



# CPCRI

## News



Views and News on Advances in Coconut, Arecanut and Cocoa

Vol. 31, No. 2

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Coconut genetic resources collection from unexplored islands of lakshadweep...



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Chief Minister of Tripura visiting exhibition stall...



Transfer of technology to target clientele...

### Inauguration of coconut shell activated carbon plant

Coconut shell activated carbon plant was inaugurated at CPCRI, Kasaragod on 14-06-2012 by Dr. Bangali Baboo, National Director, National Agricultural Innovation Project (NAIP) in presence of Dr. K.V.A. Bavappa, former Director, CPCRI. Dr. George V. Thomas, Director switched on the inaugural run.

The community level activated carbon plant was commissioned under the NAIP project on "Value chain in coconut". Shell charcoal is an important product obtained from coconut shell, widely used as domestic and industrial fuel. It is also used by blacksmiths and goldsmiths and in laundries. Shell charcoal is also used to produce activated carbon. Activated carbon produced from coconut shell has certain specific advantages as it can adsorb certain molecules.

Traditionally, shell is carbonized by using pit method, drum method, destructive distillation etc., with emission of large quantity of smoke. But, in the present design of carbonization plant, charcoal is produced without smoke. The shell charcoal is further processed in to activated carbon in the rotary fluidized bed reactor.



*Dr. Bangali Baboo, Director, NAIP inaugurating activated carbon plant. Dr. KVA Bavappa, former Director, CPCRI, Dr. George V. Thomas, Director are seen besides*

### Visit of DDG (Hort.) to CPCRI, RS, Vittal

DDG (Hort.) visited CPCRI, RS, Vittal on 30<sup>th</sup> June 2012 and reviewed the ongoing research projects and gave suggestions to improve the ongoing works. He visited arecanut and cocoa nurseries and suggested to take up advanced studies. He also had a meeting with scientists of the Regional Station.



*Dr. H.P. Singh, DDG (Hort.) interacting with the scientists during field visit at CPCRI, RS, Vittal*

### Interface programme on coconut and arecanut cultivation

An Interface programme involving farmers, extension personnel and scientists was conducted at CPCRI, Kasaragod on 07-05-2012 by the Department of Agriculture, Govt. of Kerala part of a comprehensive scheme on pest and disease management in coconut and arecanut. Dr. ChandraMohan, Head, Crop Protection in his lead talk emphasized the importance of prophylactic measures to prevent the incidence of pests and diseases in coconut and arecanut. Scientists from CPCRI and KAU made presentations on specific topics, followed by a panel discussion.



## RESEARCH HIGHLIGHTS

### Exploration and collection of coconut germplasm from Agatti and its uninhabited satellite islands

Agatti and three uninhabited Islands, Bangaram, Tinnakkara and Parali in the Lakshdweep group of islands were explored and 14 accessions were collected, including three tall from Tinnakkara, four tall from Bangaram, two tall from Parali, two tall, two green dwarfs and one orange dwarf from Agatti. Diversity in collection ranged from big, angular to small, oval fruits and normal to very big inflorescence (>1m). The collected dwarfs had medium round green fruit, medium oval green or medium round orange fruits. Collections also include types with specific traits like retention of inflorescence, non-buckling/heavy inflorescences, edible tender husk (sweet husk).



Variation in fruit size and shape of Lakshadweep collections

### Genetic resources collection from Andamans

About 300 nuts were collected from selected palms of a high yielding, uniform population of Andaman Ordinary (ADOT) maintained at Kurmadera, South Andaman and sown in the nursery at CPCRI, Kasaragod for development of a compact block. The Kurmadera farm is said to be established with progenies of selected palms of Nicobar Tall planted during 1940s to 50s and the palms at this garden were the source for the original collection of Andaman Ordinary and Andaman Giant Tall accessions by CPCRI. These two were subsequently used in the coconut



## INSTITUTIONAL NEWS

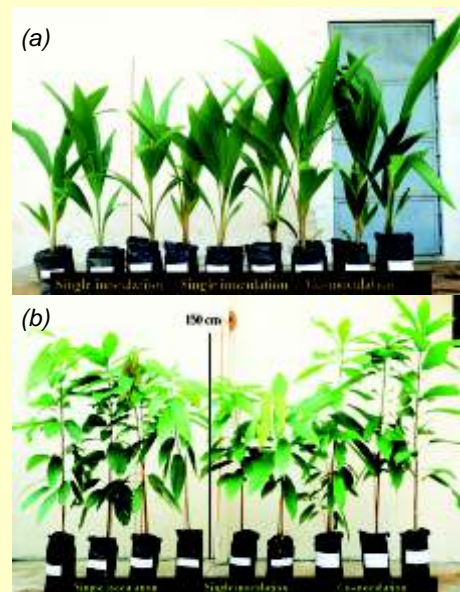
breeding programmes at CPCRI for varietal improvement. The Kurmadera farm is located in isolation from other coconut gardens and hence the seed nuts from the garden are reported to be popular among the coconut farmers of island and mainland for establishment of uniform high yielding coconut seed gardens.



