

RESEARCH HIGHLIGHTS

Coconut diversity in Minicoy

A survey of the natural coconut populations undertaken in the Minicoy Island of Lakshadweep, revealed wide diversity and sporadic occurrence of Mini Micro palms (Fig. 1). Among the 2672 coconut trees observed, 81.47%, 3.26%, 1.05%, 14% and 0.22% were of Laccadive Ordinary, Laccadive Micro, Laccadive Mini Micro, Laccadive Giant types and male palms respectively.

Import of cocoa clones

CPCRI has imported 23 clones from the Reading University, UK, comprising the material originated from Trinidad, New Guinea, USA and France. Two hybrids were also imported from Malaysian Cocoa Board making the total cocoa germplasm collections 210.

Antagonistic activity of coconut PGPR

Nine endophytic bacilli from coconut roots and 12 coconut rhizospheric bacilli were found to inhibit both *Thielaviopsis paradoxa* and *Ganoderma* sp. Higher percentage of bacilli showed antagonism against both the fungal pathogens than fluorescent pseudomonads. The PGPR-mediated antagonism was found to be medium-dependent.

Pest occurrence in Minicoy

A preliminary survey on insect pests of coconut in Minicoy revealed that spiralling whitefly, *Aleurodicus dispersus* Russell (Aleyrodidae : Hemiptera) and erect winged plant hopper, *Proutista moesta* Westwood (Derbidae : Hemiptera), a vector of root (wilt) disease, were present in significantly higher population. All stages of spiralling whitefly including the typical spiralling nature of egg laying was observed on coconut leaflets. All coconut varieties in the island were found to be susceptible for its



Fig. 1. Laccadive Mini Micro Palm



Fig. 2. Spiralling white fly on coconut leaflet

damage. In case of erect winged plant hopper, adults were found to be feeding on the under surface of coconut leaflets more frequently and higher occurrence was

observed on COD genotypes. Nearly 34 to 184 adult plant hoppers were recorded from a single frond of COD. Rat damage was found to be 33-44% under island condition.

Unprecedented rain fall during March, 2008

Kerala experienced unprecedented rainfall during March 2008. At Kasaragod, 332 mm rainfall was received in mere 5 days period. The total rainfall recorded at CPCRI, Regional station, Kayamkulam during March, 2008 was 191.3 mm from 10 rainy

days. An analysis of rainfall data from 1984 to 2008 indicates that the previous highest quantity of rainfall received at Kayamkulam was in March 1988 with a total of 110.1 mm in 3 rainy days.

Externally Aided Projects

The following externally aided projects were sanctioned during the period amounting to Rs. 488.77 lakhs.

Title of project	Principal Investigator	Funding Agency	Period	Outlay (Rs. Lakhs)
Value chain in coconut at CPCRI Kasaragod (lead centre); KFRI, Peechi, Thrissur and DFRL, Mysore (sub centres).	Er. K. Madhavan	National Agricultural Innovation Project, New Delhi	1-4-2008 to 30-6-2012	449.00
Molecular detection and variability of phytoplasmas associated with coconut (<i>Cocos nucifera</i> L.) and arecanut (<i>Areca catechu</i> L.)	Dr. (Mrs.) Manimekalai	Indian National Science Academy, New Delhi	1-4-2008 to 31-3-2011	1.50
Integrated management of bud rot disease of coconut in endemic areas	Dr. R. Chandramohanam	Coconut Development Board, Kochi	4-4-2008 to 3-4-2011	18.27
Farmers participatory action research programme (FPARP) on soil and water conservation and water harvesting in the West Coast region of Kerala	Dr. C. Thamban	Central Water Commission, New Delhi	1-1-2008 to 31-12-2009	20.00

MEETINGS HELD

Deputy Director General (Hort.) visits CPCRI

Dr. H.P. Singh, DDG (Hort.), ICAR, New Delhi visited the Institute during 17-18th Feb. 2008. A meeting of the scientists of CPCRI was held on 17-2-08 under the Chairmanship of DDG (Hort.) Dr. George V. Thomas, Director, CPCRI made a

presentation on the research activities and achievements. Dr. H.P. Singh, DDG (Hort.), has critically reviewed the work and offered valuable suggestions for improvement of research. On 18-2-2008, Dr. H.P. Singh visited laboratories and field experimental plots and interacted with the scientists.



Fig. 3. & 4. Dr. H.P. Singh, DDG (H.) during field/ lab. visit at CPCRI, Kasaragod

Brainstorming session

Brain Storming Session on 'Adoption of technologies and research gaps in coconut, arecanut and cocoa' was held at CPCRI, Kasaragod under the Chairmanship of Dr. H.P. Singh, DDG (Hort.), ICAR, New Delhi. Dr. P. Rethinam, Chairman, Research Advisory Committee (RAC) of CPCRI and other RAC members attended the Brain Storming meeting along with representatives of various development and extension agencies. Director, CPCRI, welcomed the gathering. Mr. M. Thomas Mathew, Chief Coconut Development Officer, Coconut Development Board, Dr. Venkatesh N. Hubballi, Director, Directorate of Cashew and Cocoa Development, Mr. V. Suresh, Deputy Director of Agriculture, Dept. of Agri., Kerala, Dr. C.G. Nagaraju, Deputy Director of Horticulture, Dept. of Hort., Karnataka, and Mr. S.R. Selvaraj, Deputy Director of Agriculture, Dept. of Agri., Tamil Nadu and Mr. Sundara Ramaraju, Member, RAC made presentations on the status of technology adoption in coconut, arecanut and cocoa and expectations of farming community from the research front. Dr. H.P. Singh, DDG (Hort.) also released publications such as 'CPCRI Research Highlights 2007-08', 'Calendar for Cocoa', 'Integrated Nutrient Management in Coconut Based Cropping System' and 'Arecanut Descriptor' during the occasion. The Brain Storming Session discussed in detail about strengthening arrangements for production and distribution of quality planting material in coconut, arecanut and cocoa, strengthening research on product diversification, large scale field demonstration of technologies for enhancing income of farmers and strengthening farm mechanization.



