



CPCRI News



Views and News on Advance in Coconut, Arecanut and Cocoa

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October - December, 2011

**Wishing a Happy
& Prosperous
New Year 2012**

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Secretary DARE and Director General, ICAR visits Kidu and Vittal

Dr. S. Ayyappan, Secretary DARE and Director General, ICAR visited the CPCRI Research Centre, Kidu and the International Coconut Genebank for South Asia (ICG-SA) on 25th December, 2011. DG appreciated the efforts being taken by the Institute to conserve and maintain the valuable genetic resources. He highlighted that the genebank is a treasure of genetic diversity for the future generations to combat the exigencies of changing climate to ensure food and nutritional security. He stressed the need to ensure security and continuity of the Centre and the genebank. He also inaugurated a seminar hall at the centre with facilities for organizing small farmers' meeting.

DG, ICAR visited the CPCRI, Regional Station, Vittal on the afternoon of 25th December, 2011. He appreciated the research and developmental activities being undertaken there and acknowledged the amazing collection of arecanut and cocoa germplasm being conserved there. He specially appreciated the dwarf arecanut hybrid developed at the Institute. He also visited the laboratories and individually interacted with the scientific staff and appraised himself with the activities of the centre and inaugurated the newly established



Dr. S. Ayyappan, Secretary DARE and Director General, ICAR visits dwarf arecanut plot at Vittal

tissue culture facility under the XI Plan. He called upon the Institute and staff to work in a mission mode to address burning issues and develop appropriate need based technologies for the farm sector. He called upon the Institute to "do and show" to improve the visibility in the national and international fora.

Biennial Group Meeting of AICRP on Palms held at Kasaragod

Twentieth Biennial Group Meeting of All India Coordinated Research Project



Dr. H. P. Singh, DDG (Hort.) inaugurating the Biennial Group Meeting of the AICRP on Palms. Shri M. Thomas Mathew, CCDO, CDB, Kochi, Dr. George V. Thomas, Director & Project Coordinator, Dr. P. Rethinam, Former Exec. Director APCC, Dr. S.B. Dandin, VC, UHS, Bagalkot are seen



Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR inaugurating farmers meeting hall at Kidu

(AICRP) on Palms was held during 15-10-2011 to 17-10-2011 at CPCRI, Kasaragod. The workshop was inaugurated by Dr. H.P. Singh, DDG (Hort.), ICAR, on 15-10-2011. In his inaugural address, he told that “AICRP Centres in collaboration with Krishi Vigyan Kendras in respective Districts should demonstrate the viability of technologies for improving coconut and seed garden should be established for the multiplication of the planting materials of improved varieties of coconut, climate and to study its impact on crop production.” Dr. S.B. Dandin, VCUHS, Bagalkot presided over the meeting and told that there is a need for strengthening interface between technicals and implementors of technologies. Dr. P. Rethinam formerly Executive Director of Asia Pacific Coconut Committee felicitate to the function and he suggested that value added products from coconuts should come out for the benefit of coconut farming community. Lt. Col. Amith Singh memorial Best AIRCP Centre Award was awarded to the Ratnagiri Centre and was received by Dr. Nagvekar, Mr. Sawant, Mr. Garav. Dr. George V. Thomas, Director, CPCRI welcomed the gathering and presented the report of AICRP. The Plenary Session was chaired by Dr. S. Rajan, Asst. Director General (Hort. I), ICAR, New Delhi on 17-10-2011.



Dr. H. P. Singh, DDG (Hort.) delivering inaugural address during the Biennial Group Meeting of the AICRP on Palms.

Stakeholders Meet on planting material production in coconut at Kayamkulam

The Stakeholders meet on “Planting material production in coconut for root (wilt) disease prevalent tract – Issues and Strategies” started at 2.30 pm on 15-12-2011 at CPCRI Regional Station, Kayamkulam. Dr. H.P. Singh, DDG (Hort.) inaugurated the meeting. Participants of the Stakeholders meet included Dr. George V. Thomas, Director, CPCRI, Kasaragod, Dr. P.M. Jacob, Head, CPCRI, Regional Station, Kayamkulam, Dr. R.V. Nair, Head, Division of Crop Improvement, CPCRI, Dr. P.C. Balakrishnan, Mission Director (Coconut), KAU, Dr. T.N. Vilasini, Professor & Head, ORARS, Kayamkulam., Professors from KAU, Programme Coordinators of Krishi Vigyan Kendras from Kottayam, Pathanamthitta, Alappuzha, Officials from Coconut Development Board, State Department of Agriculture, Assistant Directors from District Seed farms, and Progressive farmers of the district.

In his address, DDG emphasized the need for production of quality planting materials free from root (wilt) disease. He stressed to assess the transmission dynamics by the plant hopper vector. He complimented the scientists involved in the development of two resistant coconut varieties of root (wilt) disease viz., *Kalparaksha* and *Kalpasree* and the first hybrid- *Kalpa Sankara* tolerant to root



Dr. H. P. Singh, DDG (Hort.) inaugurating the Stakeholders Meeting at Kayamkulam

(wilt) disease. He conceptualized to investigate on the possibility of the integration of coconut root (wilt) phytoplasma with coconut genome similar to that of banana streak mosaic virus.