Kurmadera coconut population

### Synergistic effect of co-inoculation of PGPRs on the growth of coconut and cocoa seedlings

The effect of co-inoculation of potent PGPRs on growth parameters of coconut (WCT) and cocoa (Forastero) seedlings was evaluated under field condition. Co-inoculation of *Bacillus megaterium* TSB 16 with *B. coagulans* RSB 14 had significant effect in the dry weight of coconut seedlings (30 % increase over *B. megaterium* TSB 16) when compared to its single inoculation. Dual inoculation of *B. subtilis* VEB 4 and *B. licheniformis* KGB 16 on cocoa seedlings recorded significant enhancement in total dry weight (28 % over *B. subtilis* VEB 4 and 14 % increase over *B. licheniformis* KGB 16) than individual inoculations. Combined treatments containing *Pseudomonas* spp. alone had no further stimulatory effect on the growth parameters in both coconut and cocoa seedlings.



Effect of co-inoculation of PGPRs on coconut (a) and cocoa (b) seedling growth

### Two new species of mealy bugs identified

Two species of mealy bugs viz., leaf mealy bug (*Pseudococcus cryptus*) and spadix mealybug, (*Dysmicoccus finitimus*) (Pseudococcidae : Hemiptera) were reported for the first time to colonize at moderate levels on the leaves and spadix of coconut, respectively. The species identity was confirmed from NBAII, Bengaluru. *P. cryptus* was reported from Colachel, Tamil Nadu and Kayamkulam, Kerala, whereas *D. finitimus* was noticed in Kayamkulam region.



Coconut spadix mealy bugs and leaf mealy bugs

## HUMAN RESOURCES DEVELOPMENT

### Awards

Accreditation certificates for the CPCRI nurseries at Kasaragod and for Vittal and Kidu have been received from National Horticulture Board, Gurgaon. These nurseries were earlier rated as 4-star grade.

Dr. George V. Thomas, Director, CPCRI has been conferred fellow of

Confederation of Horticultural Association of India during the 'Global conference on horticulture for food, nutrition and livelihood options' held during 28 to 31 May, 2012 at OUAT, Bhubaneswar.

Dr. Chandrika Mohan, Senior Scientist (Ag. Entomology) and Dr. A. Joseph Rajkumar, Senior Scientist (Ag. Entomology) were conferred the Fellows

of Association for Advancement of Pest Management in Horticultural Ecosystem (FAAPMHE), IIHR, Bengaluru in recognition of their contributions in the field of Plant Protection and Horticulture.

### PG Studies

Dr. B. Augustine Jerard, Senior Scientist (Hort.) has been awarded with PG Diploma in IPR from Anna University, Coimbatore.

### Trainings within India

| Name of personnel                              | Title of the programme   | Place & Duration                              |
|--|--|---|
| Mrs. Lekha G. and Mrs. Jissy George, SMSs, KVK | Management development programme for women in development sector | MANAGE, Hyderabad<br>25-06-2012 to 29-06-2012 |

## PUBLICATIONS

### Research paper

Anithakumari, P., Muralidharan, K., Kalavathi, S. and Remabai, S. 2012. Constraints in adoption of integrated management of root (wilt) disease affected coconut area- An analysis of Alleppey district. *J. Plantation Crops* **40**(1): 9-15.

Bhat Ravi and Sujatha, S. 2012. Influence of biomass partitioning and nutrient uptake on yield of arecanut (*Areca catechu* L.) grown on a laterite soil. *Comm. Soil Sci. & Plant Anal.* **43**(13): 1757-1767.

Manojkumar, T.S., Sreenarayan, V.V., Mohan, S., Kailappan, R. 2012. Effect of Controlled Atmosphere Storage on adults and immature stages of *Rhizopertha dominica* (Fab.). *J. Agril. Engg.* **49**(1): 28-35.

Manimekalai, R., Anoop Raj, P., Roshna, O.M., Anil Paul and George V. Thomas. 2011. Updated Version of PHYTOBDB, the First Data Warehousing and Mining Web Server for Phytoplasma Research. *Comm. Computer and Inform Sci.* **168** (4): 548-550.

