



CPCRI

News



Views and News on Advances in Coconut, Arecanut and Cocoa

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SECTORAL NEWS

International Coconut Conference

An International Conference on "Coconut Biodiversity for Prosperity" was organized at the Institute from 25-28 October, 2010, with the participation of over 250 delegates including the delegates from eleven countries viz., United Kingdom, USA, Australia, France, Mexico, Brazil, Indonesia, Philippines, Sri Lanka, Cote d'Ivoire and Nigeria in association with Indian Society for Plantation Crops, Bioversity International and active support and partnership from Coconut Development Board, National Horticultural Board, India, NABARD, Asia and Pacific Coconut Community, Jakarta and Kerala State Department of Agriculture. There were 11 technical sessions, four workshops on topical issues and three plenary lectures in the conference. The conference deliberated the present status of research and development on coconut, particularly biodiversity conservation and utilization, and formulated the strategies and the research priorities for the future. The conference was instrumental in bringing together scientists, and officials from ICAR research institutes, state agricultural universities, National Bank for

Agriculture and Rural Development, central and state government departments and research institutes, Coconut Development Board, non-governmental organizations, self help groups and farmers on a common platform.

Prof. K.V. Thomas, Hon'ble Union Minister of State for Agriculture, Consumer Affairs, Food & Public Distribution, Govt. of India has inaugurated the conference 25th October, 2010. He has highlighted the problems, opportunities and challenges in the coconut sector and suggested that the efforts on product diversification, unravelling the nutraceutical and health benefits of coconut and adoption of farming system models are essential for providing better opportunity for improved income from coconut. Dr. H.P. Singh, Deputy Director General (Hort.), ICAR, while welcoming the gathering has outlining the background of organizing the international conference in the light of problems being faced by coconut community, the global research needs on coconut development and the opportunities available for global knowledge sharing for the benefit of coconut community around the world.

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Dr. S. Ayyappan highlighted the role of coconut farming...



Dr. H.P. Singh delivered plenary lecture on kinetics and co-kinetics...



Shri Mullakkara Rathnakaran inaugurated the Plant Health Clinic



Adv. P.P. Shyamala-devi inaugurated the Technology Week



Prof. K.V. Thomas inaugurating the International Coconut Conference. Dr. S. Ayyappan, DG, ICAR, Dr. H.P. Singh, DDG (H), ICAR, Shri P. Karunakaran, M.P., Shri C.T. Ahmed Ali, M.L.A., Dr. George V. Thomas, Director, CPCRI, Dr. Stephan Weise, Bioversity International and Dr. Romulo N. Arancon, Jr. APCC are the dignitaries on the dias.

Dr. S. Ayyappan, Secretary, DARE & Director General, ICAR delivered the keynote address highlighting the role of coconut farming in the lives of people in the coconut growing states and congratulated the scientists for the research accomplishments over the past 95 years.

Dr. Romulo N. Arancon Jr., Executive Director, Asia Pacific Coconut Community, Jakarta, Indonesia and Dr. Stephan Weise from Bioversity International & the COGENT Coordinator offered felicitations and emphasized the importance of germplasm exchange for coconut production and quality. Shri P. Karunakaran, Hon'ble Member of Parliament from Kasaragod and Shri C.T. Ahmed Ali, Member of Legislative Assembly from Kasaragod participated in the inaugural function, offered their felicitations, outlined the problems faced by the farmers and lauded the efforts of CPCRI in generating technologies to address the problems in coconut farming and also the appropriate technology interventions by CPCRI for the farming community.

During the function, CPCRI's virgin coconut oil (VCO) product 'Keramruth' was launched by the Hon'ble Union Minister of State for Agriculture. Scientist-Farmer Interface field level video conferencing facility, to keep the farming community abreast of the technological advancements, was also launched on this occasion. The conference had 11 technical sessions on global and national scenario of coconut biodiversity, conservation and utilization of genetic resources, biotechnological tools in crop improvement, bioinformatics applications, resource management and sustainable production, climate change adaptation and mitigation, integrated pest management and emerging pests, integrated disease management, post harvest technology and value addition, technology transfer and impact of developmental strategies and Interface with farmers.

Four workshop sessions were on coconut and health, organic farming in coconut, coconut wilt and lethal yellowing and somatic embryogenesis and micropropagation with participation of leading researchers from India and



Dr. S. Ayyappan, DG, ICAR delivering Keynote Address during the Conference

abroad. Three plenary lectures were delivered by eminent personalities: on 'Dynamics and co-kinetics of coconut research and development in India' by Dr. H.P. Singh, DDG (Horticulture), ICAR, 'Promoting multipurpose uses and competitiveness of coconut sector' by Dr. P. Rethinam Formerly executive Director, Asia and Pacific Coconut Community and 'Coconut Oil as an ideal fat next to mother's milk' by Dr. B.M. Hegde, Formerly Vice Chancellor, Manipal Academy of Higher Education, Manipal, India.

An Agri-Fair was also organized in which large number of farmers and students were benefited. A BiodiversityFair was also conducted for horticultural produce and best stalls / farmers were awarded during the conference.