Fig. 5. Dr. H.P. Singh, D.D.G. (H.) releasing an extension booklet Calendar for Cocoa

Group meeting on phytoplasma diseases

A Group Meeting on phytoplasma diseases of coconut and arecanut was held at CPCRI Regional Station, Kayamkulam on 28-1-2008 under the Chairmanship of Dr. J.J. Solomon, Principal Scientist (Retd.), CPCRI. The meeting was presided over by Dr. George V. Thomas, Director, CPCRI, Kasaragod. Dr. Mohan Kumar, Director, Research & Development (Biotechnology), SCMS, Kochi has actively participated in the discussion as an expert in the field of study. The outcome of the meeting is that the work on molecular detection and confirmation of the causal agent of coconut (root) wilt and YLD has to be intensified. Frequent interaction is to be established with scientists of the working group so as to find out solution to the existing diseases.

Research Advisory Committee (RAC) Meeting

The Research Advisory Committee meeting was held at CPCRI, Kasaragod on 19th February 2008 under the Chairmanship of Dr. P. Rethinam. The Chairman and members of RAC recommended the following for follow up action :

1. Large vacancies in scientist's cadre is a major constraint in the functioning of Institute. The 44 vacant posts of scientists are to be filled on priority to address the research programmes in thrust areas.
2. CPCRI technologies may be demonstrated in the neighbourhood farmer's plots for better visibility and adoption of the technologies. Kayamkulam Regional Station may demonstrate the root (wilt) management in farmer's fields around the station.
3. Committee felt the need for international exposure for scientists to understand the latest technologies and international requirements in coconut research and development. Scientists may be deputed for international trainings, seminars and workshops.
4. Internationally the coconut is becoming a food and drink crop shifting from its earlier status as an oil crop. The research programmes may address the changing scenario.

5. Number of research projects may be reduced and prioritized for better utilization of resources.

The specific recommendations of RAC on individual projects are incorporated in the technical programme 2008-09.



Fig. 6. Dr. P. Rethinam chairing the RAC meeting



Fig. 7. RAC members during field visit at CPCRI, Kasaragod

Institute Research Committee (IRC) Meeting

The 36th Annual Institute Research Committee meeting was held at Kasaragod from 20th to 23rd February, 2008. In his opening remarks, Dr. George V. Thomas, Director, CPCRI highlighted the salient research findings of the Institute during 2007-08 and other important achievements in the areas of infrastructure, human resource development, budget position etc.

The Institute has 102 research projects under 9 mega projects, out of which one project is financed by international agency (IFAD) and twenty projects are funded by agencies within the country. The progress of research in all the Institute projects and externally funded projects were presented by the respective Project Leaders and future programmes

were formulated. During the meeting, 8 new projects were presented and approved and 13 projects were closed. The Director guided the deliberations and provided guidelines in the formulation of technical programme.



Fig. 8. Dr. V. S. Korikanthimath, Director, ICAR Research Complex for Goa, chairing plenary session of IRC meeting

The Plenary Session of IRC meeting was held on 23rd February 2008 under the Chairmanship of Dr. V. S. Korikanthimath, Director, ICAR Research Complex for Goa, Ela, Old Goa. The Chairman offered the following suggestions, on the presenttaions of mega project leaders.

1. The newly released varieties/hybrids may be made available for evaluation to other Institutes working on coconut,
2. Specific varieties for tendernut purpose may be identified and recommended,
3. While reconsidering intercropping of medicinal/ aromatic crops, marketing problems should be considered and buy back arrangement should be ensured,
4. Production of VCO should be taken up in a big way, to increase income of coconut farmers,
5. Climate change – Research programme in collaboration with Ministry of Environment may be considered involving farmers to work on measures to overcome natural calamities,
6. To overcome the difficulty in getting experienced climbers, different plucking devices should be developed in addition to development of dwarf varieties,
7. To sustain the interest and profitability of small farmers, work to increase production/

productivity per unit area should be undertaken, in addition to identifying different avenues for income generation,

8. Value addition should be given emphasis in order to diversify production in addition to copra in the case of coconut,
9. Technologies developed at the Institute for value addition may be patented and
10. The farmers may be encouraged to take up agro-eco tourism for domestic/ international tourists with the help of linkages with tour operators.

