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KALPA

CPCRI Newsletter

From the Director's Desk

A shift from *'agriculture' to 'agribusiness'* is an essential pathway to revitalize indian agriculture. While the share of pure agriculture in GDP may decline, the share of agribusiness will not and is bound to go up with the continuously increasing demand for value addition. Today, India is the second largest producer of food, next only to China. Around 26% of GDP in India comes from food and agriculture. Food processing sector ranks fifth in terms of its contribution to GDP. There is tremendous untapped potential, in the field of food processing, because of various factors.

Agribusiness has its challenges in terms of resource utilization, rural livelihood and rural ecology. Issues regarding appropriate technology, labour productivity, cooperation, credit, marketing and extension services are crucial. Public-private partnership and other support mechanisms will have to be strengthened to tackle the challenges. Above all, development of marketing ideas and percolating it through the agribusiness channels needs skill development.

For coconut based agribusiness in India, there is employment opportunities to more than 10 million people in the country. Technologies are available for individual processing for the production of snowball tendernut, neera (kalparasa), coconut chips, copra, vinegar, desiccated coconut (DC) coconut shell charcoal, packed tendernut water, coconut cream and milk powder. Coconut based agro-processing complex is a long-term investment with an initial investment of Rs. 20 million for setting up processing units of 25,000 nuts per day and involvement of 36,000 man days per year. Based on the availability of the investment capital for the establishment and operation of these enterprises, institutionalized credit may be arranged through developmental agencies. Such an integrated approach ensures better price stability for coconut and its products and stabilizes the gross farm income for coconut farmers. A huge amount of returns, will act as the motivating factor, expected to realize better price stability in the long run. However, those who are willing to start these units on a large scale needs to understand the basics of international markets. The Business Planning and Development Unit at CPCRI provide business incubation services by promoting technology based business models to interested entrepreneurs towards establishment of successful business enterprise, through structured and formal entrepreneurship development program.

Agro-processing is now regarded as the sunrise sector of the Indian economy. Properly developed, agro-processing sector can make India a major player at the global level for marketing and supply of processed food, feed and a wide range of other plant and animal products.

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ICAR Short Course on planting material production

An ICAR sponsored ten days short course on "Advances in production of quality planting materials in plantation crops" was conducted at ICAR-CPCRI, Regional Station, Kayamkulam from 18th to 27th November 2014. The short course was inaugurated by Dr. George V. Thomas, formerly Director, ICAR-CPCRI. Dr. J. Thomas, Director-Research, Indian Cardamom Research Institute, Myladumpara delivered the key note address during the valedictory function. The short course was attended by 18 participants from various research institutes (Rubber Research Institute of India, Central Coffee Research Institute, Central Plantation Crops Research Institute), Agricultural Universities and Krishi Vigyan Kendras. A field trip was arranged on 21st November 2014 to different nurseries engaged in production of planting materials of plantation crops. Dr. P. Chowdappa, Director, ICAR-CPCRI, while addressing the participants, highlighted the importance of plant quarantine in production of quality planting material in plantation crops.

Dr. P. Chowdappa, Director along with participants of Short Course

Three-star status to coconut nursery at Kayamkulam

The National Horticulture Board (NHB) Ministry of Agriculture, Govt. of India has renewed the accreditation of Coconut Nursery at ICAR-CPCRI, Regional Station, Kayamkulam with 3-star rating. This is for the first time a coconut nursery in the root (wilt) disease prevalent tract is getting 3-Star rating. The NHB evaluation team led by Dr. B.K. Karkara, Consultant, and NHB visited ICAR-CPCRI, Regional Station, Kayamkulam on 30th August 2014.

