dr. V. I. Benagi, Dean, University of Agricultural

Sciences, Dharwad and Mr. Hanumanamatti felicitated the session.

Expert Committee Meeting on Management of Root (wilt) Disease

The first meeting of the team constituted by ICAR to review the status of root (wilt) disease of coconut and yellow leaf disease of



Expert committee visiting the root (wilt) affected gardens at Kayamkulam

arecanut was held from 8-10 May 2013 at CPCRI Regional Station, Kayamkulam. Dr. George V. Thomas, Director, CPCRI, Kasaragod presented an overview of root (wilt) disease and yellow leaf disease. Dr. C.A. Viraktamath, Emeritus Professor, UAS, Bengaluru chaired the meeting. The committee took stock of the research activities being undertaken at CPCRI. Research programmes undertaken on root (wilt) disease of coconut were



Shri Sugata Ghose, CCDO, CDB, Kochi chairing plenary session of IRC meeting

presented before the committee. The team visited root (wilt) diseased affected coconut gardens of Cumbum and Theni in Tamil Nadu on 9th May 2013 and interacted with farmers.

IRC Meeting

Institute Research Committee meeting was held from 8-12th April 2013 at CPCRI, Kasaragod under the chairmanship of Dr. George V. Thomas, Director. Project leaders presented the progress of research under the respective research projects. The technical programme for the year 2013-14 was formulated based on discussions and recommendations of the meeting. The plenary session held on 12-4-2013, chaired by Shri Sugata Ghose, Chief Coconut Development Officer, Coconut Development Board, Kochi. Farmer representatives, members of development agencies and State Department of Agriculture participated in the meeting.

IMC Meeting

1st meeting of the Institute Management Committee for the year 2013-14 was held at CPCRI, Kasaragod on 23-05-2013. Items related to research and development of the Institute were deliberated during the meeting.



A view of the IMC meeting

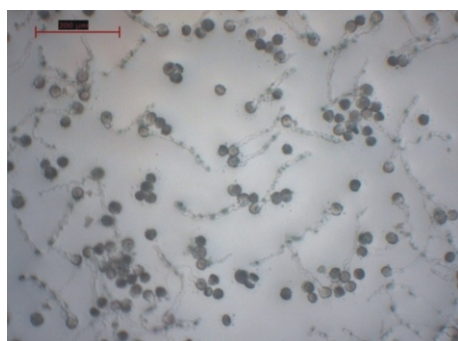
RESEARCH HIGHLIGHTS

Enrichment of PGR on cocoa

Cocoa germplasm holding at CPCRI, Regional Station, Vittal, Karnataka was enhanced to 321 with import of 20 clones resistant to biotic stress from Reading University, UK.

Standardization of arecanut pollen collection and pollen germination method

The flowering behavior of dwarf arecanut palms were studied for isolation and collection of pollen samples for cryopreservation. The fully matured male flowers just opened as well as that are expected to open the next day were collected and dried at ambient temperature for 24 hours. The pollen was collected by sieving the dried male flowers. Effect of sucrose along with agar, gelatin and boric acid on pollen germination was studied. Maximum



Pollen germination in Hirehalli Dwarf

pollen germination (75 %) was observed when pollen incubated at room temperature (28 to 30°C).

PRGPred: Creation of a palm resistant gene analogue (RGA) database and a tool for prediction of RGA domains

RGA sequences of coconut, arecanut, oil palm and date palm were collected and sorted based on domains. All the sequences were searched in the PRINTS database to find out the specified domains and their motifs. Among 150 sequences, four domains and 261 motifs were obtained. The sequences were sorted based on the four domains and based on these domains, a tool for prediction of the RGA motifs was developed using support vector machines (SVM), standalone BLAST and Hidden Markov Models (HMM).



A view of the submission form of PRGPred



Treatment of rhinoceros grubs - insets showing infested grub and micrograph of EPN infective juveniles

Entomopathogenic nematodes (EPNs) to manage rhinoceros beetle

Entomopathogenic nematode *Steinernema carpocapsae* when applied @ 20 lakh infective juveniles in 91.20 m² of area to vermicompost harbouring grubs of *Oryctes rhinoceros* caused 97.77% mortality of grubs. Inundative release of EPN on organic substrate were not pathogenic to juveniles and adult earthworms. The castings collected after two and half months showed the presence of virulent *S. carpocapsae* infective juveniles suggesting safety exclusion from the gut with no adverse effect on reproduction of earthworms.