Golden Jubilee Celebrations and Kisan Mela at RC, Mohitnagar

CPCRI, Research Centre, Mohitnagar, West Bengal celebrated Golden Jubilee and organized a Kisan Mela on 14-3-2008 to mark the occasion. The programme included farmer-scientist interface, exhibition, field visit, honouring of best arecanut farmers and scientists who served this Centre at different periods and release of publications. Dr. H.P. Singh, Deputy Director General (Hort.), ICAR, New Delhi chaired the valedictory function. Smt. Minati Sen, Hon'ble Member of Parliament, Jalpaiguri was the Chief Guest for the function. Dr. T.P. Trivedi, Director (DIPA) and ADG (ARIS) ICAR, New Delhi, Dr A.K. Singha Roy, Vice-Chancellor, Uttara Banga Krishi Viswa Vidyalaya were the Guests of Honour in the function. Dr. George V. Thomas, Director, CPCRI delivered the welcome address. Dr. M. Kochu Babu, Director of NRC on Oil Palm, Pedavegi, Andhra Pradesh, Dr. M.G. Bhat, Director, NRC for Cashew, Puttur, Karnataka and Dr. R.P. Medhi,



Fig. 9. DDG releasing Souvenir during golden jubilee celebration and Kisan Mela programme at RC, Mohitnagar

Director, NRC for Orchids, Pakyong, Sikkim and other dignitaries from state and central government organizations graced the occasion. Mr. Nagen Barman, the best farmer practicing arecanut based cropping system and Mr. Binoy Kumar Saha, the best arecanut farmer practicing scientific management practices were honoured in the function. Publications such as Golden Jubilee Souvenir, Arecanut based Intercropping System, About CPCRI, Research Centre Mohitnagar in English, Hindi and Bengali were released to mark the occasion. About 400 farmers participated in the Kisan Mela. The meeting came to an end with a vote of thanks by Dr. Gobinda Ch Acharya, SIC of the centre.

Committees on *Phytophthora* diseases

1. A team was constituted to study the effect of fruit rot of arecanut (Koleroga/ mahali) under the Chairmanship of Dr. M.L. Chaudhary, Horticulture Commissioner, GOI. Dr. W.R. Reddy, Jt. Secy. Plant Protection, GOI; Astd. Director General (Hort.), ICAR, New Delhi, Dr. D. Balasimha, Head, CPCRI, RS, Vittal and Dr. R. Chandramohan, Actg. Head, Div. Plant Protection, CPCRI, Sri. Rama Krishnappa, Director (Horticulture), Mission Director, SHM, Govt. of Karnataka and Dr. T. Tamil Selvan, Director, Directorate of Arecanut and Spices Development, Calicut were the members of the team. Recently, the study team has submitted its report to Govt. of India.
2. To undertake survey of areas affected by the bud rot disease of coconut in Kozhikode District, a committee has been constituted by DDG (Hort.), ICAR. The committee is headed by Dr. R. Chandramohan, Actg. Head, Div. Plant Protection as Chairman, Dr. Koshy Abraham, Head, Dept. Plant Pathology, KAU, Vellanikkara, Mr. M. Thomas Mathew, CCDO, CDB, Kochi and Mr. Vikraman Nair, Deputy Director, Dept. of Agriculture, Govt. of Kerala were members. The committee has undertaken survey of the affected areas recently and suggested remedial measures with action plan, which needs to be implemented by the State Dept. of Agriculture.

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HUMAN RESOURCES DEVELOPMENT

Deputations abroad

Dr. K. Subaharan, Scientist (Sr. Scale), (Agri. Entomology) has been awarded with Biotechnology Overseas Associateship 2006-2007 to work with Prof. Bill Hansson, Director, Dept. Evolutionary Neuroethology, Max Plank Institute for Chemical Ecology, Jena, Germany for one year.

Dr. R. Manimekalai, Scientist (Sr. Scale), (Agri. Biotechnology) has completed her overseas young scientist associateship in Japan for one year in January 2008.

Dr. Murali Gopal, Senior Scientist (Microbiology) completed his 12 months Post Doctoral Rothamsted International Fellowship programme at Rothamsted Research, UK in March 2008. He has completed studies on "Evaluating the effect of vermicomposts

produced from palm based litters on soil microbial biomass and microbial diversity as biological indicators of soil fertility" under the guidance of Prof. Philip C. Brookes of Agriculture and Environment Division, Rothamsted Research, UK.

Training attended

Dr. H.P. Maheswarappa, Senior Scientist, attended training programme on "Scientific Project Formulation, Implementation and Evaluation' at Administrative Staff College of India (ASCI), Hyderabad during 17-3-08 to 28-3-08.

Mr. H. Muralikrishna, Technical Information Officer, attended a training programme on "Patents (IPR) – for IP Officials, Attorneys and Lawyers" at National Institute of Intellectual Property Management, Nagpur during 10-3-2008 to 14-3-2008.

Ph. D.

Sri C. Jayabose, Scientist, has been awarded Ph. D. for his thesis entitled “Performance evaluation of coconut hybrids and parents through morphometric, molecular marker and mitochondrial enzyme activity” under the guidance of Dr. S. Ganesh, Reader in Horticulture from the Gandhigram Rural University, Tamil Nadu.

Recognitions

Dr. R. Chandramohan, Actg. Head of the Division, Crop Protection (Plant Pathology), Dr. C. Palaniswami, Sr. Scientist (Soil Science), Dr. (Mrs.) Anitha Karun, Sr. Scientist (Hort.), Dr. V. Arunachalam, Sr. Scientist (Hort.) and Dr. M. Gunasekaran, Scientist (SG) (Plant Pathology) have been recognized as guides for Ph.D. programmes under Kannur University.