Murali Gopal, Alka Gupta and George V. Thomas. 2012. Coconut leaf vermiwash as a component of organic farming for sustaining soil health and fertility. *CORD* **28**(1): 34-42.

Priya George, Alka Gupta, Murali Gopal, Litty Thomas and George V. Thomas.

2012. Screening and *in vitro* evaluation of phosphate solubilizing bacteria from rhizosphere and roots of coconut palms (*Cocos nucifera* L.) growing in different states of India. *J. Plantation Crops* **40**(1): 61-64.

Rajan, P. 2011. Transmission of coconut root (wilt) disease through plant hopper, *Proutista moesta* Westwood (Homoptera: Derbidae). *Pest Management in Horticultural Ecosystems* **17**(1): 1-5.

Rajan, P., Chandrika Mohan, Chalapathi Rao, N.B.V. and George V. Thomas. 2012. Scenario of coconut eriophyid mite infestation in Andhra Pradesh. *Indian Coconut Journal* **55**(2): 25-31.

Thomas, R. J., Nair, R.V., Mathews, C., Ajithkumar, R. and Nampoothiri, C. K. 2011. Studies on fruit set in coconut upon artificial pollination in various cross combinations. *Indian J. Hort.* **69**(1): 7-12.

### Papers presented in Conferences

Anil Kumar, N.C., Roshna, O.M., Manimekalai, R. and George V. Thomas. 2012. Isolation and comparative analysis of potc gene of ABC-transporter system between coconut RWD phytoplasma and SCGS phytoplasma. Abstracts In: National Symposium on Accelerating Biology 2012 conducted by C-DAC, Pune, Feb 15-17, 2012. pp. 66.

Anil Kumar, N.C., Ranjith, K., Gangaraj, K.P. and Manimekalai, R. 2012. Molecular docking of phytoplasma proteins with chemical analogues. Abstracts In: Global conference on 'Horticulture for Food, Nutrition and Livelihood Options. 28-31 May 2012, OUAT, Bhubaneswar, Odisha. pp. 94-95.

Jamshinath, T.P., Rajesh, M.K., Jomon, K., Jose, George V. Thomas. 2012. MAPS (Microsatellite Analysis and Prediction Software): A tool for detection of microsatellites in whole genome sequences. In: Proceedings "National Symposium on Bioinformatics-Challenges in the Post Genomics Era" held at University of Jammu, Jammu on 2<sup>nd</sup> February, 2012, pp. 58.

Jerard, B. A., Damodaranm, V., Niral, V., Samsudeen, K., Rajesh, M. K. and Sankaran, M. 2012. Conservation and utilization of "Thairu thengai" soft endosperm coconut accession from Andaman Islands. Abstracts In: Global Conference on Horticulture for Food, Nutrition and Livelihood Options, May 28-31, 2012, OUAT, Bhubaneswar, Odisha. pp. 63-64.

Jerard, B. A., Niral, V., Samsudeen, K., Nair, R.V. and George V. Thomas. 2012. Recent trends, improvements in conservation and utilization of coconut biodiversity in India. In: Abstracts on Technologies for Improving Productivity of Spices and Plantation Crops, CARL, Port Blair, 2012, pp 83-84.