The valedictory session of the international conference was held on 28th October, 2010 under the chairmanship of Dr. H.P. Singh, DDG

(Hort.), ICAR with Dr. George V. Thomas, Director, CPCRI as the co-chairman summarized the salient research priorities emanating from the different technical sessions. Awards were given to the best research papers presented at the conference as oral/poster presentations.

Kasaragod Declaration

Considering the challenges faced by the coconut community as deliberated during the conference and the global scenario of coconut farmers, the conference adopted a declaration, which was unanimously endorsed by the congregation of global researchers from 11 countries across the coconut world assembled at Kasaragod during the valedictory session of the International Coconut Conference on 28-10-2010. The resolution was named as Kasaragod Declaration. The declaration highlighted the need for declaring coconut as food for nutrition, health care and environmental services rather than only oil



Dr. H.P. Singh, DDG (Hort.) addressing the gathering

crop and enumerated the required global initiatives through understanding of structural and functional genomics, long-term conservation through cryopreservation of genetic resources, unfolding of more nutritional and health benefits and perspective to support the farming community and also the consumers.

KVK, Kasaragod celebrated Technology Week, "Akshaya 2010"

Krishi Vigyan Kendra, Kasaragod celebrated "Technology Week" from 14-18 December, 2010. The event by name "Akshaya-2010" was intended for creation of awareness among the farming community about the technological innovations and improved farming practices. "Akshaya-2010" was inaugurated by Adv. P. Shyamaladevi, President, District Panchayat, Kasaragod at KVK on 14th December at 10.30am. Welcome note was delivered by Dr. George V. Thomas, Director, CPCRI. The chief guest of the day was Dr. Prabhukumar, Director, Zonal Project Directorate, Zone VIII, Bangalore who inaugurated the agricultural exhibition. The event was felicitated by Dr. K.B. Hebbar, Head, PB&PHT, CPCRI and Dr. C. Thamban, Senior Scientist, CPCRI.

During the week, several programmes were conducted, which include seminars, discussions, farmer-scientist interactions, exhibitions, exposure visits, etc. for the benefit of farmers.

The "Plant Health Clinic" at KVK, Kasaragod funded by the Kerala State Horticulture Mission and a novel initiative "Agricultural Technology Incubation Centre" for facilitating and promoting entrepreneurship among farmers were inaugurated and dedicated to the farming community during the valedictory function of the technology



Shri Mullakkara Rathnakaran, Minister for Agriculture, Kerala inaugurating the 'Plant Health Clinic' at the KVK, Kasaragod

week celebration by Shri. Mullakkara Ratnakaran, Hon. Minister of Agriculture. Dr. George V. Thomas, Director delivered the presidential address. Smt. Najma Abdulkhader, President, Mogral Puthur panchayath and Shri. S. Shivaprasad, PAO, Kasaragod felicitated during the valedictory function.

Kasaragod to be an organic district

In the meeting convened by Sri Mullakkara Ratnakaran, Hon'ble Minister of Agriculture, Govt. of Kerala on 29-11-2010 at Thiruvananthapuram. The meeting was attended by officials from various Departments including scientists from KAU

and two scientists from CPCRI. In this meeting the following important decision were taken.

"Government of Kerala will ban all hazardous pesticides categorized under red and yellow label in Kasaragod district from 3-12-2010 and will declare Kasaragod as an organic district". With the enforcement of this ban, the use of pesticides falling under red and yellow categories as well as newer pesticides falling under this category will have to be discontinued.

Subsequently, in the meeting held at KAU on 13-12-2010, it has been decided not to include any pesticides with red and yellow labels in the KAU package of practices recommendations.

Price-rise for commodities

Increased market demand and Low arrival of the commodity in the market has led to a price-rise in coconut, arecanut and cocoa. Raw coconuts, copra, oil as well as oil cake have become dearer. This gives hope to the farmers to cope up with the inflation led price rise for other essential commodities and to lead a better quality of life. However, compared to the price-rise for other essential commodities, there is only a marginal increase in price for coconut, arecanut and cocoa.



Adv. Shamaladevi, President District Panchayath inaugurating the Akshaya - 2010

RESEARCH HIGHLIGHTS

Genetic resources collection & utilization

A coconut palm free from leaf eating caterpillar infestation was located among heavily infested palms from Devarmute Island in Honnavar Taluk in Uttar Kannada district of Karnataka. Honnavar, Yellapur and Kumta Taluks of Uttar Kannada District were explored and four local ecotypes viz., Kalache from Yellapur, Yana from Kumta, Devarmute and Mavinkuruva were collected from Honnavar.

Compact blocks of three promising dwarf coconut accessions viz., IND009, IND116 & IND112 were established for seed production and further use in breeding programmes. Coconut germplasm from Gujarat is conserved in the national gene bank. Planting of progenies of *in situ* drought tolerant coconut accessions has been undertaken for evaluation in drought prone area of Tamil Nadu. BC₁ progenies of selected F₁ hybrids have been planted for characterization and evaluation.

Eleven cocoa clones resistant to mirids, thrips and canker were imported from Reading University, UK.

Amplification of microsatellites in PGPR

Ten microsatellite - markers each, designed after genome-wide analysis of *Pseudomonas fluorescens* and *Bacillus subtilis* were used for validation in different *Pseudomonas* and *Bacillus* spp. Type cultures were obtained and genomic DNA has been extracted from different *Pseudomonas* and *Bacillus* spp., which were then amplified using the designed SSR primers. Many of these designed primers amplified microsatellite in different bacteria.