TRANSFER OF TECHNOLOGY

KASARAGOD

a. Participation in Workshops/ Interface programmes

- Dr. C. Thamban, Sr. Scientist (Agrl. Extension) participated in the brainstorming session on ‘Developing a comprehensive plan for agricultural development’ organized at IIM Kozhikode on 10-01-2008, District level Research-Extension Interface programme at Kannur on 27-2-2008 and District level Research-Extension Interface programme at Kozhikode on 13-3-2008 were organized by the State Department of Agriculture.

b. Interface Programme

An Interface Programme on ‘Statistical Methods for Social Sciences Research’ was organized on 31.1.2008 at CPCRI Kasaragod in connection with the function to honour Mr. K. Vijayakumar. Dr. S. S. Magar former Vice Chancellor, BSKKV inaugurated the programme and delivered a lecture on “Perspective on Agricultural Policy Research”. Dr. M.G. Bhat, Director NRCC was the chief guest in the valedictory function and



Fig. 10. Interface programme on Statistical methods for social science research

presented memento to Mr. K. Vijayakumar. Dr. George V. Thomas, Director, CPCRI presided over the inaugural and valedictory sessions.



Fig. 11. Dr. Magar inaugurating interface programme on Policy perspectives in plantation crops

c. Training programme for extension personnel

The training programme on ‘Horticulture crops for multiple cropping in coconut garden-Integrating innovations and focusing on stakeholder participation’ sponsored by State Horticulture Mission, Kerala was organized at CPCRI Kasaragod during 1-2-08 to 7-2-08. In the training selected officers of Department of Agriculture from Kozhikode, Wayanad and Kasaragod districts attended. The training programme was inaugurated by Mr. B.J. Jayakumar, Manager, SHM, Kerala.



Fig. 12. Participants of training programme interacting with scientists of IIHR through video conferencing

d. Off-campus training programme for farmers

An off-campus training programme on 'Integrated management of bud rot disease of coconut' was organized in collaboration with Department of Agriculture at Chittarikkal on 17-03-2008.

e. Special training programmes

- i) Special training programme as part of decentralized planning project implemented by District Panchayat, Kasaragod on 'Production of vermicompost' in five batches for members of Women SHGs from Manjeswar and Kasaragod blocks of Kasaragod district was organized on 15-3-08, 17-3-08, 19-3-08, 22-3-08 and 27-3-08. A total of 215 women SHG members were trained under this programme.
- ii) A special training programme on 'Preparation of Coconut Chips' was organized on 10-3-2008 for selected entrepreneurs from Kollam, Pathanamthitta, Malappuram, Kozhikode, Mahe, Kannur and Kasaragod.
- (iii) The Institute has participated in the 'International Horti Expo-2008' at Pragati Maidan, New Delhi during 31-1-2008 to 2-2-2008.



Fig. 13. Shri Haroon Yusuf, Hon'ble Min. of Transport, Food & Civil Supplies Dept., Govt. of Delhi visited CPCRI pavilion at Pragati Maidan, New Delhi

f. ATIC activities

Technology inputs and products including planting materials, farm products, farm literature and CD ROMs worth Rs 1,11,174/- were sold through ATIC. 2695 visitors including farmers, extension personnel and students made use of ATIC facilities during the quarter.

Television programmes

Dr. C. Thamban and Dr A.C. Mathew, Sr. Scientists, participated in the face to face programme with the farmers on 'Scientific Water Management' organized at Kozhikode by CWRDM and Doordarshan Kendra on 18-03-2008 which was telecast by Doordarshan Kendra, Thiruvananthapuram on 26-3-08.

Radio programmes

a. Radio talk

Dr. C. Thamban, Sr. Scientist presented a talk on 'Improved varieties and nursery practices of arecanut' which was broadcast by All India Radio, Kannur on 23-01-2008.

b. Phone-in programme

Dr. C. Thamban, Sr. Scientist participated in the Phone-in- programme broadcast by All India Radio, Kannur as per the following details.

- i. Integrated nutrient management in coconut on 16-1-08
- ii. Bunch buckling in coconut on 14-2-08
- iii. Raising quality seedlings in arecanut on 28-2-2008
- iv. Dwarf coconut varieties on 13-3-08

KAYAMKULAM

Training Programmes

Twenty two Agricultural Officers from Alappuzha district were trained on 'Elite seedling production for root (wilt) disease affected areas, on 29-01-08.

Twenty farmers from Srivilliputtur along with Deputy Director of Agriculture were oriented to the latest coconut technologies on 11-03-08.

Twenty farmers from Virudhunagar along with Agricultural Officer were oriented to the latest coconut technologies on 25-03-08.

Eight batches of students and teachers numbering 1262 were acquainted with the research going on at CPCRI. They have also visited the information gallery.

Kisan mela

A Kisan Mela was conducted at CPCRI, Regional Station Kayamkulam on 23rd February, 2008. The Mela was inaugurated by the Director, CPCRI. About 600 farmers, extension officials and local representatives participated in the programme. Two panel discussions, one on latest coconut technologies and other on developmental programmes for coconut were held in the forenoon. Visit to experimental fields, exhibitions and farmers' interaction were also arranged. CPCRI, Coconut Development Board, Krishi Vigyan Kendra and 13 SHGs participated in the exhibitions. Hon'ble MLA Shri. C.K. Sadasivan, Kayamkulam constituency delivered the valedictory address and Shri. A. Nazarulla, Municipal Chairman of Kayamkulam presided over the function. Shri. M. Thomas Mathew, Chief Coconut Development Officer delivered the key note address. Smt. Shamila Basheer, President, Krishnapuram Panchayat and Shri. C.S. Basha, councillor, Kayamkulam Municipality offered felicitations.