- Manju, K.P., Arun, C., Naganeeswaran, S. and Manimekalai, R. 2012. Prediction of microRNAs and their targets in date palm whole genome. Abstracts *In: Global conference on 'Horticulture for Food, Nutrition and Livelihood Options*. 28-31 May 2012, OUAT, Bhubaneswar, Odisha. pp.96.
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- Naganeeswaran, S., Manju, K.P., Elain Apsara, S. and Manimekalai, R. 2012. Standalone EST Microsatellite Analysis Tool (SEMAT): For automated EST-SSR analysis in plants. Abstracts *In: Global Conference on Horticulture for Food, Nutrition and Livelihood Options*, May 28-31, OUAT, Bhubaneswar, Odisha. pp. 95.
- Rajesh, M.K., Preethi, P. and Jerard, B.A. 2012. Identification of RAPD markers for plant trait type in coconut. Abstracts *In: Global Conference on Horticulture for Food, Nutrition and Livelihood security*, 28<sup>th</sup> - May 2012, pp. 111.
- Samsudeen, K., Niral, V., Jerard, B. A., Mukesh Kumar, Sugatha, P. and Hebbar. K. B. 2012. Coconut inflorescence sap Varietal and seasonal influence on the quantity and quality of the sap. Abstracts *In: Global Conference on Horticulture for Food, Nutrition and Livelihood Options*, May 28-31, 2012, OUAT, Bhubaneswar, Odisha. pp. 61.
- Smita Nair, Soumya, V.P., Likitha, K.C. and Manimekalai, R. 2012. Development of real time PCR with dual labeled probe for detection of 16SrXI group phytoplasma associated with coconut root wilt disease in India. Abstracts *In: Global conference on 'Horticulture for Food, Nutrition and Livelihood Options*, 28-31 May 2012, OUAT, Bhubaneswar, Odisha. pp. 93-94.
- Popular articles**
- Anithakumari, P. 2012. A farmer who challenged root (wilt) disease of coconut Success story. *Kerala Karshakan* **57**(11): 56-57.
- Anithakumari, P. 2012. Coconut farmers and market. *Indian Naliker J.* **3**(6): 32-34
- Sivakumar, T. 2012. Success story of banana farming from Kadakkarappally. *Kerala Karshakan* **57**(12): 44-46.
- Sivakumar, T. 2012. Mango-fruit, Flowers and the Tree. *Krishiyankanam* **17**(1): pp. 24.
- Thomas, R.J., Shareefa, M. and Jacob, P.M. 2012 Kattuvezha baditha pradesangalil: Thenginthal thiranjedukkumbol *Karshakan* June 2012: 27-30 (In Malayalam).
- Extension folders**
- Leena, S., Subrahmanian, P. and Manojkumar, T. S. Guinea grass variety, CO(GG)3.
- Leena, S., Ravi, S. and T. S. Manojkumar. Cryoscopes for the detection of right time of AI in cows.

## TRANSFER OF TECHNOLOGY

### Training Programmes

A training programme on 'Coconut production technology' was conducted at CPCRI, Kasaragod on request from Assistant Director of Agriculture, Pollachi (North), Tamil Nadu during 26-28 June 2012.

Training on 'Arecanut and cocoa production technology' was organized<sup>at</sup> CPCRI, RS, Vittal on 10-05-2012 under ATMA interstate programme for 23 trainees of Vatakara block of Calicut district, Kerala. Another training on 'Arecanut and cocoa production technology' was organized during 28 - 29<sup>th</sup> July, 2012 at Vittal for 4 officers and 5 farmers of Coimbatore district, Tamil Nadu.

One on-campus training programme was organized by RC, Kahikuchi for 35

farmers from Dhemaji, Assam and Arunachal Pradesh.

An off-campus training programme was organized by CPCRI, RS, Kayamkulam for 62 stakeholders on 'Coconut cropping system based soil and water conservation technologies for integration in watershed development programme' at Edava grama panchayath, Thiruvananthapuram district on 23-05-2012. 'Group meeting and skill upgradation for farm level *Metarhizium* multiplication' was organized for the women group members of Edava grama panchayath on 30-06-2012.

One day training programme was organised by RC, Mohitnagar at Dalsingh Para, Kalchini block, Jalpaiguri on "Scientific cultivation of arecanut" on 30-05-2012. About 50 farmers

participated in this training programme.

### Interface programme

Research-Extension-Farmer interface programme on "Coconut and arecanut farming" was conducted at CPCRI, Kasaragod on 7th May 2012. About 120 farmers and extension personnel attend the programme.

A stake holders' interface meet on "Effective use of microirrigation technology" was held at Bangalam, Madikkai Grama Panchayath, in which, farmers, extension personnel, and dealers of drip irrigation equipments participated.

### Scientist-Extension-Farmer Interface at Minicoy

Scientist-Extension-Farmer Interface programme was jointly organized by CPCRI, Regional Station, Minicoy and Department of Agriculture, Union territory of Lakshadweep, in Minicoy and Kalpeni



Islands on 7<sup>th</sup> and 10<sup>th</sup> April 2012. Dr. V. Krishnakumar, Senior Scientist (Agronomy), CPCRI, Regional Station, Kayamkulam took classes on scientific management of coconut garden, value addition in coconut through production of virgin coconut oil, and the importance of vegetable gardening. It was decided to form small cluster of farmers interested in vegetable cultivation in the island with support from CPCRI and the Dept. of Agriculture. *Acerophagus papayae*, the parasitoid was released in the field against mealy bug infesting crops such as papaya, guava, breadfruit, sapota etc.