Cloning and identification of water-stress transcripts in coconut

The nucleotide and protein sequences pertaining to known genes induced during water stress viz. DREB, 14-3-3, aquaporins, 9-cis-epoxycarotenoid dioxygenase, WRKY and epicuticular wax (CER, GL and Wax) were retrieved from the NCBI. Nucleotide sequences coding for conserved domain amino acids



INSTITUTIONAL NEWS

degenerate primers were used to amplify putative water stress responsive genes in coconut via RT-PCR. Amplicons of expected sizes were eluted, cloned and sequenced. Positive sequences were deposited in Genbank.

Palm aphid in coconut

Emergence of palm aphid, *Cerataphis brasiliensis* (Aphididae: Hemiptera) which is known to infest various species of palms in many tropical areas in the world was recorded on unfurled spindle leaf of Kalparaksha variety. Sooty mould accompanies an infestation as honey dew is given off by the nymphs and adults. The insects are semi-sedentary and

resemble areca whitefly pupae (*Aleurocanthus arecae*). Often ants are associated with aphid population in the palms.



Aphid encrustation on spindle leaf *Cerataphis brasiliensis* (Inset: closer view)

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■ HRD/ TRAININGS

Training Abroad

Dr. H.P. Maheswarappa, Principal Scientist (Agronomy) underwent a training in the area of "Carbon sequestration and climate change" under Dr. Rattan Lal, Director, Carbon Management and Sequestration Centre, School of Environment and Natural Resources, Ohio State University, Columbus, USA from 15th July 2010 to 14th Oct. 2010.

Dr. Alka Gupta and Dr. Murali Gopal, Senior Scientists have completed deputation to USA for NAIP-sponsored International training programme on "Molecular Microbial Taxonomy" (Hort.) during 20 Aug.-

Dr. Maheswarappa along with Dr. David A.N Ussiri at carbon sequestration experimental plot (OSU, Columbus, USA)



19 Nov. 2010 in the Dept. of Microbiology, Univ. of Georgia, Athens, Georgia, USA under the guidance of Dr. William B. Whitman, Prof. and Head of Dept. and Chief-Editor of Bergey's Manual of Systematic Bacteriology.

Training in India

Name of the Official & designation	Title of the programme	Place & Date
Dr. S. Kalavathi, Sr. Scientist	Attended a DST sponsored training programme on 'Sustainable Agriculture and Rural Development – Biovillage Model'.	MSSRF, Chennai 15-19th November, 2010
Dr. D. Jaganathan	NAIP sponsored training on 'SAS: An Overview'	UAS, Bangalore 13- 18 November, 2010
P. Geetha, Scientist (Agron)	Summer school on "Advances in land resource inventorization for precision farming in Indian situations	Regional Centre, Bangalore 14th July to 3rd August, 2010
	SAS: An overview of the NAIP consortium "Strengthening Statistical Computing for NARS"	UAS, GKVK, Bangalore from 8th to 13th November, 2010
Dr. Arun Kumar Sit, Senior Scientist (Hort.)	Winter School on "Development of Expert Systems In Agriculture"	IASRI, Pusa, New Delhi 2nd -22nd December, 2010
Mr. Rajeev M.S., SMS, Agronomy	Training on Integrated farming systems for sustainable farming	KVK-Kancheepuram, 10th -12th November, 2010
Dr. Ravi S., SMS, AH	Training on Alternative poultry farming as a livelihood option for farming community	KVK-Namakkal 24th -26th November, 2010
Sivakumar T., SMS, Entomology	Papaya mealy bug parasitoids and its mass production	NAIIB, Bangalore 31-11-2010 to 1-12-2010
Sri. Sanalkumar R.	Training on 'Classical biological control of Papaya mealy bug'	NABII, Bangalore from 31st October to 1st of December, 2010
Smt. Jayashree M.P.	Training on 'Mainstreaming Gender concerns in Agriculture'	MANAGE, Hyderabad from 20th to 27th of November, 2010.

■ TRANSFER OF TECHNOLOGY

Recognition as Research Guide

Dr. Murali Gopal, Senior Scientist (Microbiology) and Dr. M.K. Rajesh, Senior Scientist (Biotechnology) received recognition as research guide in the field of Biosciences for supervising the research work leading to Ph.D. degree from the Mangalore University.

AWARDS

CPCRI has won the Best Stall Award during the Global Conference on Banana - Meeting the challenges in banana and plaintain for emerging biotic and abiotic stresses at Tiruchirappalli, Tamil Nadu during 10-13 December, 2010.

Oral presentations entitled "Natural enemy complex associated with coconut eriophyid mite, *Aceria guerreronis* Keifer. by Chandrika Mohan, Rajan, P. and Nair, C.P.R. and "Diversification for enhancing livelihood security of marginal coconut farmers: Experiences from major coconut growing countries" by Kalavathi, S., Erlene Manohar., Peyanoot Naka., Vo Van Long, Krishnakumar, V., Thomas, R.J., George V. Thomas and Maria Luz George were adjudged as best paper (oral) during the International Coconut Conference.