Fig. 14. Kisan mela at CPCRI, RS, Kayamkulam

Other extension activities

Advisory services provided for 20 farmers who visited the station with various problems in respect of coconut cultivation. Scientists have visited 11 farmers' fields for diagnosis of field problems. 72 farmers utilized the help line service facility for various information about coconut cultivation.

Coconut Genetic Resources for Sustaining Livelihoods in India

One week training programme was organized for the CBO members of Devikulangara and Pathiyoor under the IFAD Project in the following areas :

1. Intercropping in coconut Gardens : 45 members
2. Vermicomposting: 40 members

3. Animal Husbandry: 42 members
4. Mushroom Production : 44
5. Scientific Management of Coconut: 30members
6. Animal Husbandry : 33 members
7. Production of local nutritive foods : 19 members
8. Production of mushroom and cashew products : 37 members
9. Integrated Fish Farming : 25 members
10. Demonstration of technologies in field : 12 members

Interface programmes: The scientists participated in interface programmes of Alappuzha, Pathanamthitta and Kottayam Districts.

Seminars and Farmers Meetings

Dr. C.P.R.Nair, Dr. Chandrika Mohan, Dr. V. Krishnakumar and Dr. S. Kalavathi participated in the farmers' meeting organized by the farmers' club, Kadakampally, Thiruvananthapuram on 13-03-08 and visited few farmers' gardens.

Dr. P. Rajan, Dr. Chandrika Mohan and Dr. S. Kalavathi participated in discussions with the members of a farmers' group at Haripad on 25-03-08 for arranging large scale demonstration of coconut technologies with special emphasis to Red Weevil Management.

Dr. N. Srinivasan, Principal Scientist (Pl. Path.) delivered lecture and handled field class on pest and disease of coconut to two batches of farmers (consisting 20 each) from Arjuna river sub-basin of Virudhunagar district of Tamil Nadu, who visited CPCRI RS, Kayangulam as a part of field acquaintance tour during 11-3-08 to 25-3-08.

VITTAL

Dr. Ravi Bhat delivered a lecture on Aercanut Cultivation – problems and prospects to a group of farmers, sponsored by IFFCO Ltd. Shimoga on 10-03-2008 at Vittal.

Dr. S. Keshava Bhat, Technical Officer delivered a talk on 'Pest management in cocoa' (in Kannada), AIR Mangalore on 18-2-2008.

MOHITNAGAR

A Kisan Mela was organized on 14th March 2008 to commemorate the Golden Jubilee of the centre, where 500 farmers attended the programme. Scientist-farmer interface programme and field visits were organized for the farmers during the Mela.

A one-day training programme was organized on “Crop Diversification in Plantation garden with spices” on 15th March 2008 where 50 farmers have participated in the programme. The programme was sponsored by Spices Board.

MINICOY

Training

A one day training programme on vermicomposting was conducted at the station on 8-2-08, in which 75 farmers participated. The session was presided by Dr. B. A. Jerard, Sr. Scientist, who had appraised the importance of coconut leaf vermicomposting and the present day concept of organic farming. Shri K. K. Mohammed, T.O. welcomed the trainees and Sri. Ibrahim, Agricultural Demonstrator, Minicoy highlighted the importance of sustainable farming. A lecture on vermicomposting followed by practical session was conducted by Dr. M. Shanavas, T.O.

KRISHI VIGYAN KENDRAS

Kasaragod

Training : A total of 37 training programmes and trained 1024 participants comprising farmers, farm women, members of women self help groups, rural youth and extension personnel. Details are presented in the following table:

Type of training	No. of training courses	Number of participants		
		Men	Women	Total
On-campus	24	380	234	614
Off-campus	13	028	382	410
Total	37	408	616	1024

Extension activities/ services

KVK faculty had undertaken 82 extension activities and interacted with 1541 farmers and 106 extension personnel on various aspects of agriculture

and allied sectors and suggested suitable technologies and clarified farmers' doubts in their farming situation. Further, extended services to 186 farmers who visited KVK as well as 113 farmers who contacted through help-line.

Radio programmes

KVK faculty participated in 8 radio programmes on management of bud rot disease in coconut, feature on mushroom cultivation, management of rhinoceros beetle and root grub attack in coconut palms, pest management in mango, nursery techniques in arecanut and nutritional value of vegetables.

Engagements

Shri R. Sanal Kumar, STA (T7-8) participated in All India Expo during 6-3-08 to 7-3-08 at Nileshtar.

Special programmes

Farmers Sensitization Meeting on DUS Guidelines was organized in collaboration with Protection of Plant Varieties and Farmers Right Authority, (PPV& FRA) Government of India, Indian Institute of Spices Research, Calicut, and CPCRI Kasaragod on 13-2-08. A total of 93 farmers from Kasaragod district and officials from PPV&FRA, NABARD, Dept of Agrl. and Lead District Bank attended the programme.



Fig. 15. Dr. George V. Thomas, Director, CPCRI, Dr. K.V.A. Bavappa, Former Director, CPCRI and Dr. V.A. Parthasarathy, Director, IISR, Kozhikode during sensitisation programme

A training programme on management information system for the computer programmers of KVK's in Zone VIII was organized during 17-3-08 to 19-3-08. A total of 17 computer programmers and 5 resource persons taken part in the programme.

Alleppey

Training programmes / Seminars

KVK Alleppey has conducted 10 on-campus trainings and 37 off-campus trainings during the quarter. In these trainings, a total of 403 men and 922 women have participated. Four seminars for women entrepreneurship in farming, organic farming technologies and SRI in paddy have been organized by KVK with a total participation of 124 men and 202 women.