EXTERNALLY FUNDED PROJECTS SANCTIONED

Business Planning and Development Unit at CPCRI, Kasaragod was sanctioned under Component I of NAIP with an outlay of Rs. 1.60 Crores. Dr. K. Muralidharan, Head, Div. of Social Sciences is the Principal Investigator of the project.

A project on "Assessment of harvest and post harvest losses of major crops and commodities in India" funded by MoFPI is in operation at AICRP on PHT, Ludhiana. Rs. 3.55 lakhs has been allotted to carry out the survey in Kasaragod and Kannur districts of Kerala by Dr. A.C. Mathew, Sr. Scientist (SWC Engg.).

PUBLICATIONS

Research article

Chakrabarty, R., Acharya, G.C., and Sarma, T.C. 2013. Effect of fungicides, *Trichoderma* and plant extracts on mycelia growth of *Thielaviopsis paradoxa*, under *in vitro* condition. *The Bioscan*, **8** (1): 55-58.

Samsudeen, K., Niral, V., Jerad, B.A., Mukesh Kumar, Sugatha, P. and Hebbar, K. B. 2013. Influence of variety and season in the inflorescence sap production in *Cocos nucifera* L. *J. Plantation Crops*, **41** (1): 57-61.

Samsudeen, K., Rajesh, M. K., Nagwaker, D. D., Raghavan Reshmi, Ajith Kumar, P., Devadas, K., Karun Anitha. 2013. Diversity in Mohachao Narel, a sweet endosperm coconut (*Cocos nucifera* L.) population from Maharashtra, India. *Natl Acad Sci Lett*. DOI: 10.1007/s40009-013-0128-0 (Springer), **36** (3): 319-330.

Popular article

Anitha Karun and Rajesh, M. K. 2013. Production of coconut planting material through plumule

culture. *Indian Coconut J.* **56** (2) 22-25.

Jaganathan, D., Elain Apshara, S., Nagaraja, N. R. and Purandhara, C. 2013. Adikeyondige Bahubele Krishni Paddati: Yashassina Hinnale (Kannada). *Krishimitra*. **10** (07): 6-11 (In Kannada).

Jeena Mathew and V. Krishnakumar. Chorimanal Pradeshathe Vila Paripalanam. *Karshakan*, May 2013, **21** (5): 24-26.

Kesavan Subaharan, Vibina Venugopal, Ravindran, P., 2013. Semiochemicals in management of coconut rhinoceros beetle and red palm weevil. *Indian Coconut J.*, **56** (3): 26-28.

Leena, S. and Manojkumar, T.S. 2013. Women conquer yet another bastion. *Indian Coconut J.* **56** (2): 27-28.

Nair, S.A., Jose, M., Thomas, R.J. and Nair, R.V. 2013. Production of Neera. *Indian Coconut J.* **56** (1): 25-26.

Ravindran, P. and Subaharan, K. 2013. *Kombanchelliye thurathan paristhithi souhrida margangal*". *Indian Naliker J.* **4** (4): 35-36.

Sit, A. K., Roybarman, Jagadish and

Rizal, S. K. 2013. Turmeric - A profitable intercrop in arecanut garden under sub Himalayan Terai region of West Bengal. *Indian J. Arecanut, Spices and Medicinal Plants*, **15** (1): 31-34.

Ravi, S. and Muralidharan, P. 2013. Preparation of enriched straw. *Kerala Karshakan*. **58** (9): 62-63.

Thamban, C. and Madhavan, K. 2013. The nginte ulpanna vyvidhyavalkaranathilood moolyavardhanavu. In: Sasi, M.S. (Ed.) *Haritham* souvenir. Association of Agricultural Officers, Kerala, Kozhikode. pp 23-25 (In Malayalam).