Dr. H.P. Singh, DDG released a DVD on “Techniques for production of quality coconut seedlings for the disease prevalent tract” compiled by Dr. P.M. Jacob and team and the first copy was received by Dr. P.C. Balakrishnan.

Dr. George V. Thomas, Director, CPCRI presented a paper on “Strategies for planting material production in coconut for root (wilt) diseased tracts”. In his lecture, Dr. R.V. Nair, Head, Division of Crop Improvement, highlighted the yield potential of the resistant varieties.

Inauguration of New Biocontrol Laboratory

Dr. HP Singh, DDG (Horticulture) also inaugurated the new Biocontrol Laboratory of the Regional Station, Kayamkulam on December 15, 2011. Dr. George V. Thomas, Director, CPCRI, Kasaragod and Dr. PM Jacob, Head, CPCRI, Regional Station, Kayamkulam were also present on the occasion.

DDG (Hort.) visits Lakshadweep Island, Vittal and Kidu

DDG (Hort.) visited CPCRI, RS, Minicoy, Lakshadweep Islands on 10-14th



Dr. H. P. Singh, DDG (Hort.) inaugurating the Biocontrol laboratory at Kayamkulam

December, 2011 and reviewed the ongoing activities. He has given constructive guidance for action to be taken at Minicoy and Kalpeni Islands by the CPCRI. He has also visited Kalpeni Island and addressed the farmers.

Dr. H.P. Singh, DDG (Hort.) visited the CPCRI, RS, Vittal on 24th December, 2011 and provided technical guidance. He stressed the importance of team work in addressing the challenging problems specially YLD of arecanut.

Dr. H.P. Singh, DDG (Hort.) also visited the ICG-SA and the CPCRI, RC, Kidu on 24-12-2011 and provided technical guidance for the better management and utilization of the coconut germplasm. He also highlighted the importance of maintaining the world's largest collection of coconut genetic diversity for the benefit of mankind.

QRT visits KVK, Kasaragod

One day Travel Workshop of Quinquennial Review Team for Zone VIII KVKs was held at KVK, CPCRI, Kasaragod on 14th November, 2011. Dr. Mruthyunjaya, Former National Director, NAIP was the Chairman of the team. The other members were Dr. SVN Rao, Professor and Head, Rajiv Gandhi College of Veterinary and Animal Sciences, Puducherry and Dr. P.L Maliwal, Director of Extension, MPUAT, Udaipur and Dr. S. Prabhukumar, Zonal Project Director, Zone VIII, Bangalore. Programme Co-ordinators of 19 selected



QRT chairman and members interacting with the KVKs of Kerala, Karnataka and Tamil Nadu at CPCRI, Kasaragod



Dr. H.P. Singh, Deputy Director General (Hort.), ICAR interacting with farmers at Minicoy

KVKs from Kerala, Tamil Nadu and Karnataka, farmers from these KVKs, various heads of divisions from CPCRI, District Heads of developmental departments and NGOs and SAC members of KVK also attended the programme. An exhibition was also organised in which all the KVKs displayed their activities and products.

SAC meeting of KVK, Kasaragod

SAC meeting of KVK, Kasaragod was held on 22.12.2011 at CPCRI. Dr. S. Prabhukumar Zonal Project Director, Zone VIII, Bangalore participated in the meeting. Suggestions for improvement of KVK activities were given. KVK quaters was also inaugurated by Dr. Prabhukumar on the occasion.



Dr. S. Prabhukumar, Project Director, KVK releasing technical bulletin of KVK Kasaragod

Monthly interface with farmer innovators

The KVK, Kasaragod - NABARD partnership 'Farmers Monthly Interface Series' is continuing. In October 'Effective microorganism technology for sustainable agriculture and complete waste management' by Sri. V. Premnath, Director of EM Technology Mission, Kozhikode, in November, 'Modified pepper thresher which can thresh 250 kg/hr' by Sri. Gopalakrishna Sharma, Kasaragod, in December, 'Effective utilisation of wastes from cattle shed using Automatic slurry-churning device' led by Sri. V.Subrahmaniam Bhat from Yethadka, Kasaragod were held.



Farm innovator demonstrating his device

RESEARCH HIGHLIGHTS

Horned Coconut

A novel coconut accession is reported which produces multiple ovaries resulting in formation of horn like structures over the mature fruits. Though it has been reported as a freak type, the conservation and evaluation at National Coconut Gene Bank at CPCRI has revealed that the trait is inherited to the next generation. Originally the accession which was then named as “*Horned Cocos*” was collected from natural indigenous coconut populations of the country during 1999 and the progenies from the four horned type palms were planted in 2002. The palms flowered between 2008 and 2010 i.e 6 to 8 years after planting. Over 60 % of open pollinated progenies exhibited this trait. In the fruit bunches of these coconut palms, one of the ovaries located in the centre develops into a complete fruit with husk, shell, endosperm and embryo surrounded with multiple rudimentary ovarian structures. The unique heritable trait could be useful in studying the segregation pattern in coconut using it as a marker trait. The Horned coconut type could be a progenitor of primitive coconut types with rare genes.