Vocational trainings

Vocational trainings on scientific goat rearing for rural women (one week duration; participants: 32), scientific mushroom cultivation (participants: 6 men, 14 women) and three batches of skill up-gradation training on Screw pine products for rural women (Two weeks duration each – 76 participants), bee keeping training (3 months-Participants: - 13 men) and Layer chick rearing (two months -participants: 4 men & 44 women) were organised. One batch of 48 students from Vocational Higher Secondary School, Bharanikkavu were given training on entrepreneurship development in agriculture.

Training for Extension Functionaries

Training programmes were conducted for the extension officials of ICDS projects of Muthukulam Block (208 Anganwadi Teachers) on 'Nutritional budgeting and attaining nutritional self sufficiency with proper choices and utilization of local resources in four batches.

External funded programmes

Large Area FLD on Paddy - A Front Line Demonstration on "Integrated Nutrient and Pest Management for improving yield and profitability in Rice" funded by Planning Board, Kerala is being conducted at 9th block Padasekharam of Chennithala Panchayath in an area of 50 hectares consisting of 113 farm families. Farmer Field Schools (FFS) were conducted on every Saturday. The programme concluded in March 2008.

State Horticulture Mission - A six months duration programme on "Knowledge and Skill up-gradation training for Gardeners for employability

in the Horticulture units/farms" funded by State Horticulture Mission, Kerala started on 14th November 2007 with 50 participants.

On Farm Testing / Frontline Demonstrations

A total of seven On Farm Testing in 55 trails/farmers field and 10 Front Line Demonstrations in 230 farmers' plots are in progress/completed by the KVK. The results during the quarter is furnished as follows:

- Evaluating performance of IISR ginger varieties for intercropping in coconut gardens - The OFT was conducted in Chingoli and Krishapuram panchayaths involving 10 farmers. The variety Varada was found to be suited in coconut gardens compared to Mahima and Rejatha, with an yield of 8684 kg/ha and net income of Rs. 91410.00/hectare with B:C ratio of 1.97.
- Virgin coconut oil production by using different methods - The OFT was conducted in Harippad pachayath involving 30 rural women already engaged in virgin coconut oil production using traditional method. The freezing and heating method was found to be superior to ordinary traditional and controlled heating method. The yield of oil per 100 nuts was 6.1 litre, gross income Rs. 1373.00 with B: C ratio of 1.66 in the freezing and heating method.

Other Extension activities of Krishi Vigyan Kendra

During this period, the Krishi Vigyan Kendra organized various extension activities. Details of the activities are furnished in the table given below:

Extension activities	Number of activities
Agro clinic	103 Nos
Helpline Services	144 Nos
Press Release	32 Nos
Field Visits	116 Nos
Students Group	
Visit to KVK	8 Nos
Radio feature	1.no

Agricultural inputs

Good quality planting materials, vegetable seeds, tissue culture banana, medicinal plants, mushroom spawn etc were provided through KVK during the quarter.

PARTICIPATION IN SYMPOSIA / SEMINARS AND CONFERENCES

Name of the officers	Seminar/ Symposium etc	Venue and date
Dr. G.C. Acharya and Dr. A.K. Sit	National workshop on "Production, Processing and Marketing of Spices and Aromatic Plants" and delivered a lecture on "Spices-Status and Achievements" by G.C. Acharya and "Crop Diversification in plantation garden with spices" by A.K. Sit	UBKVV, Cooch Behar, 16-1-2008 to 17-1- 2008
Dr. G.C. Acharya	"Krishi and Swasthya Mela" organized by NGO "RURAL AID" and sponsored by CASA, Kolkatta and delivered a lecture on agriculture and health.	Hamiltonganj, Jalpaiguri, 24 th January 2008
Dr. R.V. Nair, Dr. V. Niral, Dr. K. Samsudeen	Orientation workshop on International Treaty on Plant Genetic Resources and Protection of Plant Varieties and Farmers Rights Act at College of Agriculture, KAU	Padannakad 16-1-2008
Dr. K. Samsudeen	International Conference on Biodiversity Conservation and Management (BIOCAM 2008), Cochin University of Science and Technology	Kochi 3-2-2008 to 6-2-2008
Dr. V. Niral	National Symposium on Plant Biotechnology for Conservation, Characterization and Crop Improvement & 29 th Annual Meeting of Plant Tissue Culture Association (India) at the Department of Biotechnology, Mohanlal Sukhadia University, Udaipur	Udaipur 8-2-2008 to 10-2-2008
Dr. R. Dhanapal	National Seminar on Integrated nutrient management in rainfed agro-ecosystem	Hyderabad 3-3-2008 to 4-3-2008
Dr. George V. Thomas, Dr. K. S. Ananda & Dr. V. Niral	Interactive meeting of All Directors and concerned scientists from Horticultural Institutes for finalization of contents of handbook of seed and planting material testing manual for horticultural crops and size and contents of labels/tags to be used for these crops at Central Institute for Subtropical Horticulture, Luknow.	Lucknow 11-3-2008 to 12-3-2008

C E L E B R A T I O N S

KASARAGOD

Republic Day

Republic day was celebrated at Kasaragod, Regional Stations and Research Centres. Dr. Mrs. K.V. Kasturi Bai, Acting Director hoisted the flag and delivered the Republic day speech. Dr. George V. Thomas, Director, on official tour, attended Republic Day functions at the Regional Station, Kayamkulam.