Best poster award was bagged by Rajan, P., Josephraj Kumar, A., Chandrika Mohan and Subaharan, K for their paper entitled "Emerging pests of coconut in India" and Dr. C.T. Jose and Dr. K.S. Ananda for their paper entitled "Application of spatial technique in field experiments with coconut".

Second Best Poster for the Dr. R.L. Narasimha Swamy Award for research paper on "Economic evaluation of High density Multispecies a Cropping System in root (wilt) disease affected Coconut (*Cocos nucifera*) area in Kerala" was bagged by Krishnakumar, V., Maheswarappa, H.P and Jayasekhar, S during XIX PLACROSYM, RRII, Kottayam, December 7-10, 2010.

The paper "Spatial smoothing technique in field experiments" by Dr. C.T. Jose, Dr. Ravi Bhat, Dr. Ismail B., and Dr. S. Jayasekar was adjudged as the best paper in the field of Design of Experiments published in the Journal of the Indian Society of Agricultural Statistics during the years 2008 and 2009.



Trainees of the Model Training Course along with training faculty

KASARAGOD

Model Training Course

Model Training Course on 'Coconut based integrated farming for higher income and employment' sponsored by Directorate of Extension, Ministry of Agriculture, New Delhi was organised at CPCRI, Kasaragod during 1-8 December 2010. Extension personnel representing six states participated in the Model Training Course.

Special Training Programmes

A Special Training Programme on 'Value addition in coconut' sponsored by the High Value Agriculture Development Agency, Andaman and Nicobar Islands Administration was conducted at CPCRI Kasaragod during 15-23 November 2010 in which 29 tribal farmers from various islands of A&N attended.

Special Training Programme on 'Preparation of coconut chips' was conducted on 26-11-2010 in which eight entrepreneurs participated.

Cyber Extension Programmes

Scientist-Farmer interface programme on coconut farming facilitated through

videoconferencing was conducted on 18-11-2010. Scientists at CPCRI, Kasaragod, and extension personnel and farmers from Kannur District gathered at Kannur participated in the interface programme.

Participation in extension programmes

Dr. C. Thamban, Sr. Scientist participated in the training programme for extension personnel organised by Department of Agriculture at Kannur on 18-11-2010 and handled a session on 'Market led Extension'. He has also participated in the training programme for farmers organised by KVK, Kasaragod on 15-12-2010 as part of Technology Week celebration and handled a session on 'Technology integration for enhancing income from coconut based farming system'.

ATIC activities

A total of 1147 visitors including farmers, extension personnel and students made use of ATIC facilities. Technology inputs and products including planting materials, farm products, farm literature and CD ROMs worth Rs 2,70,503/- were sold through ATIC.

Exhibition

CPCRI exhibited its technologies during the Global Conference on Banana at Tiruchirappilly during 10-13 December, 2010. The stall was awarded best exhibition stall award.

Radio programmes

Dr. C. Thamban, Sr. Scientist presented a radio interview programme on 'Technology transfer programmes of CPCRI', which was broadcast on 18-11-2010 through Red FM radio channel. He has also participated in the Phone-in-programmes which were broadcast by All India Radio, Kannur in Integrated management of eriophyid mite of coconut on 9-10-2010 and in Integrated management of stem bleeding disease of coconut on 11-11-2010.

KAYAMKULAM

Training Programmes

Rajan, P., Chandrika Mohan and Josephraj Kumar, A. functioned as resource persons for imparting training to RAWE students of College of Agriculture, Vellayani during November 1-4, 2010.

Dr. N. Srinivasan, Principal Scientist (Plant Pathology), CPCRI - Regional Station, Kayamkulam handled a class on biopriming of coconut seedlings in management of coconut root (wilt) - leaf rot diseases to about 100 farmers in Kandalloor Panchayat of Alappuzha District of Kerala in 19th November 2010.

Dr. P.M. Jacob, Head conducted one day training on "Diagnosis and Management of coconut root (wilt) disease for the officials of the Karnataka State Department of Agriculture at CPCRI, RS, Kayamkulam on 20th December, 2010. P. Rajan, Pr. Scientist, Chandrika Mohan and Dr. A. Joseph Rajkumar, Sr. Scientists conducted a special training programme on Technological Update of Black headed caterpillar of coconut was conducted. A total of ten officials including four officers from Department of Horticulture, Karnataka (Tumkur) and six from Department of Agriculture, Kerala participated in the programme. Trainees were imparted hands on training on various aspects of promising parasitoids



Dr. Stephan Wiese, Director, Bioversity International along with other dignitaries visited the exhibition stall of CPCRI at Tiruchirappilly

of leaf eating caterpillar viz., rearing, maintenance of cultures, release of parasitoids, estimation of population etc. They were also trained on mass production of entomopathogens such as *Metarhizium anisopliae*, *Oryctes rhinoceros* virus and entomopathogenic nematodes at CPCRI, Regional Station, Kayamkulam during 10-12th November, 2010

Conducted a one day training programme on root (wilt) disease of coconut for 8 officials from the Department of Horticulture, Karnataka.

88 farmers visited under NHM Programme from Virudhunagar District of Tamil Nadu on 19-10-10. and from Krishnagiri District of Tamil Nadu on 21-10-10.