Inauguaration of 'Kalparasa' outlet at Palakkad

Honorable former Chief Minister of Kerala Shri V.S.Achutanandan on November 11, 2014 inaugurated a Neera outlet of Palakkad Coconut Producers Company at Kanjikode in Palakkad district using the technology developed by ICAR-CPCRI. He said that it is the best natural nutraceutical. On this occasion he complimented the company for adopting the latest technology developed by ICAR-CPCRI and making available farm fresh, hygienic and unfermented 'Kalparasa' in different parts of Kerala as a natural drink. He emphasized that it is not only reviving the coconut sector by improving the economy of small and marginal farmers but also create employment opportunity in tapping, marketing and preparation of value added products like coconut honey, coconut sugar and coconut jaggery. Dr. P. Chowdappa, Director ICAR- CPCRI in his address stressed the usage of name 'Kalparasa' instead of Neera which

Shri V.S. Achuthanandan, Leader of Opposition, Kerala Assembly inaugurating neera outlet in the presence of Dr. P. Chowdappa, Director, ICAR-CPCRI

is often confused as an alcoholic drink. As it is a nutritious health drink, it will improve the nutritional security of the society particularly malnutrition of children. He said even if 10% of the total coconut plants are tapped either for the purpose of health drink or making sugar, it would generate an additional revenue to the tune of Rs. 720 crores in addition to the production of nuts.

It is the eighth outlet in Palakkad district by the PCPCL. A large number of farmers, entrepreneurs, media persons participated in the function and also showed keen interest in the promotion of kalparasa.

Contingency strategies to manage Hudhud cyclone affected coconut gardens

Coconut growing tracts in the east coast region in states of Andhra Pradesh and Orissa have been hit by the latest 'Hudhud' cyclone. Coconut is the important source of livelihood for the farming community in the affected coastal belt. Livelihood security of the affected farm families can be ensured by implementing following strategies for sustaining coconut based farming in these localities.

1. Removing fully/partially damaged coconut trees and seedlings and disposing the dead logs and organic debris to prevent the emergence of red palm weevil and rhinocerous beetle attack. This can be carried out by opening trenches and burying the organic materials andcovering with soil.

2. Removing the damaged/affected portion in slightly damaged trees, and taking up prophylactic measures such as application of Bordeaux mixture paste/ spray.

3. Decomposing debris should be treated with *Metarhiziumanisopliae* to avoid Rhinoceros beetle outbreak.

4. Replanting the severely damaged coconut gardens by seedlings of improved varities like KalpaPratibha, Kera Chandra, Chandra Kalpa, Chandra Sankara, KeraSankara, KeraBastar and Chandra Laksha.

5. To rejuvenate the existing palms, apply 0.5 kg urea, 1kg super phosphate and 1kg MOP in the basin area and irrigate, if required, to maintain sufficient moisture. Wherever possible, apply organic manure such as FYM/ vermicompost/ compost at the rate of 25kg /palm.

6. Coconut is tolerant to salinity at least for one season. The salinity level becomes normal in the next monsoon season. However, providing irrigation with fresh water, wherever available, can reduce the problems due to enhanced salinity of soil in the affected regions. Soil/sand accumulation in the coconut garden would enhance coconut growth.

7. Though coconut is fairly tolerant to water logging, prolonged water logging needs to be avoided by providing proper drainage.

8. Intercropping of leguminous vegetables may be adopted for livelihood security and increasing fertility of coconut gardens.

Hudhud affected palms in Andhra Pradesh

Coconut crown damage due to cyclonic gales at Nimmavanipeta Etcherla

Severely affected coconut garden at Kotapalem village Ranastham

Stakeholders meeting on enhancing productivity and value addition in arecanut

A Stakeholders Meeting on 'Enhancing productivity and value addition in arecanut' was organized at ICAR-CPCRI, Regional Station, Vittal, Karnataka on 29-10-2014. More than 200 stakeholders representing farmers, scientists from ICAR-CPCRI, UAHS, Shimoga and KVKs, Officials from Department of Horticulture, CAMPCO, ARDF, Shree Kshetra Dharmasthala Gramaabivridhi Yojana, Cadbury India Pvt. Ltd., MAMCOs, Shimoga and AGRIMART, Puttur and Media personnel participated to formulate strategies for enhancing the productivity and value addition in arecanut

Shri Konkodi Padmanabha, President, CAMPCO inaugurating the Stakeholder's Meeting in presence of Dr. P. Chowdappa, Director, ICAR-CPCRI and Dr. Homey Cheriyan, Director, DASD

Dr. P. Chowdappa, Director, ICAR-CPCRI, Kasaragod presided over the function. During the presidential address he highlighted the importance of fruit rot and yellow leaf disease management and mechanization in arecanut for enhancing the productivity. He also emphasized the need for value added products from arecanut viz., soft drinks, soap, toothpaste etc. Shri Konkodi Padmanabha, President, CAMPCO, Mangalorehad inaugurated the Stakeholders Meeting. During his inaugural address, he urged the ICAR-CPCRI scientists to take up research to enhance the effectiveness of Bordeaux mixture for the management of fruit rot disease. He also emphasized the importance of processing and value addition in arecanut to enhance the profitability. Dr. Homey Cheriyan, Director, Directorate of Arecanut and Spices Development, Calicut was the Chief Guest and he emphasised that farmers need to adopt multispecies cropping system to increase productivity and profitability from unit area.