Book chapters

Chandra Mohanan, R. Manimekalai, R. and Sharadraj, K.M. 2013. Coconut (*Cocos nucifera* L.) In: 'Diagnostics for Horticultural Crops' (Eds) Singh, H.P., Anandaraj, M. and Bhat, A. I. *Advances in Horticulture Biotechnology*. West Ville Publisher. VII. pp 278-296.

Manimekalai, R., Smita Nair and Roshna, O.M. 2013. Diagnostics and management phytoplasmal diseases. In: "Nanotechnology in Agriculture (Eds) Singh, H.P., Anandaraj, M. and Bhat, A. I. *Advances in Horticulture Biotechnology*. West Ville Publisher. VI. pp 177-183.

COMMERCIALISATION OF TECHNOLOGY

Virgin coconut oil (VCO) is the oil obtained from fresh, mature endosperm (kernel-meat) of the coconut by mechanical or natural means, with or without use of heat, no chemical refining, bleaching or deodorizing and maintains the natural aroma and nutrients. It is the purest form of coconut oil, crystal clear, contains natural vitamin E and with very low, free fatty acid content (0.1 %). The modified hot process method developed for producing VCO follows the same principle except that controlled heating, prevents the oil from turning yellow and maintain the moisture content less than 0.2 % with one year shelf life. The VCO production by hot process technology has been transferred non-exclusively to Mr. Mahesh Bhat, Sreekalpa Industries, Narayanamangalam, Kumbla for Rs. 25,000/- license fees for three years. This product will be available in the brand name Gencocus.



Director, CPCRI exchanges MoA with Shri Mahesh Bhat

HUMAN RESOURCE DEVELOPMENT

Trainings within India

Name and Designation	Title of training course	Place and duration
Dr. K. Sajjanath, SMS	Agricultural Extension Management for KVK Scientists/SMSs	MANAGE, Hyderabad 10-5-2013 to 19-5-2013
Shri K. Omanakuttan, Shri K.C. Damodaran and Shri K. Soman, Skilled Support Staff	Driving and maintenance of tractors	RTTC, Vellayani, Thiruvananthapuram 16-05-2013 to 29-05-2013
Dr. K.P. Chandran, Sr. Scientist	CAFT on Recent advances in statistical modelling technique	IASRI New Delhi 31-05-2013 to 20-06-2013
Dr. K. Muralidharan, Head and Dr. A.C. Mathew Sr. Scientist	BPD Training by ABI-ICRISAT	TNAU, Coimbatore 18-06-2013 to 21-06-2013
Dr. K. Subaharan, Sr. Scientist	MDP workshop on priority setting, monitoring and evaluation of agricultural research projects	NAARM, Hyderabad 18-6-2013 to 22-6-2013

Deputation Abroad

Dr. R. Manimekalai, Sr. Scientist visited Coconut Research Institute (CRI), Sri Lanka as FAO consultant on development of capacities for early diagnosis, surveillance, spread prevention and integrated management of Weligama Coconut Leaf Wilt Disease during 25-03-2013 to 07-04-2013.

Awards / Honours

Confederation of Horticulture Association of India conferred best paper award to Dr. K. Subaharan for his paper on sub lethal effects of insecticides on electro-physiological and behavioral responses of *Bracon brevicornis*.

Mrs. K. Nihad, Scientist has been awarded with Ph. D. in Horticulture from Kerala Agricultural University, Vellanikkara for her thesis entitled "Nutrient management practices for *Heliconia* under open condition and as intercrop in coconut garden".

SUCCESS STORY

Participatory approach for coconut seedling production

Under a unique scheme implemented by Madikkai Grama Panchayat in Kasaragod District, a decentralized farmer participatory approach was successfully demonstrated for the production of quality coconut seedlings. Members of five selected self help groups from the Panchayat were trained at CPCRI, Kasaragod on nursery techniques in coconut including mother palm selection, seed nut collection, sowing and management of seedlings in nursery. Mother palms were identified in coconut farmers' gardens within the Panchayat and 8,000 seed nuts were collected and sown in eight different nurseries. About 5,000 quality seedlings were raised in these nurseries which were managed by the self help groups. Periodical monitoring and proper management of nurseries were done to ensure quality of seedlings. These were regularly monitored by CPCRI extension team lead by Dr. C. Thamban, Principal Scientist. Funds for implementing the programme was mobilized from the Decentralized Plan of the Panchayat for the year 2011-12 and the scheme was linked to NREGA for providing the labour component required for nursery management. Dr. George V. Thomas, Director, CPCRI inaugurated the distribution of coconut seedlings raised under the scheme on June 5th, World Environment Day at Madikkai. Mrs. S. Preetha, President of the Panchayat presided over the inaugural function.