Management of stem canker disease of cocoa caused by *Phytophthora palmivora*

Stem canker disease of cocoa can be controlled by following integrated disease management practices such as frequent removal and destruction of *Phytophthora* infected pods, proper pruning of cocoa plants including removal of *Phytophthora* infected chuppons and



Horned coconut accession conserved at NCGB

twigs and treatment of canker lesions with either phosphorous acid or *Trichoderma* coir pith cake (TCPC). Application of TCPC in the soil around the base of the plant will help in reducing the inoculum. *Trichoderma* treatment will be cheaper than phosphorous acid treatment such as build up of *Trichoderma* population in the garden which in turn is expected too reduce the incidence of all *Phytophthora* diseases and also helps in the long term management of the disease.

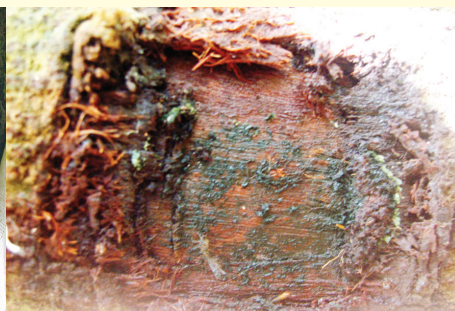
Adoption of coconut technologies gaining confidence over time

Concerted efforts in technology transfer through innovative approaches could improve the technology utilization and impact of research. The technologies like fertilizer application for seedlings, basin management with green manure, application of chemical fertilizers including magnesium sulphate, organic manure application recorded 30- 40 percent adoption among farmers. Similar was the case with plant protection in coconut seedlings, lime application, mulching basins and chemical fertilizer application for seedlings. Adoption level for these technologies were very low in

the previous decade. Compared to the knowledge and adoption of recommended practices among coconut farmers reported during 2001 the results of the study in 2011 indicated 30-40 percent improvement in technology utilization by farmers. The knowledge regarding the root (wilt) disease symptoms identification and management was only 24 percent as reported during 2001 which was improved by 55 percent as per data from this study. Crop being perennial in nature, gaining confidence by perception and subsequent adoption of newly developed technologies takes more time among the farming community.

Assessment of coconut eriophyid mite damage in Andhra Pradesh

Dr. George V. Thomas, Director, CPCRI and P. Rajan and Dr. Chandrika Mohan, Entomologists of CPCRI Regional Station, Kayamkulam visited East and West Godavari districts of Andhra Pradesh during November 4-6, 2011 and assessed the mite damage in this region. Mite incidence was found to be low to medium in the gardens surveyed ranging from 18.3 to 54.2. Well-maintained coconut gardens with adequate nutrition and irrigation had the least incidence of mite. In coconut gardens with flowering plants as intercrops the eriophyid mite was significantly low when compared to gardens with other inter / mixed crops. The present level of mite infestation in these two districts could be managed by adopting the current recommendation of integrated management consisting of plant protection and nutritional management. The acaropathogenic fungus, *Hirsutella thompsonii* could not be isolated from the coconut samples collected from these districts.



Trichoderma treatment against stem canker of cocoa

Research paper

Litty Thomas, Alka Gupta, Murali Gopal, ChandraMohan, R., Priya George, and George V. Thomas. 2011. Evaluation of rhizospheric and endophytic *Bacillus* spp. and fluorescent *Pseudomonas* spp. isolated from *Theobroma cacao* L. for antagonistic reaction to *Phytophthora palmivora*, the causal organism of black pod disease of cocoa. *J. Plantation Crops*, **39** (3): 370-376.

Murugan, M. Shetty, P.K., Ravi, R., Anandhi, A. and Josephraj Kumar, A. 2011. Climate change in Indian Cardamom Hills, 1978-2007. *Climatic Change* DOI 10.1007/s10584-011-0115-8.

Nampoothiri, C.G.N., Nirali, V., Parthasarathy, V.A. and Muralidharan, K. 2011. Segregation, phenotypic and genotypic variance and heritability in the F₂ population of coconut (*Cocos nucifera*). *Indian J. Agricultural Sci.* **81** (10): 954-956.

Papers presented in seminar/symposia/ conferences

Murali Gopal, Kamlesh Jangid, Alka Gupta, George V. Thomas and William B. Whitman. 2011. Computational analysis of the 454-GS-FLX generated metagenome data of coconut leaf vermicomposting using QIIME and MOTHUR bioinformatics programmes. Paper presented in the Conference 'Next-Generation Sequencing and Bioinformatics for Genomics & Healthcare', Rajiv Gandhi Centre for Biotechnology, Trivandrum, India, Dec 16-17th, 2011.

Rao, D.L.N., Murali Gopal and Pramod Jha. 2011. Soil organic matter and soil biodiversity concerns in integrated soil management. Lecture delivered

during Brainstorming Session on Sustaining Agricultural Productivity through Integrated Soil Management, National Academy of Agricultural Sciences, New Delhi, Oct.10, 2011.

Shil, S., Acharya, G.C., Jose, C.T., Muralidharan, K. and Sit, A.K. 2011. Forecasting of arecanut market price in major markets of Meghalaya using ARIMA Mode. Paper presented in National conference on Statistical Theory and its Practices, held at Department of Statistics, Gauhati University, during 23-24th December 2011.