Dr. V. Krishna Kumar handling an interface session at Kalpeni

### Cyber extension

A Video conference on 'Scientific drip irrigation technologies for coconut' was organized on 03-05-2012 with 28 progressive farmers of Varkala block, scientists of CPCRI, Kasaragod, Assistant Director (Agri.) and extension officials. Another video conference on 'Water shed based soil and water conservation technology integration in coconut based system' for major stakeholders of water shed development in Edava was organized on 15-05-2012. Extension officials, farmers, scientists of CPCRI, water shed experts of NGOs and watershed committee members participated in the programme.

### Diagnostic visit

Dr. K. Subaharan, Sr. Scientist (Entomology) as member of the Central team to assess the impact of eriophyid mite and drought conditions on production of poor quality of milling copra in Andhra Pradesh, visited Vishakhapatnam, East and West Godavari districts from 02-04-2012 to 04-04-2012. The team observed that immature nuts are being used for copra making and the drying method was also improper. The farmers were advised to improve drying methods and CPCRI

expressed its willingness to the State Department for providing training on post harvest processing.

### Exhibitions

CPCRI, Kasaragod participated in the "Malabar Mango Fest 2012", exhibition at Padannakkad, Nileswar during 18-24 May 2012 organized by College of Agriculture, Padannakkad.

CPCRI, RS, Vittal had arranged exhibition stall at Horticultural Research Station, Ullal, Dakshina Kannada district in connection with Cashew Field Day on 10<sup>th</sup> February 2012.

CPCRI, RC, Kahikuchi arranged one exhibition each at Lembucheera, Tripura and OUAT, Bhubaneswar.



Hon'ble Chief Minister of Tripura, Shri Manik Sarkar visiting the stall at Lembucheera, Tripura



Farmers visiting the stall at OUAT, Bhubaneswar

CPCRI, RC, Mohitnagar participated in "Workshop cum Exhibition on Promotion of Horticulture Development of Uttarakhand" from 12-13th May, 2012 at Engineering College of Roorkee. Hon'ble Minister of State, (Agriculture), Govt. of India, Sri Harish Rawat inaugurated the Workshop. More than 150 farmers visited the exhibition.

### Extension services

A total of 401 farmers and students visited the CPCRI, Regional Station, Vittal and had exposure to various research and extension activities. Seedlings of arecanut and grafts of cocoa were supplied to the farmers.

Dr. Arun Kumar Sit, Senior Scientist (Hort.) participated on live phone-in programme on "How to increase the returns from plantation gardens" on 14-06-12 broadcast from AIR, Siliguri.

### Krishi Vigyan Kendra, Kasaragod

#### Trainings programmes

Training programmes on various topics like, value addition of cashew apple, value addition of coconut, fruits and vegetable processing, jackfruit processing, mushroom cultivation, ornamental fish culture, jackfruit harvesting, and IPM in organic cultivation of crops were conducted by KVK, Kasaragod.

| Training   | No. of Batches | Participants |       |       |
|------------|----------------|--------------|-------|-------|
|            |                | Men          | Women | Total |
| On-campus  | 1              | 10           | -     | 10    |
| Off-campus | 16             | 316          | 354   | 710   |
| Total      | 17             | 326          | 354   | 720   |

#### Frontline demonstrations

KVK, Kasaragod demonstrated the use of modern agricultural machineries like offset disc harrow and helical blade puddler in 10 acres of paddy fallow to prepare the field for cultivation. The helical blade puddler was demonstrated in the district for the first time by KVK, Kasaragod.

As a part of KVK's FLD four jackfruit harvesters were introduced among 4 women SHGs involved in value addition of jackfruit.

Demonstration on ornamental fish culture initiated among two groups at Mangalpady, management of red palm weevil in coconut initiated in 4 ha area belonging to 6 farmers in Ajanur, Chemnad and Chengala panchayaths, seed production in paddy with high yielding rice variety Pratyasa initiated in 6 ha of land belonging to 17 farmers of Manjeswar grama panchayath are the new FLDs.

#### On farm trials

An OFT on Management of Leaf roller in paddy using biocontrol agents was conducted in 5 paddy cluster committees in an area of 6 ha belonging to 21 farmers. *Bacillus thuringiensis* was the most effective followed by *Beauveria bassiana* and chitin enriched *Pseudomonas fluorescens* with 7%, 9.5% and 10.5% incidence respectively.

An On Farm Evaluation of salt tolerant rice varieties, Vyttila-6 and Ezhom -2 was conducted at Cheravathur grama panchayath. Vyttila-6 performed better with a grain yield of 4.8 t/ha and Ezhom-2 yielded 3.8 t/ha.