Dr. George V. Thomas, Director inaugurating coconut seedling distribution

Training programmes

A training programme on 'Production and processing technologies of coconut' was organised at CPCRI, Kasaragod under ATMA project in collaboration with Department of Agriculture during 21-22 May 2013 in which 25



Farmers from Nilambur visiting CPCRI Kasaragod

farmers from Nilambur block of Malappuram district participated. A lecture on "Crop diversification in plantation garden for maximization of profit" was delivered by Dr. Arun Kumar Sit, Senior Scientist (Hort.), CPCRI, RC, Mohitnagar under the training programme "Horticulture development in North Bengal Region" organized by Programme



Participants of training programme along with resource persons at Vittal

Coordinator, KVK, Ramsai, Jalpaiguri on 21-05-2013.

Training on 'Arecanut and cocoa production technology' was organized on 13-06-2013 at CPCRI, RS, Vittal in which 85 trainees from Bhatkal, Uttara Kannada district participated. Lecture cum discussion on crop improvement, production, protection and processing technologies of arecanut and cocoa were held.

Training was imparted to 30 Agricultural officers from Alappuzha district on integrated pest and disease management in coconut at CPCRI, RS, Kayamkulam on 20-06-2013 sponsored by Kerala Centre for Pest Management, Moncompu. Various technical sessions on agronomic management, bio-suppression of coconut pests and disease management in coconut were handled by the Scientists of the Station. Training was followed by a laboratory visit which exposed Agricultural officers towards current



Training on climbing coconut palms with climbing device at Minicoy

ongoing research activities.

A one day training programme on coconut, arecanut and cocoa production technology was organised by CPCRI, RC, Kidu on 25-06-2013 for 60 farmers of Shri Dharmasthala Gramabhivridhi Sangha, Kadaba.

Training programme on "Use of coconut climbing devices in the island conditions" was conducted at Minicoy Island during 26-06-2013 to 29-06-2013. A total of 18 participants attended the programme.

Two off-campus and one on-campus training programmes were organized for 135 farmers/ farm women of Assam State by CPCRI, RC, and Kahikuchi.



Off campus training programmes in Assam



Training programme at CPCRI, RC, Kahikuchi

Diagnostic field visit

A team of scientists from Regional Station, Kayamkulam have undertaken diagnostic field visits to the yellowing affected coconut gardens at Edava, Thiruvananthapuram; Thriuvambady, Kozhikode and Ambalapuzha, Alappuzha districts on 1-05-2013, 17-05-2013 and 20-05-2013, respectively and suggested management measures.

Other extension activities

A total of 510 farmers and students visited the CPCRI, RS, Vittal and had exposure to various research and extension activities. Seedlings of arecanut and grafts of cocoa were supplied to the farmers.

Seven students along with Professor of Horticulture Department, Sikkim University visited CPCRI, RC, Mohitnagar on 18-05-2013 and the queries acquainted with the ongoing activities.

Radio talks/ TV programmes

Dr. C. Thamban, Principal Scientist (Agrl. Extension) presented radio interview programme on 'Improved varieties and production of quality planning material in coconut' which was broadcast by All India Radio, Kannur on 18-06-2013. He also presented a radio interview programme on 'Group approach for integrated pest and disease management and value addition in coconut' which was broadcast by All

India Radio, Kannur on 25-06-2013.

Dr. Arun Kumar Sit, Senior Scientist (Hort) attended live phone-in-programme on "Crop diversification in plantation garden for maximization of profit" on 18-04-2013 at AIR, Siliguri.