Thamban, C., Anithakumari, P., Jayasekhar S. and Muralidharan, K. 2011. Technology Integration in Coconut Enterprise for Sustainable Livelihoods involving CBOs of Small Farmers - Field experiences of CPCRI. In the International Conference on 'Innovative approaches for Agricultural Knowledge Management: Global Extension Experiences' organised by International Society of Extension Education and ICAR held at New Delhi during 09-12 November 2011.

National symposium on "Microorganisms and Plant Health" during 4-5th November 2011 at Gauhati University organized by Indian Phytopathological Society and Dept of Botany, Gauhati University.

Chakrabarty, R., Acharya, G.C., Ray, A.K. and Sarma, T.C. 2011. Management of Basal Stem Rot of arecanut (*Areca catechu*, L) under Assam condition.

Ghose, S. and Acharya, G.C. 2011. Leaf diseases of coconut-an overview. 2011.

Paul, S.C., Acharya, G.C., Baishya, P.K. and Rabha, H. 2011. Harmonization of soil and plant health in agro-ecosystem: Role of Organics.

Popular article

Anithakumari, P. 2011. Mushroom in coconut husk also. *Kerala Karshakan*. **57**(5): 56-57

Anithakumari, P. and Thajudin, S. 2011. Indian Naleekera Journal- pride and experiences of six decades. *Indian Naleekera J.* **2**(10): 25-27

Maheswarappa, H.P., Harish, C.B. and Subramanian, P. 2011. Integrated nutrient management in coconut based high density multispecies cropping system for sustainable productivity. *Bharateeya Tengu Patrike*, **22**(2):11-14.

Nagaraja, N.R., Jaganathan, D. and Yadukumar, N. 2011. *Labhadhayaka udyoga: Adike thatte thayarike*. *Krishi Mitra* **9** (2):12 – 15 (in Kannada).

Nihad, K. and Krishnakumar, V. 2011. Irish *Heliconia* thenginu changathi. *Kerala Karshakan*. Nov. 2011. pp. 38-39 (in Malayalam).

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Thomas, R.J., Shareefa, M. and Jacob P.M. 2011. Hybrids and hybridization techniques in coconut. *Indian Coconut Journal* **54**(5): 25-28.

Tiwari, Meenakshi, Acharya, G.C., Chakrabarty, Ranjana and Ray, A.K. 2011. Scientific cultivation practices of cinnamon grown under arecanut based high density multi species cropping system in Assam. *Indian journal of Arecanut, Spices & Medicinal Plants*, **13** (2): 3-6.

TRANSFER OF TECHNOLOGY

Technology week

Technology week was celebrated from 17-11-2011 to 21-11-2011 at Pullur Periya panchayath jointly by KVK, Kasaragod and Department of Soil Conservation, Kasaragod district. The programme was inaugurated by Dr. George V Thomas, Director, CPCRI. Sri C. K. Aravindan, Panchayath President, Pullur Periya presided over the function. As a part of the Technology Week, latest developments in the field of agriculture were presented for farmers. Farmer-scientist interface was also conducted for the farmers under NWDpra. Various subjects like bee keeping, mushroom cultivation, seasonal vegetable cultivation, vermicompost, vegetable cultivation in terraces, dairy farming, jasmine cultivation, areca leaf sheath plate making, and banana fibre extraction for bag making were popularised.



Inauguration of Technology Week at Pullur Periya

TRAINING PROGRAMMES

Field Experience Training (FET) of ARS scientists

The Field Experience Training (FET) of eight ARS scientists of 94th FOCARS was organised during the period from 08-11-2011 to 28-11-2011. The FET was conducted in Muliya village. The village seminar was held on 19-11-2011 at Muliya which was inaugurated by Shri. K. Kunhiraman, M.L.A., Udma. The Institute seminar was held on 24-11-2011 at CPCRI, Kasaragod.

Training programme on 'Production Technology for Plantation Crops'

The training programme for extension personnel on 'Production Technology for

Plantation Crops' sponsored by Directorate of Agriculture, Bodoland Territorial Council, Kokrajhar, Assam held at CPCRI, Kasaragod during 12-19 December 2011. Sixteen officers attended the training programme.



Participants of training programme on 'Production technology for plantation crops'

Training programme on "Production of quality coconut seedlings utilising local elite coconut germplasm"

Training programme for members of Self Help Groups on "Production of quality coconut seedlings utilising local elite coconut germplasm" was organised at CPCRI, Kasaragod on 16-12-2011 in collaboration with Madikkai gramapanchayat.

Training-cum-Exposure visit programme for farm women from Andaman and Nicobar Islands

Three days Training-cum-Exposure visit programme for farm women on 'Coconut Production Technology' sponsored by Directorate of Agriculture, A&N Islands was organised at CPCRI, Kasaragod during 20-22 December 2011 in which 26 farm women participated.



Participants of exposure visit-cum-training programme for women from A & N Islands

Training-cum-Exposure visit programme on 'Coconut Production Technology'

Training-cum-Exposure visit programmes for farmers on 'Coconut Production Technology' sponsored by Department of Agriculture under ATMA project were organised at CPCRI, Kasaragod in which 30 coconut farmers from Tuneri Block, Kozhikode District for two days from 30-11-2011 to 01-12-2011, 25 farmers from Rajakad, Idukki District on 09-12-2011 and 30 coconut farmers from Edakkad Block, Kannur District for two days from 03-01-2012 to 04-01-2012 participated.