One day training on Scientific Management of Coconut under ATMA programme where, 44 farmers from Kanyakumari district and Kottayam district have participated on 12-11-10. Thirteen farmers from Krishi Raksha Samithi, Cherthala were trained on coconut cultivation techniques on 08-12-10.

Exhibition

International Horti Expo - 2010 organized by State Horticultural Mission - Kerala at Thiruvananthapuram during 1- 6 December, 2010. Exhibition in connection with the International Conference on Education for Peace, Social inclusion and Sustainable Development at M.G. University Campus, Kottayam during 07-10 December, 2010. Exhibition in connection with Indian Biodiversity

Congress at Thiruvananthapuram during 27- 31 December, 2010.

Help line services

Two Hundred and twenty farmers utilized the help line service facility for various information about coconut cultivation.

Dr. P.M. Jacob, Head, Dr. N. Srinivasan, Principal Scientist, Dr. Regi Jacob Thomas, Senior Scientist and Mrs. K. Nihad, Scientist attended a meeting at Kandalloor Krishi Bhavan on 19-11-2010 for sensitizing the importance of biopriming coconut seedlings with *Pseudomonas* for controlling leaf rot disease. Dr. V. Krishnakumar, Senior Scientist served as resource person for HRD training programme of Farmers' Training Centre, Pandalam on 1st December, 2010 and handled class on "Technology upgradation for cultivation of coconut, banana and vegetables". He attended One day Seminar on "Integrated management for sustainable coconut production" organized by Coconut Development Board, Kochi held at Kanjikuhy on 28th December, 2010 and took a class on "Agro management practices for sustainable coconut production". Dr. V. Krishnakumar, Sr. Scientist served as Expert Member to evaluate various projects submitted to Coconut Development Board, Kochi and attended the meeting held on 1st October, 2010. Dr. Regi Jacob Thomas, Senior Scientist (Horticulture) attended the Interface programme of Pathanamthitta District conducted at Mannil Regency,

Pathanamthitta on 08-12-2010 and delivered a lecture on "Recent updates in coconut research". Dr. P. Anithakumari attended the AIR, Trivandrum consultative meeting at Cashew Bhavan, Kollam on 10-12-2010. She has also attended 'Nattukootam' programme of Kumarapuram, Chettikulangara and Thekkakara panchayaths of Alappuzha district.

VITTAL

Training programme

Training on Advances in arecanut and cocoa production technology was organized at Vittal for 5 staff members during 22- 28 November, 2010. Staff from TNAU and CDB attended the training.

Extension services

A total of 527 farmers and students visited the research station and had exposure to various research and extension activities.



Training for rural farm women at Kahikuchi

Seedlings of arecanut and grafts of cocoa were supplied to the farmers.

KAHIKUCHI

Training programmes

Three on-campus training programmes on 4th and 25th August and two off-campus training programmes was organized for 180 numbers of farmers, farm women and rural un-employed youth in Kamrup and Sonapur districts during the period.

Attended and provided a stall in 2ND North East Agri-Expo held at Dimapur, Nagaland during 15th -19th December 2010.

MOHITNAGAR

A total 90 farmers of Malbazar sub division of Jalpaiguri district along with KPS and Agriculture Development Officer visited the farm and discussion was made with plantation crops and cropping system.

■ KVK, KASARAGOD

Training Programmes

Krishi Vigyan Kendra, Kasaragod organised 26 training programmes during the period from October 2010 to December 2010 with the participation of 646 trainees. Training was imparted to practicing farmers, farm women, women self help groups, rural youth and extension functionaries on various topics like crop production, plant protection, post harvest processing, agricultural equipment and allied enterprises. This includes the skill development training programmes under SGSY sponsored by Manjeshwar Block panchayat.

Farmer-Scientist interactions

KVK, Kasaragod carried out a total of 818 extension activities comprising of field days, film shows/video CD,

advisory services, agricultural seminars, farmers visit to KVK, diagnostic visits, method demonstration, radio talks etc. where in farmers were appraised of modern production technologies of various crops and enterprises.

Frontline Demonstrations

The major Front line demonstrations conducted by KVK are Management of bud rot in coconut, Performance of ME Traps for the management of fruit flies in mango, Micronutrient management in Banana, Management of fruit flies of cucurbits using cue lure traps, Pepper production through bush pepper technology, Moisture conservation practices and intercropping in coconut gardens of sandysoils, Arecanut based mixed farming system, Micronutrient management in vegetables, Coconut

based mixed farming system, Management of Coconut rhinoceros beetle using *Metarhizium anisopliae*.

Assessment and refinement of technologies

The different on farm trials carried out by KVK, Kasaragod are Management of stem bleeding in coconut, Management of foot rot of black pepper, Effect of Cassava based biopesticide for the management of pseudostem weevil, High density planting of Banana, Performance of different models of climbing devices and Effectiveness of new generation insecticides for the management of Red Palm Weevil in Coconut.

Video CD on Banana fibre extraction

A video CD of 30 minutes duration was prepared on the technique of extraction of banana fibre and the procedure of making handicrafts out of it.

Radio talks

Smt. Jayashree M. P., SMS (Agrl. Extn.) on 29th November, 2010 delivered a talk on Banana fibre extraction and utilisation broadcasted by FM radio, AIR, Kannur.