Radio talks on field experiences of staff of CPCRI, RC, Kidu were broadcast during 16-06-2013 to 19-06-2013 from AIR Mangalore. Shri Nagesh spoke on availability of planting materials at CPCRI Kidu, Shri A.S. Gopalakrishna and Shri M. Narayana Naik spoke on Nursery management, planting methods of coconut and pest and disease management in coconut.

Krishi Vigyan Kendra, Kasaragod

During the period, 29 training programmes were conducted, in which 732 participants including 403 women and 329 men were benefitted.

Training programmes

A training programme on popularization of cassava biopesticide against pseudostem weevil of banana was held at Kasaragod on 10-05-2013. Biopesticide produced by CTCRI,

Thiruvananthapuram was evaluated under on-farm trials in two panchayats viz. Madikai and Periya panchayats under Rastriya Krishi Vikas Yojana (RKVY). The programme was inaugurated by Dr. Ravi Bhat, Head, Crop Production. Dr. C.A. Jayaprakas, Principal Scientist and Head CTCRI, Thiruvananthapuram presided over the function and delivered a lecture on biopesticide. More than 40 farmers from the above panchayaths attended in the programme and interacted with the scientists and shared their experiences in applying the bio-pesticide.

A training programme was conducted at KVK on 07-05-2013 in

relation to production of value added products from honey. The programme was conducted in association with the closing ceremony of training programme on apiculture conducted by KVK at CPCRI. Dr. George V. Thomas was the chief guest. He told that honey and value added products will play an important role for rural economy. Deputy Director of Agriculture Shri. Thirumaleshwara Bhat emphasised the need for promoting apiculture. Smt. Mercy Thomas was the chief trainer and Shri Charley Mathew, Shri K.K. Thomas have felicitated. Around 40 persons from the different parts of the district participated in the training.



Training programme on cassava bio-pesticide at Kasaragod

Foot rot disease management of pepper using biocontrol agents

Management of foot rot disease of pepper using biocontrol agents



Dr. George V. Thomas, Director
addressing the apiculture trainees

successfully demonstrated by KVK was widely adopted by the farmers of Kasaragod, Parappa, Karadka, Kanhangad and Nilesishwar blocks with a horizontal spread of more than 300 ha., results indicated that pepper vines treated twice with 1% BM spray along with basal application of *Trichoderma* enriched neem cake during monsoon period could effectively control foot rot disease incidence.

Value added products from Kokum

KVK Kasaragod developed the protocols for the preparation of value added products like dehydrated peel, syrup and squash from Kokum (*Garcinia indica*). Kokum cutting machine was used for separation of seeds. The temperature and time required for the preparation of dehydrated peel was standardized. The yield and process parameters for preparation of syrup by concentrating the Kokum juice and preparation of squash from the peel extracted from the syrup were standardised. The products are devoid of artificial colors and preservatives. This technology was further promoted and popularized as a nutraceutical food through an SHG producing value added products from 200 Kg of kokum fruits.

Enhancement of palatability of Nutrimix

A mixture of wheat (*Triticum vulgare*), roasted Bengal gram (*Cicer arietinum*), roasted groundnut (*Arachis hypogaea*), defatted soya flour (*Glycine max*) and powdered jaggery were the constituents of nutrimix. 100g of this mix provides a child with one-third of its daily requirement of protein. Value addition of nutrimix was carried out by adding vanilla, strawberry, chocolate or almond flavour to enhance the palatability. Acceptability and preference test were done among mothers, Anganwadi's children and SHGs.

Integrating bee colonies for better pollination and yield enhancement in coconut gardens

An FLD is being carried out by integrating 20 bee colonies in an area of 4 ha. of coconut garden belonging to seven farm families of Kodavalam, Badiadka and Kuttikkol Panchayats. The average yield of coconut recorded an increase of 6 nuts per palm along with an average 5 kg honey yield per hive.