Training of farmers from Tuneri block on 'coconut production technology'

Special Training Programme

Special Training Programmes for entrepreneurs on 'Preparation of coconut chips' was conducted at CPCRI, Kasaragod on 09-12-2011 in which entrepreneurs from Kasaragod, Kozhikode, Malappuram and Thiruvananthapuram participated.

Training on IPM of coconut

A group of 40 Agricultural Officers from Alappuzha District attended a one day training programme on IPM of coconut at Kayamkulam on 15-11-2011. The programme included sessions on IPM of coconut, safer use of insecticides and biological measures for control of coconut along with lab visits, handled by Dr. P. Rajan, Dr. Chandrika Mohan and Dr. Joseph Rajkumar.

Training on cocoa production technology

Two training on cocoa production technology sponsored by Directorate of Cashewnut and Cocoa Development (DCCD), Cochin was organized at RS, Vittal. First one for 49 farmers of Sirsi, Uttara Kannada district, Karnataka was imparted during 21- 22 November, 2011. Dr. George V. Thomas, Director, CPCRI inaugurated the training. The second training for 48 farmers of Kodakara, Thrissur district, Kerala was imparted during 24- 25 November, 2011.



Dr. George V. Thomas, Director inaugurating the training on cocoa production technology

Training on production technology of plantation crops for extension personnel sponsored by Directorate of Agriculture, Bodoland Territorial Council, Assam was organized at Vittal for 16 Officers from Assam on 16-12-2011.

Training on organic farming

Two training programmes on Organic Farming and Techniques of planting material Production of Plantation crops were conducted during 17-10-2011 and 20-10-2011 at RC, Mohitnagar. A total of 60 (30 + 30) women of different Self Help Group participated in the training Programme.

A training programme of 5 days duration was conducted at Mohitnagar from 15-11-2011 to 19-11-2011 was conducted on “ Horticulture Development in North Bengal (Plantation and Spice Crops) in collaboration with Jordighi Bamanpara Cooperative Society Ltd. at this Center.

Women in Agriculture

The first exclusive ladies' batch in Kerala has come out completing their training



Participants of training on cocoa production technology from Karnataka



Participants of training on cocoa production technology from Kerala

on machine aided coconut palm climbing and management practices of coconut from KVK, Kasaragod as a part of “Friends of Coconut”, in collaboration with CDB, Kochi. Seventeen women attended the programme out of which 11 have taken up the profession already.

Training programme on scientific management of Prathyasa- a short duration paddy variety

Under the technology demonstration component of the national network project ‘National Initiative on Climate Resilient Agriculture’ funded by ICAR and coordinated by CRIDA, Hyderabad a training programme on Scientific

management of Prathyasa – a short duration paddy variety’ was conducted on 10-11-2011 at Muttar village of Veliyanad Block in Kuttanad taluk. Dr. S. Leenakumari, Prof. and Head, Rice Research Station, Mancombu, attended the training programme as expert. About 50 partners of the technology demonstration attended the programme.

‘Friends of Coconut Tree’ Training programme

Three batches of ‘Friends of Coconut tree’ training programme sponsored by Coconut Development Board, Kochi were conducted in which 13, 16 & 14 participants attended respectively.



Training programme on Scientific paddy cultivation by Dr. Leenakumary, Prof & Head, Rice Research Station, KAU

The six days residential training included coverage of topics like mother palm selection, selection of seed nuts and nursery management, pest and disease management, nutrient management, intercropping, integrated farming and value addition of coconut in addition to rigorous training on climbing for harvesting and plant protection of coconut. The trainees were also exposed to personality development and financial management aspects.

Off-campus training programmes / Farmers' seminar

Dr. Chandrika Mohan and Dr. S. Kalavathi participated in the Rodent control campaign organized by Pallippuram Krishi Bhavan, Vypeen block on 25-10-11, in which 48 farmers participated. They had attended another off-campus training on Scientific management of coconut at Thalavady on 19-11-2011, in which 65 farmers participated. Another training on Scientific management of coconut as resource persons at Njarakkal, Vypeen Block on 20-12-2011, in which 40 members participated.

Awareness campaign on varieties of coconut and scientific management at High School, Chettikulangara. The planting of varieties of coconut was inaugurated by Dr. P.M. Jacob, Head, CPCRI, Regional Station, Kayamkulam.

Capacity development activities under NABARD project on 'Integrated model coconut clusters for improving livelihood security in root (wilt) affected areas with three training programmes on cultivation of cabbage and cauliflower as intercrop in coconut on 12-12-2011, in which 40 members participated.

Two one day trainings were arranged by Mrs. P. Nihad at Kayamkulam for 40 farmers each from Thuravoor and Thrikkunnappuzha panchayats underwent training on floriculture in coconut gardens on 25-10-2011 and 02-11-2011.

A batch of 16 students from College of Agriculture, Vellayani underwent RAWE programme at Kayamkulam during 13-19 October, 2011. KVK module of the RAWE programme was held at KVK – Alleppey from 20th to 25th October, 2011.