World Women's Day Celebration 2008

World Women's Day was celebrated on 10-3-08 in a befitting manner under the Chairmanship of Dr. S. Arul Raj, Project Coordinator (Palms) and Acting Director. Mrs. Baby Balakrishnan, President, Block Panchayat, Kanhangad was the chief guest for the programme. In the presidential address Dr. Arul Raj stressed the need for the empowerment of the woman folk for empowering the Society. Mr. TKN Nambiar, Administrative Officer, and Mr. P. Balakrishnan,

Technical Officer, CPCRI expressed their views on the women's day theme "Investing in women and girls". Importance of education to women and girls for the improvement of society was stressed by both of the speakers. They opined that investments in women, the primary caretakers of the future generation, provide returns for decades. The Chief Guest in her address



Fig. 16. Mrs. Baby Balakrishnan addressing the gathering

highlighted the changing pattern of life of women due to education, economic independence of the empowered women, etc. She opined that there is still a long way to go for changing the outlook of the women and she stressed that woman should be bold enough to face many challenges for safeguarding their rights.

VITTAL

Annual Day of Recreation Club was celebrated on 1-2-08. Dr. V.G. Bhat, Principal, Vivekananda PU

College was the Chief Guest and Dr. S. Arulraj, Project Co-ordinator (Palm), CPCRI Kasaragod presided over the function. The prizes were distributed by Smt. Cristina Rani Arulraj.

On the occasion of International **Women's Day** on 8-3-2008, Women's Cell members visited CMFRI Mangalore. They briefed about the ongoing activities of the Centre. The members also visited the 'Pilikula Nisargadhama' at Mangalore.

OTHER INFORMATION

Quinquennial Review Team (QRT) for CPCRI constituted

ICAR has constituted QRT to review the progress of work done in CPCRI and AICRP (Palms) with its subordinate Centres during 1-1-2003 to 31-3-2008. Following is the QRT, which shall conduct its visit during April-May 2008 and submit the report.

Dr. S.N. Rai, Chief Commissioner of Forest (Retd.), Bangalore Chairman

Dr. C. Singh, Retd. Head (Hort.), BAU Member

Dr. KUK Nampoothiri, Director, M.S. Swaminathan Research Foundation Jaypure, Orissa Member

Dr. A.K. Bakshi, Retd. Director of Research, SKVAST Member

Dr. B. Mallik, Project Coordinator, AINP (Acarology), GKVK, Bangalore Member

Dr. Gopalji Trivedi, Former Vice Chancellor Rajendra Agricultural University, Bihar Member

Dr. R. Chandramohanam Acting Head, CPCRI Secretary

XIth Institute Joint Staff Council (IJSC)

The XIth IJSC of the Institute (2008-2010) was constituted with the following members:

Official side

Dr. George V. Thomas, Director, CPCRI, Kasaragod Chairman

Senior Administrative Officer, CPCRI, Kasaragod Secretary (Official Side)

Dr. D. Balasimha, Head, CPCRI (RS), Vittal Member

Dr. R.V. Nair, Head, Div. of Crop Improvement, CPCRI, Kasaragod Member

Dr. P.M. Jacob, Principal Scientist, CPCRI (RS), Kayamkulam Member

Shri K. Madhavan, Principal Scientist, CPCRI, Kasaragod Member

Senior Finance & Accounts Officer, CPCRI, Kasaragod Member

Staff side

Shri P. Ravindran, Technical Officer, CPCRI, Kasaragod Member

Shri CGN Nampoothiri, Sr. Tech. Asst, CPCRI (RS), Kayamkulam Member

Shri T.H. Nagaraj, Assistant, CP RI (RS), Vittal Member

Shri M. Ravindran, UDC, CPCRI, Kasaragod Member

Shri K. Sukumaran, SS Gr. II, CPCRI, Kasaragod Member

Shri N. Dinesh Kumar, SS Gr. I, CPCRI, Kasaragod Member

Shri V. Chennappa Gowda, SS Gr. I, CPCRI (RC), Kidu Member

IMC Meeting

Institute Management Committee (IMC) meeting was held at Kasaragod on 25-3-2008. The IMC has reviewed the different activities, programmes, budget and expenditure, etc.

Earth day

CPCRI observed Earth Hour by switching off the electrical equipments for an hour on 29th March, 2008 to stress the importance of energy conservation to mitigate green house gas emissions in quest against climate change.

I N F R A S T R U C T U R E

Kasaragod : State Bank of India has opened its new branch upgrading extension counter, a digital PABX and public address system were installed in the main campus.



Fig. 17. Dr. H.P. Singh inaugurating dairy component in mixed farming

Vittal : A dairy component under areca based mixed farming system with three HF cows, a National Seed Project buildings were inaugurated by Dr. H. P. Singh, DDG (Hort), ICAR on 17-02-2008.



Fig. 18. Dr. H.P. Singh inaugurating seed projects building

F O R T H C O M I N G E V E N T

National conference on “Organic farming in horticultural crops with special reference to plantation crops” having a theme: Promoting organic horticulture for safe food and healthy environment, will be held at CPCRI, Kasaragod during 15-18th October, 2008.

There are seven technical sessions in the conference:

1. Organic horticulture: current status, prospects and potential
2. Technological advancements in organic horticulture
3. Soil health management: Biomass recycling, earthworm for solid waste management, prospects and potential of bio fertilizers

4. Plant health management: Eco-friendly pest management, eco-friendly disease management
5. Standards, certification, marketing and Export
6. Interface with farmers and NGOs
7. Future strategies and policies

There will be lead lectures by experts in the field, besides oral and poster presentations.