Dr. H. P. Maheswarappa, Project Coordinator (Palms), ICAR-CPCRI, Kasaragod had urged the Department of Horticulture and KVKs to have strong linkage with ICAR-CPCRI and other research institutes for serving the farmers with better technologies. Mr. Manchi Srinivasa Achar, President, All India Arecanut Growers Association, Puttur demanded for more field oriented programmes and appreciated the efforts of ICAR-CPCRI. Mr. P. N. Shashidhara, Director, MAMCOS, Shimoga emphasized the importance of dwarf varieties and hybrids, value addition and mechanization for increasing the productivity. Mr. Shree Padre, Farm Journalist, Adike Patrike, Puttur had pointed out different problems faced by farmers in arecanut cultivation viz., attack of wild animals, fruit rot and yellow leaf disease. He also emphasized the importance of mechanization and value addition in arecanut. Mr. Shankara Bhat, Progressive farmer, Poogavana, Vittal had thrown light on different value added products prepared from arecanut. Dr. D. C. Chowta, Progressive farmer, Meeyapadavu, Manjashwara highlighted the importance of cropping system approach to increase the productivity and profitability from unit area.

Stakeholders meeting on Edava Long Fibre Coconut

Stakeholders meeting was held at Edava on 20-11-2014 with regard to registering Edava Long Fibre Coconut (ELFC) and applying for Genome Saviuor Award by the ELFC community. Dr. P. Chowdappa, Director, ICAR-CPCRI, Dr. V. Krishnakumar, Head, ICAR-CPCRI, Mr. Balik, President,Edava Grama Panchayath, Dr. Anitha Karun, Dr. V. Niral, Dr. K. Samsudeen, Dr. P. Anithakumari, Community members, Extension officials participated in the meeting. Dr. P. Chowdappa, Director emphasized the need to popularize this variety for making coir industry more vibrant.

Dr. P. Chowdappa, Director addressing the farmers at Edava

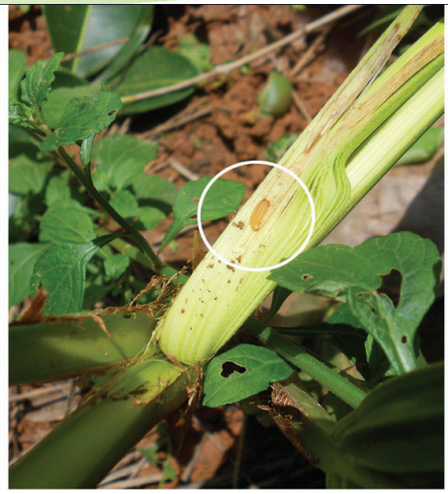
RESEARCH HIGHLIGHTS

Coconut testa- a rich source of phenolics

Coconut testa is one of the waste materials obtained during virgin coconut oil production. Phenolic compounds in these have been considered to be the potential and important contributors in reducing oxidative stress due to their antioxidant activity, which are of great importance, predominantly in human diets. An attempt was made to extract the phenolics present in the defatted cake of testa using different solvent systems. Ethanol extract of testa contained 0.9 to 2.3 g of phenolics (Gallic acid equivalent) per 100 g dry weight. The ethanol extract showed better antioxidant activity as compared to other solvent extracts.