Osmotic dehydration of fruits

Osmotic dehydration of seasonal fruits like pineapple, mango, and jackfruit were carried out. SHGs were imparted training on value addition. Jackfruit osmo dehydration process was refined since the final products were hard. Jackfruit slices were steamed for 2 minutes before osmosis process and sugar syrup with 50°Brix was used. Fruits should be of 2/3 yellow stage ripe were taken and outer peel, crown, leaves and seeds were removed. Sugar syrup of 60°Brix to 70°Brix was used @ 2 kg for one kg of prepared fruits slices. Citric acid @ 0.2-0.3 % is added and syrup is allowed to boil and was filtered using muslin cloth. KMS was added @ 0.2 % after cooling syrup to below

45°C. A refractometer is used for checking syrup ° Brix. Prepared



Training women on papad making at KVK,
Kasaragod

slices were dipped in 60-70°Brix sugar syrup solution in ratio 1:2 fruit to syrup and allowed to continue osmosis for 20-24 hours at room temperature (20-30°C). At the end of osmosis the slices were taken out of syrup. Slices were again heated in drained syrup and rinsed quickly with water. Slices were spread thinly on stainless steel trays kept in a hot air oven for dehydration at 55-60°C till the moisture content in the final product reaches to 14-15%. Dehydrated slices were packed in moisture proof, airtight bags and stored in cool and dry place.

Krishi Vigyan Kendra, Alleppey

Organized 21 training programmes benefitting a total number of 564 farmers/ rural youth including 268 women and 296 men during the period.

Interface with Innovative Farmers of Alleppey district

20 farm innovations were identified



Inauguration of interface with farm
innovators at Kayamkulam

as a part of the activity on identification and mapping of farmers innovations in Kerala with the financial support of State Planning Board. As a part of this programme a survey of the district was conducted. An interface programme with the innovative farm scientists were conducted on 28-06-2013 and 14 innovators presented their innovations. Dr. George V. Thomas Director, CPCRI, inaugurated the interface programme. Farmers, staff of CPCRI and KVK participated in the interface programme.

Field day on fungal disease management in cowpea

A field day of the FLD on 'fungal disease management in cowpea' was conducted at Takazhi panchayath on 03-05-2013 in which 47 farmers and 7 extensions officials attended. Mr. E.R. Radhakrishna Pillai, President, Grama Panchayath inaugurated the field day. Dr. P. Muralidharan. Programme Coordinator, KVK



Harvest of cowpea from organic farming FLD plot

emphasized the importance of bio agents in the management of diseases and its advantages over chemical pesticides. The partner farmers shared their experience on the FLD in the programme.

RAWE programme

Eight, final year B. Sc. (Agri.) students from College of Horticulture, Vellanikkara have undergone the KVK module of the RAWE programme at KVK Alleppey from 29th April to 4th May, 2013. Students were guided to organize a training on 'ICM in

banana' at Ala Panchayath on 02-05-2013. An interaction session with progressive farmers and exposure to successful enterprises of the District was also arranged.

Demonstration of turmeric boiler

Based on the success of frontline demonstration programme, a method demonstration of turmeric boiler was conducted at Bharanikkavu panchayath in collaboration with Krishi Bhavan where procured 3 tons of turmeric was processed. This high quality turmeric was powdered, packed and marketed in the brand name 'Sudhi'.



Students interacting with KVK beneficiary farmer

SUCCESS STORY

Mass multiplication of parasitoids - A farmer's experience

Outbreak of coconut black headed caterpillar, *Opisina arenosella* in Mr. Aravind Sabapathy's garden at Kaliyapuram village in Pollachi in Tamil Nadu forced him to spray insecticides. Not satisfied with the control, he attempted to procure parasitoids from private firms and Government agencies for release in his garden, but he failed to get sufficient parasitoids to contain the

pest. His visit to CPCRI, Kasaragod enabled him to get hands on training to mass multiply the parasitoids. Back in his village, he along with his supervisor Mr. Sennayan successfully multiplied over 15,000 *Goniozus nephantidis* and released it in his garden that helped to scale down the damage. This success in mass multiplication of parasitoids, is now attracting the neighbouring farmers to adopt this technology.