Short duration varieties of Black gram (var. COBG-6) and Green gram (var. COGG-6) are put to trial in paddy fallows to cope up with the non availability of irrigation water in rice based farming system. Organic cultivation of Bhindi using var. Salkeerthi and that of Yardlong bean using var. Jyothika is being tried in Chemnad, Kambar and Badiadka panchayaths.

#### Monthly interface programme

As a part of the NABARD-KVK Farmers' Monthly Interface Programme for the month of April, 2012, Shri. Avaran a veteran farmer from Malappuram introduced his microsprinkler irrigation system which he has named as "Mayilpeeli micro-sprinkler" owing to the shape of the sprinkling water similar to the spread out feathers of a peacock. He claims that this is superior to other devices in that the irrigation water is provided right at the root zone of the crops thus increasing the water use efficiency and reducing wastage of water. The method was very low cost and was well accepted



Demonstration of micro-sprinkler

by the fellow farmers.

#### Ex-trainees meet

An ex-trainees meet of the members of Friends of coconut tree, a collaborative programme of CDB and KVK, Kasaragod was organised on 8<sup>th</sup> of May, 2012. It was attended by 50 ex-trainees. In connection with the programme a study was conducted on the impact of the programme.

#### Plant Health Clinic

KVK, Kasaragod organised a Plant Health Diagnostic Camp at Kodom, Rajapuram in collaboration with District Co-operative Bank, Kasaragod. Dr. T. S. Manojkumar, Shri R. Sanalkumar and Shri K. Manikantan attended the clinic in which 60 farmers participated.

#### Other extension activities

Organized a Farmer-Scientist interface programme on Production and post harvest technology of banana and pine apple at College of Agriculture, Padannakad on 25-05-2012.

#### Krishni Vigyan Kendra, Alleppey

#### Training programmes

#### Ex-trainees meet of Friends of Coconut programme

KVK, Alleppey conducted 'Friends of Coconut' training programme sponsored by Coconut Development Board for 91 participants in 6 batches during the last year. A meeting of all the trainees under the programme was organized on 27<sup>th</sup> June 2012 in which 43 'friends' attended. Dr. P.M. Jacob, Head, CPCRI, Regional Station inaugurated the meet. Trainees shared their experiences and reiterated their commitment to serve the coconut farmers. Many trainees reported earnings of ` 300-750 per day from coconut harvesting and plant protection operations, in addition to their regular earning.

Organized training programmes and attended programmes as resource persons benefitting a total number of 945 farmers/rural youth during the period.

| Training            | No. of Batches | Participants |            |            |
|---------------------|----------------|--------------|------------|------------|
|                     |                | Men          | Women      | Total      |
| On-campus           | 12             | 162          | 118        | 280        |
| Off-campus          | 24             | 260          | 371        | 631        |
| Extension officials | 1              | 9            | 25         | 34         |
| <b>Total</b>        | <b>37</b>      | <b>431</b>   | <b>514</b> | <b>945</b> |

#### Harithavruthantham- SMS Service

A total of 21346 messages on 26 different topics like weather forecasting, training details, technology tips were delivered to various stakeholders during the period. The messages were sent both in English and Malayalam.

#### Frontline Demonstrations

Technology demonstrations viz., integrated duck and fish farming, integrated pest management in coconut, mushroom and spawn production, better dairy and poultry management, and value addition of rice and coconut are in progress at Muttar village of Kuttanad taluk under the NICRA project.

### COMMERCIALISATION OF TECHNOLOGY

Production of Virgin Coconut oil by cold process has been refined by CPCRI in collaboration with DFRL, Mysore for industrial and mechanised production so as to run a profitable enterprise. The technology has been transferred non-exclusively to M/s Kaayi Kompany, Arsikere, Karnataka represented by Ms. Kaavya Nag and partners for a period of three years.

### OTHER INFORMATION

#### New project sanctioned

Project on "Phytoplasma diseases of coconut and arecanut: Development of molecular diagnostics" under the National Fund for Basic, Strategic and Frontier Application Research in Agriculture of Indian Council of Agricultural Research was sanctioned with an outlay of

Rs. 64.988 lakhs to Dr. R. Manimekalai, Sr. Scientist (Biotech.), CPCRI Kasaragod for three years from 1-6-2012 to 31-5-2015.

#### Infrastructure development

A wind tunnel has been installed in Entomology section at CPCRI, Kasaragod. This wind tunnel will be used

to assess the behavioral response of the palm pests viz., red palm weevil, *Rhychoporos ferrugineus* and rhinoceros beetle, *Orcytes rhinoceros* to their respective pheromones and kairamones. This facility could be used to assess the behavioral response of coleopterans, hemipterans, hymenopterans and lepidopterans.