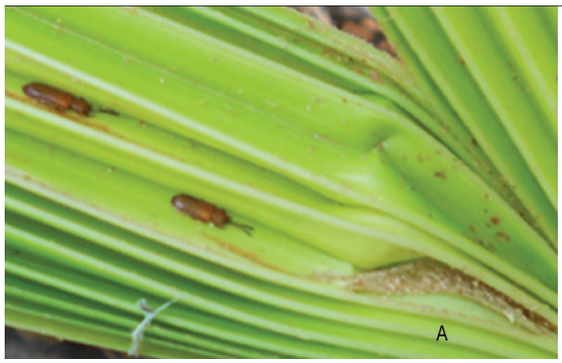
Snap survey of leaf beetle infesting coconut in Andamans

A snap survey was conducted by Dr. Chandrika Mohan and Dr. Joseph Rajkumar of ICAR-CPCRI during 8-14,October 2014 in South and Little Andamans to assess the incidence and damage potential of a new chrysomelid beetle, *Wallacea* sp. on coconut. The adult beetles and immature stages were found feeding on the tender spindle regions of coconut seedlings causing longitudinal brown lesions. Though 80-90% of seedlings were infested by the pest damaging 40% leaf area, seedling mortality was not observed. *Wallacea* sp.was prevalent in abandoned, unattended and old nurseries. Strict quarantine is recommended while transporting planting material of coconut and ornamental palms from the Island to the mainland.



Grubs of *Wallacea sp.* feeding on spindle leaf of coconut seeding

Pupa in the leaflet base



Adult beetle of *Wallacea sp.* - abobe on leaflet folds (A), feeding marks and excreta (B), Enlarged view

Subduing root-knot nematode attack through marigold

The infestation of root-knot nematode (RKN), *Meloidogyne sp*. was noticed in black pepper, tomato, brinjal, turmeric, ginger, noni, chilli and various cucurbits which are grown as intercrops in coconut based cropping system. RKN caused damaged to an extent of 40 - 90 % and recorded maximum gall index i.e. 5 in noni plants.These can be effectively managed by growing antagonistic crops like Marigold, Tagetes erecta (5-7) in crop basins, which showed reduction in nematode population as well as nematode gall index (2.0) significantly by sustained release of active ingredients from the root exudates.

HUMAN RESOURCES DEVELOPMENT

Following personnel have undergone human resources development training during the period.

Training within India

Name and Designation	Title of training course	Place and Duration
Dr. Leichombam Singhajit Singh	Short course "Advances in production of quality planting materials in plantation crops"	ICAR-CPCRI, Regional Station, Kayamkulam 18-11-2014 to 27-11-2014
Dr. T.S. Manojkumar and Dr. S. Leena	Organic Certification and Internal Control System Management	CTI, KAU, Vellanikkara 11-10-2014 to 18-10-2014
Shri K. Manikantan Ansary K.M Programme Assistant (Computer)	Data base management for KVKs (Online Reporting System-OLRS)	KVK, Mysore 16-12-2014 to 17-12-2014
Ms. Jissy George SMS (HS)	Frontier Home Science Technologies and economic empowerment	UAS, Dharwad 28-10-2014 to 30-10-2014
Shri Rajeev M.S. (Agronomy)	Integrated Farming	Central Training Institute ,SMS Mannuthy 28-10-2014 to 29-10-2014
Dr.S.Ravi, SMS (Animal Husbandry)	Orientation Programme on Mandated activities of the Krishi Vigyan Kendras	KVK, Thrissur 19-11-2014 to 22-11-2014
Dr.K.Sajnanath SMS (Soil Science)	Orientation Programme on Mandated activities of the Krishi Vigyan Kendras	KVK Vijayapura 03-10-2014 to 06-10-2014

AWARD/ HONOURS

- Best arecanut scientist award for the biennium 2013-2014 for outstanding contributions in the field of arecanut research & development by ISPC was awarded to Dr. Anitha Karun, Head, Crop Improvement and Dr. G.C. Acharya, Former Sr. Scientist, RC, Kahikuchi.
- Dr. H.P. Maheswarappa, Project Coordinator (Palms) was honoured with "Fellow of Indian Society of Plantation Crops" during the General Body Meeting of ISPC held on 10th December, 2014 at Calicut.
- Dr. Anithakumari P. received best poster award for the paper on 'Impact study on area wide extension approach for biomanagement of Rhinoceros beetle in farmers' fields' in PLACROSYM XXI during 10-12, December, 2014 at Kozhikode.