A view of the coconut leaf eating caterpillar infested coconut garden at Pollachi, Tamil Nadu; mass multiplication of parasitoids by farmers

PARTICIPATION IN MEETINGS/ SYMPOSIUM/ SEMINAR

Name and designation	Title of the programme	Place and date
Dr. George V. Thomas, Director, Anitha Karun, Head, Murali Gopal, Pr. Scientist, M.K. Rajesh, Sr. Scientist	National seminar on Horticultural Biotechnology	IIHR, Bangalore 14-06-2013
Dr. Ravi Bhat and Dr. P. Subramanian, Pr. Scientists	International conference on water quality and management for climate resilient agriculture	Jalgaon, Maharashtra 28-05-2013 to 31-05-2013
Dr. Chandrika Mohan, Pr. Scientist	XXII th Group meeting of All India coordinated research project on biological control of crop pests and weeds	NBAII, Bangalore 24-05-2013 to 25-05-2013
Dr. G.C. Acharya Sr. Scientist	Summer School on "Horticulture based diversification options for livelihood security in Tribal areas" - Scope of plantation crops in Eastern Region	ICAR Res. Complex for Eastern Region, Ranchi 05-06-2013
	21 st RCM Meeting Region-III	AAU, Jorhat 17-05-2013 to 18-05-2013
Dr. Shareefa M., Scientist	Resource person in training programme "Hybridization technique in coconut"	DSP Farm, Neria-mangalam, Ernakulam 01-04-2013
Dr. D. Jaganathan, Scientist	National Seminar on 'Cocoa development in India Issues and Strategies'	TNAU, Coimbatore 15-04-2013 to 16-04-2013
	Brainstorming on 'Improving research in agricultural extension issues and way forward'	TNAU, Coimbatore 26-04-2013
	Annual review meeting of National Horticulture Mission programme implemented by Directorate of Arecanut and Spices Development, Calicut	Centre for Research on Seed Spices, Jagudan, Gujarat 19-06-2013 to 20-06-2013
	Workshop on 'Agropedia' an ICT initiative of NAIP	IISR, Calicut 07-06-2013
Mrs. K. Nihad, Scientist	Workshop on 'Problems and prospects of ployhouse cultivation in Kerala' conducted by State Horticulture Mission and Precision Farming Development Center	Thiruvandapuram 24-06-2013
	Scientist- farmer interface on Hi-tech farming	Coir Board and Precision Farming Development Center, Harippad 28-06-2013

CELEBRATIONS

World Environment Day celebrations

CPCRI celebrated World Environment Day at the headquarters as well as Regional Stations and Research Centres. At Kasaragod Dr. George V. Thomas, Director inaugurated the celebrations by planting a seedling.

Club Day celebrations

The Annual Day celebration of Recreation Club at CPCRI, RS, Kayamkulam was held on 24-05-

2013. Shri Somasekharan Nair, Music Director inaugurated the celebrations and Smt. Kanimol, Poet delivered a keynote address. Dr. V. Krishna Kumar, Acting Head, presided over the function. Mr. Rajeev M.S., Secretary, Recreation club presented the report of activities of the club. Prizes for the winners of various competitions were given by the chief guest. Variety entertainment programmes were also arranged in connection with the

club day.



Dr. George V. Thomas, Director planting a seedling on the World Environmental Day

DISTINGUISHED VISITORS



Shri Oommen Chandy, Hon'ble Chief Minister of Kerala visiting Agro Processing Centre and also neera collection plot

Dr. Gurbachan Singh, Chairman, ASRB visited CPCRI Research Centre Kahikuchi on 30th June 2013.

A two member delegation comprising of Prof. H.P.M. Gunasena, Chairman, Coconut

Development Board, Dr. H.A.J. Gunathillake, Director, CRI, and Mr. Nihal Somaweera V., Secretary, Min. Coconut Development, Sri Lankan visited CPCRI, Kasaragod on 02-04-2013 and the Regional Station,

Kayamkulam during 4-5th April 2013 to acquaint with various aspects of coconut root (wilt) disease. They were exposed to various research programmes undertaken, especially on coconut root (wilt) disease.