## PARTICIPATION IN MEETINGS/ SYMPOSIUM/ SEMINAR

| Name and designation   | Title of the programme   | Place and date                                      |
|--|--|---|
| Dr. K S Ananda, Principal Scientist and Dr. V. Niral, Senior Scientist   | All India Plant Breeders Meet  | NBPGR, New Delhi<br>03-05-2012 to 04-05-2012        |
| Dr A. Joseph Rajkumar, Sr. Scientist   | Brainstorming session on Roadmap for entomopathogenic nematodes research and utilization in IPM                        | NBAII, Bengaluru<br>20-04-2012                      |
|  | IV National Symposium on Plant protection in horticultural crops - Emerging challenges and sustainable pest management | IIHR, Bengaluru<br>25-04-2012                       |
| Dr. K. Subaharan, Sr. Scientist  | National workshop on nuclear technologies for human welfare  | Mangalore University<br>28-04-2012                  |
|  | Workshop on Plant clinic for farming community   | Vivekanada College, Puttur<br>30-04-2012            |
| Dr. Arun Kumar Sit, Senior Scientist   | Workshop cum Exhibition on Promotion of Horticulture Development of Uttarakhand  | Roorkee<br>12-05-2012 to 13-05-2012                 |
| Dr. K.S. Ananda, Principal Scientist   | PPV & FRA - Plant genomic savior community award function & DUS review meeting   | NASC Complex, New Delhi<br>21-05-2012 to 22-05-2012 |
| Dr. George V. Thomas, Director, Dr. P. Subramanian, Dr. B. Augustine Jerard, Dr. G.C. Acharya, Dr. K. Samsudeen, Dr. M.K. Rajesh, and R. Manimekalai, Sr. Scientists | Global conference on horticulture for food, nutrition and livelihood options   | OUAT, Bhubaneswar<br>28-05-2012 to 31-05-2012       |
| Dr Chandrika Mohan Sr. Scientist   | XX AICRP Group Meeting on Biocontrol of crop pests and weeds   | ANGRAU, Hyderabad<br>21-05-2012 to 23-05-2012       |
| Dr V Krishnakumar, Dr. Chandrika Mohan, and Dr. A. Josephraj Kumar, Sr. Scientists, Dr. Merin Babu, Scientist  | Brainstorming session on Plant Protection of Spices and Plantation Crops   | Spices Board, Kochi<br>20-06-2012                   |

## FORTHCOMING EVENTS

### World Coconut Day

The World Coconut Day will be celebrated on 02-09-2012 at CPCRI, Kasaragod with Painting Competition for school children, competition for coconut climbers trained under FOCT programme and interface programmes at Kasaragod and Kayamkulam. An essay competition for undergraduate students of Agriculture/ Horticulture will be conducted on 22-08-2012. Topic for essay is "Inclusive growth and sustainable development of Indian coconut sector".

### Swadeshi Science Congress

CPCRI is hosting the 22<sup>nd</sup> Swadeshi Science Congress 2012 with Swadeshi Science Movement Kerala (SSMK) at Kasaragod during 6-8 November 2012. Focal theme of the Congress is 'Ecosystem Services through Plantation Crops'. Besides papers on the focal theme, 22<sup>nd</sup> SSC will have presentations on primary research findings in the areas such as mathematics, ocean technology and fisheries sciences, life sciences (biotechnology, microbiology, botany

and zoology), environmental sciences, agriculture, animal and aquatic sciences, health sciences, physical sciences (IT, engineering, physics and chemistry) and traditional sciences.

Last date for submission of abstracts is 14<sup>th</sup> August 2012.

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## PERSONALIA

### APPOINTMENT

| Name of the official    | Designation                            | Location              | w.e.f.     |
|-------------------------|--|-----------------------|------------|
| Ms. Arathy Balakrishnan | Programme Assistant (T-4, Agri. Extn.) | KVK, Alleppey         | 02-04-2012 |
| Mrs. Surekha            | Scientist (Agron.)                     | CPCRI, Kasaragod      | 02-05-2012 |
| Dr. Anitha Karun        | Head, Div. Crop Improvement            | CPCRI, Kasaragod      | 17-05-2012 |
| Dr. R. Velayudhan Nair  | Emeritus Scientist                     | CPCRI, RS, Kayamkulam | 18-06-2012 |