One off-campus training programme was organized by RC, Kahikuchi for 50 farmers/ farm women at Baihata Chariali on 22nd October 2011.

Plant Health Clinic

Plant Health Clinic was conducted by KVK, Kasaragod at Vorkady Panchayath on 27-12-2011 with active participation of farmers.



RAWE students interacting with farmers at Muttar on 24-10-2011



Off-campus training programme at Kahikuchi

Other Training programmes

Twenty training programmes on topics like vermicomposting, jasmine cultivation and plant propagation techniques, mushroom cultivation, poultry rearing, dairy farming and paper bag making were conducted by KVK, Kasaragod in which a total of 420 farmers participated. This also includes the skill development training courses under SGSY scheme of Manjeshwar Block Panchayath.

KVK, Kayamkulam has organized 20 training programmes and attended 10 programmes as resource persons benefitting a total number of 926 farmers/ rural youths during the period. It includes 10 on campus, 7 off campus and three sponsored programmes. In these 483 women and 443 men have participated.

OFT by KVK

On farm testing of evaluation of upland rice varieties viz., Vaisakh and Samyuktha conducted in 3 locations at Panayal village has been completed successfully. The results showed that Vaisakh performed better (3200 kg/ha) followed by Samyuktha (2800 kg/ha) and then the

local Vellathouvan var. (2100 kg/ha). The net returns obtained from the varieties were Rs.11250, Rs.7050 and Rs.1250 per ha respectively. B:C ratio were 1.6, 1.4 and 1 respectively. This indicates that Vaisakh is suitable for large scale cultivation in uplands.

Technology demonstrations under National Initiative on Climate Resilient Agriculture (NICRA) project under KVK, Kayamkulam

Two hundred soil samples collected from wet lands and uplands (paddy lands – 145 nos, uplands – 65 nos) in the village were analyzed for macro and micro nutrients and pH and the soil health cards were prepared and distributed along with fertilizer recommendations. Cow pea (C152 variety) in the basins of coconut palms in 45 famers' plots covering 3000 coconut palms. Portable biogas plants were established in 13 households for organic matter recycling and biogas production which are functioning effectively. Mushroom cultivation training organised and 7 mushroom production units were established. The high yielding short duration Prathyasa variety released by Rice Research Station, Mancombu is being demonstrated in 18 hectares involving 45 partners during the puncha season (November, 2011 to March, 2012). Demonstration programmes were conducted for using paddy transplanter, drum seeder and paddy weeder and demonstration plots are set up using these machines. Integrated fish and duck farming in seven farmers' plots with low cost cages made of bamboo poles and PVC pipes were established in the farm ponds and ducklings were introduced. Fingerlings of



Demonstration of paddy transplanter

catla, rohu, mrigal, thilopea and red belly were released in the farm ponds.

FLD by KVK, Kasaragod

Frontline demonstration on “Introduction of high yielding variety of rice, Pratyasa” was initiated at Chemnad and Alampady villages in 2 ha area covering 8 farmers. Other demonstrations initiated are Backyard Poultry rearing as an income generating enterprise for rural women, Introduction of Fodder grass var. COGG3 in coconut based integrated farming system, Integrating bee colonies in coconut based cropping system and Crystoscopes for detecting right time for Artificial Insemination in cows. An on farm trial on management of leaf roller in paddy was also initiated. A method demonstration on paddy thresher cum winnower was conducted at Mogral Puthur Panchayath which proved very useful to the rural youth.



Demonstration of mechanization in paddy at Chemnad

Participation in Exhibition

Officials from CPCRI, Kasaragod have participated in ‘International Conference-cum-Exhibition’ at Hyderabad during 20th to 22nd November, 2011, ‘4th India International Food and Agri Expo 2011’ organized by the Foundation for Organic Agriculture and Rural Development at Kochi during 26-28 November 2011, ‘Swasraya Bharat - 2011’ organised by Swadeshi Science Movement at Kochi during 15-20 December 2011 and ‘Nileswar Mahotsav’ organised by JCI Nileswar at Nileswar during 24 – 31 December 2011.

CPCRI, RS, Kayamkulam participated in two exhibitions, one at SB College, Changanacherry during 14-18 October, 2011 and another organized by Gandhi Study Centre, Thodupuzha from 26-12-2011 to 01-01-2012.

CPCRI, RS, Vittal exhibition stall was arranged at Directorate of Cashew Research, Puttur in connection with Silver Jubilee Celebrations during 23-24 December 2011.

RC, Mohitnagar participated in “Krishi, Shilpo o Baniya Mela” at Bajkul, Purba Midnapur from 09-12-2011 to 15-12-2011. A stall with different live products and posters of different technologies were displayed for seven days.

RC, Kidu participated in the exhibition at Kukke Subramanya organized by Exhibition Committee of Subramanya temple during 29-11-2011 to 30-11-2011.

KVK, Kasaragod participated in “Kathir”-Malabar Karshikotsav, an exhibition organised by Parappa Block panchayat on 30-12-2011 to 1-1-2012.

KVK, Kayamkulam participated in the exhibition in connection with the ‘Onattukara Karshikothsavam’ jointly organized by NABARD, Bharanikkavu Block Panchayath, Farmers Club and State Bank of Travancore, Charummoodu during 20-22nd Dec. 2011 at Majestic Centre, Charummoodu. Large number of farmers, school students and industrialists visited the stall and got acquainted with the various technologies developed by the Institute.