On campus				off campus			
No. of Courses	Men	Women	Total	No. of Courses	Men	Women	Total
15	55	332	387	11	174	85	259



OFT on high density banana cultivation and control of pseudo-stem

KVK, ALLEPPEY

Field Day of Farmer Field School (FFS) on 'IPM in coconut seedlings'

A Farmer Field school on IPM in coconut seedlings has been conducted in Krishnapuram Panchayath for about six months from June to November, 2010. Twenty five farm families participated in the programme which was conducted on Saturday afternoons at least once in a month. Different sessions such as method demonstration, group discussions, 'do it yourself' etc. were conducted in the field itself. The participants were given an opportunity to scout, identify and suggest management practices in the seedlings of their location. FFS students kept specimens of pests and tried different management methods on them and got convinced themselves by discussing the progress in the weekly meetings.

To mark the conclusion of the programme, a field day was organized on 09-12-2010 with participation of agricultural officer, peoples' representatives, farmers' club and farmers. The farmers suggested to expand the concept over a large area with the help of local bodies and line departments. Dr.P.M.Jacob (Head, CPCRI(RS), Kayamkulam, Dr.P.Muralidharan (Programme Coordinator, KVK), Mrs. Radhamani Rajan (Vice president, Krishnapuram grama panchayath) Mrs. Shinyamol Vishnu (Member, Krishnapuram grama panchayath) Mrs.Asha Sankar (Agrl.officer, Krishnapuram) Mr. Sivaraman K. (Secretary, Farmers' Club) addressed the meeting. A photo exhibition was also arranged during the occasion.

Training programmes

KVK Alleppey has conducted a total of 46 trainings during this quarter; 20 on campus, 14 off campus, 10 sponsored and 2 vocational programme. A total of 1160 participants attended the programmes in which 379 men and 781 women participated.

External funded programmes

Initiated activities of the state wide network project on 'Soil based plant nutrient management for agro-ecological systems of Kerala'- funded by State dept. of Agriculture and co-ordinated by State Planning board with an outlay of 1.5lakhs. Under this project, about 3500 soil samples from different parts of Alleppey district will be analysed in the SWPT laboratory of KVK and the data will be uploaded in the project database.

Entrepreneurship development programme in agriculture - funded by Kerala State Development Corporation for SC/ST, Thrissur: Training for one batch was conducted from 13th to 20th December, 2010.

Vocational training for a batch of women on 'goat rearing' sponsored by Oachira Block panchayath was conducted from 27th to 29th December 2010.

Exhibitions

KVK Alleppey was one among the two KVKs selected from Zone VIII for participating in the exhibition during the National Conference of KVKs at MPUAT, Udaipur, 22-12-2010 to 24-12-2010.



FFS on IPM of coconut at Krishnapuram



Exhibition stall of KVK, Alleppey at MPUAT, Udaipur

Other Extension activities

During this period the Krishi Vigyan Kendra organized various extension activities. Details of the activities are furnished below

Helpline Services	: 690 nos
Farmers visit to KVK	: 77 nos
Agroclonic services	: 67nos.
FFS	: 1no.
Diagnostic and scientific visits	: 14 nos
Visits of school children	: 8batches (268 students)
Film shows	: 7 no
Method demonstrations	: 6 no
Group meetings	: 5 no

SEMINARS /SYMPOSIUMS/WORKSHOPS/ MEETINGS ATTENDED

Dr. George V. Thomas, Dr. R.V. Nair, Dr. R. Dhanapal, Dr. K. Muralidharan, Dr. K. B. Hebbar, Er. K. Madhavan, Dr. (Mrs.) Anitha Karun, Dr. P.M. Jacob, Dr. N. Srinivasan, Shri P. Rajan, Dr. D. Balasimha, Dr. K.S. Ananda, Dr. H.P. Maheswarappa, Dr. Ravi Bhat, Dr. (Mrs.) V. Niral, Dr. B. Augustine Jerard, Dr. V. Arunachalam, Dr. K. Samsudeen, Dr. M.K. Rajesh, Mr. K. Devakumar, Dr. (Mrs.) R. Manimekalai, Dr. P. Subramanian, Dr. A.C. Mathew, Dr. T. Vidhan Singh, Dr. T. Arumuganathan, Dr.

K. Subaharan, Dr. C. Thamban, Dr. S. Jayasekhar, Dr. T.S. Manojkumar, Dr. N. Ravi Kumar, Shri. Mukesh Kumar, Dr. S. Leena, Mrs. K.K. Sajini, Mrs. E. Radha, Dr. (Mrs.) Chandrika Mohan, Dr. (Mrs.) P. Anitha Kumari, Dr. S. Kalavathi, Dr. V. Krishnakumar, Dr. V.K. Chaturvedi, Dr. Regi Jacob Thomas, Dr. A. Joseph Rajkumar, Mrs. K. Nihad, Dr. P. Muralidharan, Dr. C.T. Jose, Dr. S. Sujatha, Dr. S. Elain Apshara. Dr. D.V. Patil, Dr. G.C. Acharya and Shri Sandeep Shil attended the International

Conference on Coconut Biodiversity for Prosperity at CPCRI, Kasaragod during 25-28th October, 2010.