### TRANSFER

| Name of the staff / Designation                   | From (Place)          | To (Place)                                    | w.e.f.     |
|---|-----------------------|---|------------|
| Shri K.P.S. Gautam, Senior Administrative Officer | CPCRI, Kasaragod      | IASRI, New Delhi                              | 10-04-2012 |
| Shri T. Dayanandan Unnithan, Driver, T-3          | CAZRI, RRS, Jaisalmer | CPCRI, RS, Kayamkulam                         | 21-05-2012 |
| Dr. R. Dhanapal, Head, Div. Crop Production       | CPCRI, Kasaragod      | Principal Scientist (Agron.), SBI, Coimbatore | 18-06-2012 |
| Smt. Prema Pillai, Assistant                      | CPCRI, Kasaragod      | CPCRI, RS, Kayamkulam                         | 18-06-2012 |
| Shri Pradeepkumar Vasu, Assistant                 | CPCRI, RS, Kayamkulam | CPCRI, Kasaragod                              | 20-06-2012 |
| Mrs. C. Radhika, Scientist (Agri. Economics)      | CPCRI, Kasaragod      | DSR, Mau, U.P.                                | 29-06-2012 |
| Dr. Jagadeesh Patil, Scientist (Nematology)       | CPCRI, Kasaragod      | NBAII, Bangalore                              | 30-06-2012 |

### PROMOTION

| Name of the staff                   | From (Designation)                             | To (Designation)                                   | w.e.f.     |
|-------------------------------------|--|--|------------|
| Shri M. Manamohan                   | Mechanic cum Pump Operator, T-4                | Technical Officer (T-5) CPCRI, RC, Kidu            | 21-06-2010 |
| Shri Adolphene Francis Mascaranahas | Electrician, T-3 CPCRI, RS, Vittal             | Electrician, T-4 CPCRI, RS, Vittal                 | 02-07-2010 |
| Shri Avrajyothi Ghosh               | Technical Officer (T-5), CPCRI, RC, Mohitnagar | Technical Officer (T-6), CPCRI, RC, Mohitnagar     | 24-11-2010 |
| Dr. C.G. Narayanan Namboothiri      | Technical Officer (T-5), CPCRI, RS, Kayamkulam | Technical Officer (T-6), CPCRI, RS, Kayamkulam     | 27-03-2011 |
| Shri S. Manohara                    | Driver, T-3, CPCRI, Kasaragod                  | Driver, T-4 CPCRI, Kasaragod                       | 29-06-2011 |
| Shri K. Venkatesh                   | Personal Assistant CPCRI, RS, Vittal           | Private Secretary CPCRI, RS, Vittal                | 02-04-2012 |
| Shri K.S. Ramakrishna               | Assistant CPCRI, RC, Kidu                      | Assistant Administrative Officer, CPCRI, Kasaragod | 14-06-2012 |
| Shri V. Lakshminarayana             | SSS, CPCRI, RS, Vittal                         | LDC, CPCRI, RS, Vittal                             | 18-06-2012 |

### RETIREMENT

| Name                    | Designation             | Place                 | Superannuation on |
|-------------------------|-------------------------|-----------------------|-------------------|
| Shri P. Rajan           | Principal Scientist     | CPCRI, RS, Kayamkulam | 31-05-2012        |
| Shri K.K. Mohammed      | Technical Officer (T-5) | CPCRI, RS, Minicoy    | 31-05-2012        |
| Shri Joseph Sebastian   | Technical Officer (T-5) | CPCRI, Kasaragod      | 31-05-2012        |
| Shri A. Bhaskaran       | Technical Officer (T-5) | CPCRI, Kasaragod      | 31-05-2012        |
| Shri P.K. Shai          | AAO                     | CPCRI, Kasaragod      | 31-05-2012        |
| Shri K.P. Kumaran       | Driver T-1-3            | CPCRI, Kasaragod      | 31-05-2012        |
| Shri C.H. Sulaiman      | SSS                     | CPCRI, Kasaragod      | 31-05-2012        |
| Shri P.T. Govindan Nair | SSS                     | CPCRI, Kasaragod      | 31-05-2012        |
| Shri K.M. Bhat          | Technical Officer       | CPCRI, RS, Vittal     | 30-06-2012        |
| Shri T.K. Mohanchandra  | SSS                     | CPCRI, RS, Vittal     | 30-06-2012        |
| Smt. A. Madhavi         | SSS                     | CPCRI, Kasaragod      | 30-06-2012        |
| Shri K. Prasad          | SSS                     | CPCRI, RS, Kayamkulam | 30-06-2012        |

### OBITUARY

Shri P. Ambu, SSS, CPCRI, Kasaragod, who was ailing for a few weeks, passed away on 20-06-2012. We pray to the Almighty that the departed soul may rest in peace.



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