For further details please contact:

The Secretariat, National Conference on Organic Farming in Horticultural Crops, CPCRI, Kudlu (P.O), Kasaragod- 671 124, Kerala. Phone: 04994-232893,94,95, 232090, E-mail: ncoh2008@gmail.com

TOWN OFFICIAL LANGUAGE IMPLEMENTATION COMMITTEE (TOLIC) – KASARAGOD

Under the auspices of TOLIC – Kasaragod, conducted Joint Hindi Week Celebration. As a part of the programme, poem recitation, hindi song compilation, debate, extempore speech, poem writing were conducted for the staff of TOLIC offices and for students. Nehru Yuva Kendra and CPCRI coordinated the programmes and Kendriya

Vidyalaya No.1 CPCRI and Kendriya Vidyalaya No.2, Vidyanagar conducted the competitions for the students. The valedictory function was conducted on 18-1-08 under the Chairmanship of Dr. George V. Thomas, Director, CPCRI, Kasaragod. Dr. V. Balakrishnan, Deputy Director (Impl.), Regional Implementation Office, Kochi was the Chief Guest

and give away the prizes to the winners of the above competitions.

14th Half Yearly meeting of TOLIC, Kasaragod

14th Half yearly meeting of TOLIC, Kasaragod was conducted on 18-1-08 under the Chairmanship of

Dr. George, V. Thomas, Director, CPCRI & Chairman (TOLIC). Dr. V. Balakrishnan, Deputy Director (Impl.), Regional Implementation Office, Kochi represented as an official language department member. Smt. Sreelatha, Hindi Translator & Secretary, TOLIC presented the Half Yearly Report.

P E R S O N A L I A

A P P O I N T M E N T

Name of staff	Post appointed	Place	Date
Sri. P. Bala Brahmaiah	SFAO	CPCRI Kasaragod	10-3-2008
Sri K.M. Ansary	Technical Assistant, T3	KVK, Alleppey	10-1-2008
Ms. M.P. Jayashree	Technical Assistant, T3	KVK, Alleppey	14-1-2008
Miss Bijila P.V.	Technical Assistant, T3	KVK, Alleppey	4-2-2008

P R O M O T I O N

Name of staff	From (designation)	To (designation)	Date (w.e.f.)
Dr. R. Dhanapal	Sr. Scientist (Agronomy)	Principal Scientist (Agronomy)	27-7-2006
Dr. K.S. Ananda	Sr. Scientist (Pl. Breed.)	Principal Scientist (Pl. Breed.)	27-7-2006
Sri C.H. Sulaiman	SS Gr. III, CPCRI, Kasaragod	SS Gr. IV, CPCRI, Kasaragod	5-3-2008
Sri M. Gopalan	SS Gr. III, CPCRI, Kasaragod	SS Gr. IV, CPCRI, Kasaragod	5-3-2008
Sri M. Appu	SS Gr. III, CPCRI, Kasaragod	SS Gr. IV, CPCRI, Kasaragod	7-3-2008
Sri Thimmappa Gowda	SS Gr. II, CPCRI, RC, Kidu	SS Gr. III, CPCRI, RC, Kidu	14-3-2008
Smt. S.K. Mohini	SS Gr. II, CPCRI, RC, Kidu	SS Gr. III, CPCRI, RC, Kidu	14-3-2008
Sri S. Kushalappa Gowda	SS Gr. II, CPCRI, RC, Kidu	SS Gr. III, CPCRI, RC, Kidu	14-3-2008
Sri D. Isubu	SS. Gr. I, (Mazdoor), CPCRI. RS, Vittal	SS. Gr. II (Mazdoor), CPCRI. RS, Vittal	28-3-2008
Smt. S. Chandravathi	SS. Gr. I, (Mazdoor), CPCRI. RC, Kidu	SS. Gr. II (Mazdoor), CPCRI. RC, Kidu	28-3-2008
Sri S. Bhojappa	SS. Gr. I, (Mazdoor), CPCRI. RC, Kidu	SS. Gr. II (Mazdoor), CPCRI. RC, Kidu	28-3-2008

T R A N S F E R

Name of staff	Designation	From (Place)	To (Place)
Smt. Sumithra Nambiar	Assistant	CPCRI RS, Kayangulam	CPCRI, Kasaragod
Sri P.K. Sunilkumar	JTA (T2)	CPCRI, RC, Kannara	CPCRI RS, Kayamkulam
Sri A.O. Varghese	T1 (JTA)	CPCRI RS Vittal	CPCRI Kasaragod
Shri P.V. Devassy	S.S.Gr.IV	CPCRI, RC, Kannara	CPCRI RS, Kayamkulam
Shri P.K. Unnichekkann	S.S.Gr. III	-do-	-do-
Smt. C.P. Thressia	S.S.Gr. II	-do-	-do-

R E T I R E M E N T

Name of staff	Designation	From (Place)	Date
Sri K. Vijayakumar	Scientist (SG)	Kasaragod	31-1-2008
Sri A. Sheena	SS Gr. IV (Lab Attender)	CPCRI, RS, Vittal	31-3-2008
Sri. Jatin Chandra Borah	SS Gr. IV (Lab Attender)	CPCRI, RC, Kahikuchi	31-3-2008
Sri N.K. Narayanan	SS Gr. IV (Mazdoor)	Kasaragod	3-1-2008
Smt. N. Lakshmy alias Baby	SS Grade IV (Mazdoor)	Kasaragod	31-1-2008

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