Dr. George V. Thomas, Dr. N. Srinivasan, Er. K. Madhavan, Dr. H.P. Maheswarappa, Dr. T. Vidhan Singh, Dr. A.C. Mathew, Dr. K. Subaharan, Dr. C. Thamban, Dr. (Mrs.) Chandrika Mohan, Dr. (Mrs.) P. Anitha Kumari, Dr. S. Kalavathi, Dr. V. Krishnakumar, Dr. D. Balasimha, Dr. Ravi Bhat and Dr. S. Elain Apshara attended 19th Biennial Symposium on Plantation Crops (PLACROSYM XIX) during 07-12-2010 to 09-12-2010 at Kottayam.

Name of Personnel and Designation	Name of the symposium, title of the paper presented	Place & duration
Dr. George V. Thomas, Dr. Anitha Karun, R. Manimekalai	Global Conference on Meeting the challenges in banana and plantain for emerging biotic and abiotic stresses	NRC Banana, Trichy 15th Dec 2010
Dr. Anitha Karun	National Workshop on Date Palm	4th October, 2010
Dr. R. Manimekalai	National Symposium on Bioinformatics "Accelerating Biology"	C-DAC, Pune 14-12-2010 to 15-12-2010
Dr. Anitha Karun, V. Arunachalam, R. Manimekalai	Hortinformatics 2010	IISR Calicut October 8th 2010
Dr. R. Dhanapal	First world Noni congress, World Noni foundation	Chennai, Oct, 1-3, 2010
Dr. R. Dhanapal	National conference on Challenges in weed management in Agro -Ecosystems, Present status and future strategies	TNAU, Coimbatore, Tamil Nadu. Nov 30th -Dec, 1st, 2010
Dr. N. Srinivasan	Participated in the Third Conference on Biopesticides: Emerging Trends (BET 2010) - Biopesticides in Food and Environment Security and presented paper entitled, "Role of biopesticides in disease management with special reference to coconut root wilt - leaf rot diseases".	CCS, Haryana Agrl. University, Hisar 20-22nd 2010

Name of Personnel and Designation	Name of the symposium, title of the paper presented	Place & duration
Dr. G. C. Acharya	North East and The Response to Climate Change-Policies for Watershed Management, Energy Security and Biodiversity	TERI, Guwahati, 13th December 2010
Dr. S. C. Paul	Soil management for achieving food security and nutritional safety under normal and intensified agro-ecosystem	Banaras Hindu University, 1st-2nd November 2010
Smt. Jayashree M.P.	National Farm Innovators' Meet organized at by ICAR and ZPD, Bangalore	Suttur, 11th to 13th November, 2010

CELEBRATIONS

New Year eve celebrated at CPCRI, Kasaragod and Regional Station, Kayamkulam in the evening of 31-12-2010 under the auspices of the Staff Recreation Club.

Vittal

Hindi Workshop was organised on 24-11-2010 with participants from all the member organisations of TOLIC. 34 officers and

staff from various offices attended the classes conducted by Shri E. Shivadasan, Jawahar Navodaya Vidyalaya, Mudipu, Shri Prakash G. Bhat, DCR, Puttur and Smt. K. Sreelatha, CPCRI, Kasaragod.

The Workshop was concluded with a guest lecture by Shri KPS Gautam, SAO, CPCRI, Kasaragod.

NEW PROJECTS SANCTIONED

Four projects with a total outlay of ` 81.22 lakhs external funding have been initiated.

S. No.	Project title	Funding agency	Amount	Principal Investigator
1	Isolation and characterization of resistant gene analogues from coconut	KSCSTE	`14.6 lakhs	Dr. M.K. Rajesh
2	Farmer Participatory Action Research Project – II Phase	Central Water Commission- Ministry of Water Resources	`46 lakhs	Dr. K. Muralidharan
3	Integrated model clusters for improving livelihood security in root (wilt) affected areas in Alappuzha district	NABARD	`9.62 lakhs	Dr. S. Kalavathy
4	Studies on Development and Management of Water Conservation Measures to Augment Water Availability of Surangams – a Unique and Traditional Method of Harnessing Ground Water in Rural Areas of North Kerala and South Karnataka	KSCSTE	`11 lakhs	Dr. A.C. Mathew

Other Information

The second Institute Biosafety Committee (IBSC) meeting was held on 22-12-2010.

PERSONALIA

APPOINTMENT

Name of the Official	Designation	Location	w.e.f.
Dr. K. Balachandra Hebbar	Head, Div. Physiology, Biochemistry & Post Harvest Technolgy	CPCRI, Kasaragod	30-09-2010
Sri Kiran Pandurang Bhagat	Scientist	CPCRI, Kasaragod	18-09-2010