Cyber extension programmes

Scientist-extension personnel-farmer interface programmes on coconut farming facilitated through videoconferencing were conducted by CPCRI, Kasaragod. One interface programme on 10-10-2011 in ‘Intercropping of tuber crops in coconut garden’, another on 18-11-2010 in which

scientists at CPCRI, Kasaragod, and extension personnel attending MTC at CTCRI, Thiruvananthapuram interacted. Field based videoconferencing to facilitate interface programme on ‘Scientific coconut farming for higher productivity and income’ in which farmers from Kannur District gathered at Kannur interacted with the scientists at CPCRI. Interface programme conducted on 19-12-2011 on ‘Intercropping of tuber crops in coconut garden’ in which scientists at CTCRI, Thiruvananthapuram and extension personnel attending training programme on ‘production technology for plantation crops’ interacted with CPCRI, Kasaragod.

Radio programmes

Dr. C. Thamban, participated in a radio interview programme on ‘Drip irrigation in coconut garden’, which was broadcast by AIR, Kannur on 26-12-2011.

Dr. Ravi Bhat delivered a radio talk in Kannada on Nutrient management in Arecanut, broadcast by AIR, Mangalore on 21-09-2011.

Dr. S. Leena delivered a talk on ‘Organic farming practices’ on 12-10-2011 and ‘Role of bio agents in organic farming’ on 16-10-2011.

Shri T. Sivakumar, participated in an interview - Karshakavedi in Malayalam, broadcast on 18-10-2011 by AIR Trivandrum.

ATIC activities

A total of 970 visitors including farmers, extension personnel and students made use of ATIC facilities at Kasaragod. Technology inputs and products including planting materials, farm products, farm literature and CD ROMs worth Rs. 1,12,643/- were sold through ATIC.

HUMAN RESOURCES DEVELOPMENT

Deputation Abroad

Dr. K. Subaharan, Sr. Scientist (Agri. Ento.), CPCRI has participated in the 59th Annual meeting of Entomology Society of America at Reno, Nevada during 13-16 November, 2011. He has presented a paper on 'Chemo-ecological approaches for red palm weevil management in India'

Trainings

Name and designation	Programme title	Place and date
Dr.V. Krishnakumar, Dr A. Joseph Rajkumar Sr. Scientists	Refresher course on Agricultural Research Management for newly recruited Senior/ Principal Scientists	NAARM, Hyderabad 03-23, November 2011
Dr. K. Muralidharan, Head, Social Sciences	MDP on Leadership Development	NAARM, Hyderabad 1-21, November 2011
Mrs. K. Nihad, Scientist (Hort.)	Short Course on "Nutrio-hormonal dynamics and photosynthetic efficiency in crop plans under abiotic stress"	TNAU, Coimbatore 9-18 November, 2011
Mr. Mukeshkumar, Scientist (Biochemistry)	Training course on "Current Techniques and Protocols in Plant Biochemistry and Molecular Biology"	Biochemistry Division, IARI, New Delhi 8-28 December, 2011
Shri Sandip Shil, Scientist	Winter School on "Data mining techniques and tools for knowledge discovery in agril. datasets	IASRI, New Delhi 3- 23 November, 2011
Shri. K. Manikantan, SMS	Cocoa production technology	CPCRI-RS, Vittal, 24-25 November, 2011
Shri H. Muralikrishna, Tech. Information Officer	Basic Hindi training programme on computer	CHTSI, Chennai 12-16 December, 2011

CELEBRATIONS

Christmas and New Year Eve

Christmas was celebrated by Dr. S. Ayyappan, DG, ICAR at CPCRI, RC, Kidu along with staff of the Centre.



Dr. S. Ayyappan, DG, ICAR joins hand as Dr. George V. Thomas Director, CPCRI cuts the cake at RC, Kidu to celebrate Christmas

New Year Eve was celebrated at CPCRI Kasaragod arranged by the CPCRI Staff

Recreation Club on 31-12-2011. The programme was presided over by Dr. K. Muralidharan, Head, Div. Social Sciences and Dr. R.V. Nair, who retired from official service as Head, Div. Crop Improvement on the same day was the chief guest. The programme began at 7 PM and there were variety entertainment programme on the occasion.

Hindi Fortnight

Hindi Fortnight was celebrated at CPCRI. Hindi Chetana Maas observed at CPCRI and its subsidiary Station and Centres. At RC, Kahikuchi Hindi Chetana Maas observed during 15-9-2011 to 15-10-2011. Various competitions held during the Hindi Chetana Mass and prizes were distributed to the winners.



Hindi Chetana maas training programme and distribution of prizes to winners in competitions at Kahikuchi

Communal Harmony Flag Day

Communal Harmony Campaign and Flag Day of the National Foundation for Communal Harmony was observed at CPCRI, Kasaragod during 19th to 25th November 2011. Dr. George V. Thomas, Director inaugurated the function. Janab Rishad Sullami, Katheeb, Salafi Masjid,

Kasaragod was the Chief Guest and delivered the message the need to maintain communal harmony among each religion. Brahmakumari Vidya, Ishwariya Viswavidyalaya, Kasaragod also spoke on the occasion. Various cultural programmes were also conducted during the meeting.