Dr. Gurbachan Singh, Chairman, ASRB at CPCRI, RC, Kahikuchi



Sri Lankan team with Director, CPCRI at Kasaragod



Dr. S.K. Malhotra, Assistant Director General (Hort.) visiting field experiments at CPCRI, Kasaragod along with scientists

OTHER INFORMATION

Hindi Workshop

A "Hindi Workshop" was conducted on 29-05-2013, which was inaugurated by Dr. B.R. Paul, Sr. Officer, Official Language Implementation, MRPL, Mangalore and Dr. K.S. Ananda, Head of the Station. Shri K.M. Jayarama Naik, Admn. Officer and Smt. Sreelatha, Technical Officer (Hindi Cell), CPCRI, Kasaragod were present. Employees of CPCRI, RS, Vittal as well as from member organizations of TOLIC have participated. Participants were trained on rules,

grammar and usage of Hindi in day-to-day administrative work. In the afternoon Shri Rajesh, Officer, Hindi Implementation Cell, Corporation Bank, Mangalore delivered a lecture on "Hindi Vikas".

Surveillance squad

Pest and disease surveillance in the locality, especially in the Institute field experimental plots is being done by the surveillance squad at the Institute. Scientists, technical and skilled support staff members of the re-constituted squad have been trained and oriented for this task. A

database was developed to enter the collected information.



Members of CPCRI surveillance squad along the Director

PERSONALIA

APPOINTMENTS

Name of official	Designation	Place	w.e.f.
Mrs. Priya U.K.	Scientist (Soil Science)	CPCRI, Kasaragod	11-04-2013
Ms. Chaithra M.	Scientist (Plant Pathology)	CPCRI, Kasaragod	11-04-2013
Shri Arun N.K. Raj	LDC	CPCRI, RC, Kidu	29-04-2013
Shri Sathya Bratha Maharana	LDC	CPCRI, RC, Mohitnagar	02-05-2013
Shri Jayarajan V.	LDC	CPCRI, Kasaragod	03-05-2013
Shri Ratan Singh	LDC	CPCRI, Kasaragod	07-05-2013
Shri Umesh Kumar	LDC	CPCRI, Kasaragod	13-05-2013
Shri Deepak Meena	LDC	CPCRI, RC, Kahikuchi	14-05-2013
Shri Dinesh	LDC	CPCRI, Kasaragod	21-05-2013

TRANSFER

Name of the staff / Designation	From (Place)	To (Place)	w.e.f.
Shri Sushanta Roy, Assistant	CPCRI, RC, Kahikuchi	CPCRI, RC, Mohitnagar	15-05-2013
Shri Subhash Paul, Assistant	CPCRI, RC, Mohitnagar	CPCRI, RC, Kahikuchi	16-05-2013
Shri K.R. Nithyanandan, Assistant	CPCRI, Kasaragod	CPCRI, RC, Kidu	29-05-2013
Shri B. Anil Kumar, Technical Officer	CPCRI, RS, Kayamkulam	CPCRI, RC, Minicoy	29-05-2013
Shri P. Krishna Naik Assistant	CPCRI, RC, Kidu	CPCRI, RS, Vittal	29-05-2013
Shri M.S. Antony, Assistant	CPCRI, RC, Minicoy	CPCRI, Kasaragod	11-06-2013
Shri T.N. Vidyadharan, Assistant	CPCRI, Kasaragod	CPCRI, RC, Minicoy	14-06-2013

PROMOTION

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri Mohana Gowda S.N.	Technical Officer (T5 Artist)	Technical Officer (T6 Artist)	01-07-2006
Shri C. Abdul Aziz	Farm Assistant (T3)	Farm Assistant (T4)	30-06-2012
Shri B. Ananda Gowda	Technical Assistant (T1)	Technical Assistant (T3)	27-01-2012
Shri Gopalakrishna	Farm Assistant (T3)	Farm Assistant (T4)	

RETIREMENT

Name	Designation	Place	Superannuation on
Er. K. Madhavan	Pr. Scientist	CPCRI, Kasaragod	30-04-2013
Shri B.M.Vidyadhar	Technical Officer (T5 Pharmacist)	CPCRI, RS, Vittal	30-04-2013
Dr. S. Keshava Bhat	Sr. Technical Officer (T9)	CPCRI, RS, Vittal	31-05-2013
Shri Francis D'Souza	Skilled Supporting Staff	CPCRI, RS, Vittal	30-06-2013
Shri K. Keeran	Technical Assistant (T4)	CPCRI, Kasaragod	30-06-2013



हर कदम, हर डगर
किसानों का हमसाथर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

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