TRANSFER

Name of the staff / Designation	From (Place)	To (Place)	w.e.f.
Dr. V. Arunachalam, Sr. Scientist (Hort.)	CPCRI, Kasaragod	Principal Scientist (Hort.), ICAR Res. Complex, Goa	16-11-2010
Dr. K. Devakumar, Scientist SS (Biotech.)	CPCRI, Kasaragod	Sr. Scientist (Biotech.), CARI, Port Blair	30-12-2010
Dr. Shareefa M. Scientist (Hort.)	CPCRI, Kasaragod	CPCRI, RS, Kayamkulam	06-12-2010
Shri K.S. Ramakrishna, Assistant	CPCRI, Kasaragod	CPCRI, RC, Kidu	30-11-2010
Shri P. Narayana Naik, UDC	CPCRI, RC, Kidu	CPCRI, Kasaragod	01-12-2010
Shri P.K. Mohammed Haneefa	LDC, CPCRI, Kidu	LDC, CPCRI, Kasaragod	01-12-2010

PROMOTION

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri P.K. Shai	Assistant, CPCRI, RS, Kayamkulam	AAO, CPCRI, Kasaragod	15-09-2010
Shri P.M. Thomas	UDC, CPCRI, Kasaragod	Assistant, CPCRI, Kasaragod	3-12-2010
Smt. Subhadra K.	UDC, CPCRI, RS, Vittal	Assistant, CPCRI, RS, Vittal	3-12-2010
Shri Subhash Paul	UDC, CPCRI, RC, Mohitnagar	Assistant, CPCRI, RC, Mohitnagar	6-12-2010
Smt. Mary A.J.	Skilled Support Staff, CPCRI, Kasaragod	LDC, CPCRI, Kasaragod	3-12-2010

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri P.K. Krishnan Kutty	T-1, JTA, CPCRI, Kasaragod	T-2, JTA	01-04-2010
Shri V. Suresh Kumar	T-2, JTA, CPCRI, Kasaragod	T-3, Tech Asst.	21-10-2008
Shri Sunny Thomas	T-2, JTA, CPCRI, RS, Kayamkulam	T-3, Tech Asst., CPCRI, RS, Kayamkulam	28-09-2009
Shri M.V. Sridharan	T-2, JTA, CPCRI, Kasaragod	T-3, Tech Asst.	27-12-2009
Shri M. Narayana Naik	T-2, JTA, CPCRI, RC, Kidu	T-3, Tech Asst.	08-08-2009
Shri Y. Sreenivasa Bhat	T-2, JTA, CPCRI, RS, Vittal	T-3, Tech Asst.	27-10-2008
Shri K. Krishnan Nair	T-2, JTA, CPCRI, Kasaragod	T-3, Tech Asst.	05-08-2009
Shri Mangesh K. Moragkar	T -3, Tech Asst. CPCRI, RS, Vittal	T-4, Tech Asst.	01-01-2010
Shri Koragu Naik	T-3, Tech Asst. CPCRI, Kasaragod	T-4, Tech Asst.	01-01-2010
Shri C. Purandara	T-3, Tech Asst. CPCRI, RS, Vittal	T-4, Tech Asst.	01-01-2009
Shri K.P. Udayabhanu	T-3, Tech Asst. CPCRI, RS, Kayamkulam	T-4, Tech Asst.	24-08-2009
Shri V. Balakrishnan	T-3, Tech Asst. CPCRI, Kasaragod	T-4, Tech Asst.	05-08-2009
Shri M. Krishnan	T-3, Tech Asst. CPCRI, Kasaragod	T-4, Tech Asst.	01-07-2009
Shri A. Bhaskaran	T-4, Tech Asst. CPCRI, Kasaragod	T-5, Technical Officer	03-02-2010
Shri B. Anil Kumar	T-4, Tech Asst. CPCRI, RS, Kayamkulam	T-5, Technical Officer	03-02-2010
Shri K. Rajendran	T-4, Tech Asst. CPCRI, Kasaragod	T-5, Technical Officer	30-03-2010
Shri A.S. Panicker	T-4, Tech Asst. CPCRI, RS, Kayamkulam	T-5, Technical Officer	03-02-2010
Shri A. Jayantha	T-4, Tech Asst. CPCRI, Kasaragod	T-5, Technical Officer	03-02-2010
Shri V. Keshava	T-4, Tech Asst. CPCRI, RS, Vittal	T-5, Technical Officer	03-02-2010
Shri M.C. Muthanna	T-4, Tech Asst. CPCRI, RS, Vittal	T-5, Technical Officer	03-02-2010
Shri N. Nagesh	T-4, Tech Asst. CPCRI, RC, Kidu	T-5, Technical Officer	03-02-2010
Shri Subhash Paul	UDC, CPCRI, RC, Mohitnagar	Assistant, CPCRI, RC, Mohitnagar	06-12-2010
Smt. Veeramma	Personal Assistant, CPCRI, RS, Vittal	Private Secretary	01-10-2010

RETIREMENT/RESIGNATION

Name	Designation	Place	Cause and date
Shri. Jithin,TV.S.	Farm Assistant (T-3)	CPCRI, RS, Kayamkulam	Resigned on 15-12-2010
Smt. Priya Buddi	Scientist (Plant Pathology)	CPCRI, Kasaragod	Resigned on 15-12-2010
Shri Monappa Gowda M.	SSS	CPCRI Vittal	Superannuation on 31-12-2010
Shri Rameshwar Kaivarta	SSS	CPCRI, RC, Kahikuchi	Superannuation on 31-12-2010
Shri Mukul Chandra Mohanta	SSS	CPCRI, RC, Kahikuchi	Superannuation on 30-11-10



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

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