Vigilance Awareness Week

The Vigilance Awareness Week was observed at CPCRI, Kasaragod during 31st October to 5th November, 2011. Dr. R.



Shri Rishad Sullami delivering communal harmony speech

Chandramohan, Director-in-Charge administered the pledge in English and Shri K.P.S. Gautham, Sr. Admn. Officer administered the pledge in Hindi to the staff members. Dr. R. Dhanapal, Vigilance Officer while giving the welcome address explained about the “Participative Vigilance” which is the main focus of Vigilance Awareness Week this year. The Director-in-charge briefed the gathering on the importance of Vigilance, especially to a research organization. At Kayamkulam, on 31-10-2011, Dr. George, V. Thomas, Director, CPCRI, Kasaragod (Camp: CPCRI RS, Kayamkulam) administered the pledge in English and called upon each and everyone to be sincere and loyal to the duties assigned to them. Smt. Sreelatha, Technical Officer (Hindi Translator) administered the pledge in Hindi. Shri G.V. Nair, Asstt. Admn. Officer has



Shri K.P.S. Gautham, Senior Administrative Officer administering the pledge in Hindi

delivered a brief speech on the relevance of observing vigilance awareness week in government offices. At Vittal, Dr. D. Balasimha, Head I/c administered the pledge to all officers and staff of the station on 31-10-2011. The vigilance awareness week was observed at RC, Kidu during 24-10-2011 to 31-10-2011. The pledge was taken by all the staff of the centre on 24-10-2011.

IMC MEETING

The first IMC meeting for the year 2011-12 held on 10-10-2011 at 10.00 AM at CPCRI, Kasaragod. The following members were present

Dr. George V. Thomas, Director, CPCRI, Kasaragod	Chairman
Dr. T.R. Gopalakrishnan, Prof. & Director of Research, KAU, Vellanikkara	Member
Adv. Mamman Iype, Ex-MLA, Alleppey, Kerala	Member
Dr. L. Jose, HOD, Botany, St. Alberts College, Ernakulam	Member
Dr. R. Chandramohan HD(C.P), CPCRI, Kasaragod	Member
Dr. M. Gangadhar Nayak, Pr. Scientist (Hort), Directorate of Cashew, Puttur	Member
Dr. P. Kalidas, Pr. Scientist (Ento.), Directorate of Oil Palm, A.P.	Member
Shri K.P.S. Gautam, Sr. Administrative Officer, CPCRI, Kasaragod	Member Secretary

AWARD/ RECOGNITION

CPCRI RC, Kahikuchi has been recognised as a research Centre under the University of Guwahati and Dr. G.C. Acharya, Sr. Scientist (Hort.) has been recognised as a research guide for Ph.D. under the Dept. of Botany.

Dr. Jagadeesh Patil, Scientist (Nematology) was awarded Prof. D. J. Raski Academic merit award from the Nematological Society of India in recognition of his research contribution entitled “Effect of root-knot nematode, *Meloidogyne graminicola* on nutrient uptake and water use efficiency of rice plant and quality and vigour of rice seed” presented at National Nematology symposium on “Nematodes: a challenge under changing climate and agricultural practices” held at Thiruvananthapuram from 16- 18th November, 2011.

NEW PROJECT INITIATED

A new project on “Mixed cropping of noni (*Morinda citrifolia*) in coconut gardens under coastal agro-ecosystems” for three years from October, 2011. This project is funded by Coconut Development Board, Kochi with an outlay of Rs. 6.52 lakhs and the project leader is Dr. H.P. Maheswarappa, Principal Scientist (Agronomy), CPCRI, Kasaragod.

PERSONALIA

TRANSFER

Name of the staff / Designation	From (Place)	To (Place)	w.e.f.
Dr. Vinayaka Hedge, Sr. Scientist	CTCRI, Thiruvananthapuram	CPCRI, Kasaragod	01-12-2011
Dr. Kiran Pandurang Bhagat, Scientist	CPCRI, Kasaragod	National Instt. of Abiotic Stress Management, Baramati	23-12-2011
Dr. D.V. Patil, Sr. Scientist	CPCRI, RC, Kidu	National Instt. of Abiotic Stress Management, Baramati	31-10-2011
Sri S. Sreekumar, UDC	CPCRI, Kasaragod	CTCRI, Thiruvananthapuram	14-11-2011

PROMOTION

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri N. Lakshmana	LDC, CPCRI, RS, Vittal	UDC, CPCRI, RS, Vittal	21-11-2011
Shri O. Pundarika	LDC, CPCRI, RS, Vittal	UDC, CPCRI, RS, Vittal	21-11-2011
Shri T.J. Saji	LDC, CPCRI, RC, Kahikuchi	UDC, CPCRI, RC, Kahikuchi	24-11-2011

RETIREMENT

Name	Designation	Place	Superannuation on
Dr. R.V. Nair AHD	Crop Improvement CPCRI,	Kasaragod	31-12-2011
Shri A.C. Chandran	SSS (Record Keeper) CPCRI,	Kasaragod	31-12-2011



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

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