Dr. H.P. Maheswarappa receiving citation from Dr. M. Anandaraj, Director, IISR, Kozhikode

- Dr. Nagaraja, N. R., Scientist (Plant Breeding) received 'Award for Best Oral Presentation' for research paper entitled 'Molecular marker analysis and tagging of gene for stem rust resistance in wheat', the paper on "Detection of mature miRNAs in the mitochondrial genome of Phytophthora ssp." by Rahul C.U. and Rajesh M.K. was awarded the second Best Poster Award and Dr. Elain Apshara, Senior Scientist received best oral presentation award for the paper entitled "Cocoa stress gene database (CocoaSTRESSdb): Compre-

hensive resource for cocoa stress response genes and associated SSR markers to facilitate marker assisted selection" at the National Seminar on "New Horizons and Challenges in Biotechnology and Bioinformatics", organized during 9-10 October 2014 at ICAR-CPCRI, Kasaragod.

- Best oral presentation award for the paper 'Efficacy of entomopathogenic nematode in combination with imidacloprid against root grub (*Leucopholis burmesteri*) in arecanut' by Rajkumar, Jagadeesh Patil and K. Subaharan was conferred during the International conference on 'Changing scenario of pest problems in Agri-Horti ecosystem and their management', held at MPUA&T, Udaipur, Rajasthan during 27-29 November, 2014.

Vice chancellor conferring the award to Dr. Rajkumar

- Oral presentation entitled "Disrupting insect luminal enzymes for pest management" authored by Josephrajkumar, A. and Chandrika Mohan was adjudged as a best oral presentation in recognition of its research thrust and technical contents in the National Symposium on Entomology as a Science and IPM as a technology-the way forward held at College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh during November 13-15, 2014.

PUBLICATIONS

Research articles

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TRANSFER OF TECHNOLOGY

Training programmes

Womens' training on cocoa

Conducted training on 'Cocoa cultivation aspects for women beneficiaries' on 09.12.2014 at ICAR-CPCRI, RS, Vittal with the collaboration of Mondelez (Cadbury) Ltd., Puttur and 45 women members from Sullia and Puttur taluks participated.

National training programme on cocoa production and processing technologies

National Training programme on Cocoa production and processing technologies was organized during 20-22 November, 2014 at ICAR-CPCRI Regional Station, Vittal under the guidance of Dr. P. Chowdappa, Director, ICAR-CPCRI, Kasaragod. This training was sponsored by Directorate of Cashew and Cocoa Development (DCCD), Cochin. Twenty four trainees (developmental Officers) from Karnataka, Kerala and Tamil Nadu had participated in the training.


Women training inauguration


Cocoa grafting training


Cocoa processing training


Cocoa pruning training

Dr. K. S. Ananda, Head, ICAR-CPCRI, RS, Vittal gave an overview about cocoa research and development in India. The Chief Guest of the function, Shri Venkatesh N. Hubballi, Director, DCCD, Cochin, inaugurated the training. In his inaugural speech, he stated that 'cocoa production should be increased to meet the increasing demands. He also told that developmental officers should be trained on production, protection and processing technologies so as to help the farming community. Dr. D. Jaganathan, Scientist proposed vote of thanks during the inaugural session.

Shri Venkatesh N. Hubballi, Director, DCCD, Cochin, inaugurating the training on cocoa

Participants of cocoa training along with experts

Trainees were trained on soft wood grafting, cocoa pruning and Bordeaux mixture preparation. Exposure visits were arranged to CAMPCO and Cadbury processing units and Farmers' gardens at Puttur.

Coconut Production Technology

A training programme on Coconut Production Technology was organized on 20-12-2014 at ICAR-CPCRI, Kasaragod for 50 farmers representing Coconut Producers' Federation, Kunnamangalam, Kozhikode district.

A training programme on Coconut Production Technology was organized at ICAR-CPCRI, Kasaragod for the students of VHSE (Agriculture) students from Trikaripur GVHSE on 25-10-2014.

Two-days hands on capacity building training programme on pests and diseases of coconut was held for Technical personnel from ICAR-IISR, Calicut at ICAR-CPCRI, RS, Kayamkulam during 21st & 22nd November 2014.

Dr. P. Anithakumari, Principal Scientist, ICAR-CPCRI, RS, Kayamkulam conducted three training programme on 'Identification and management of pest and diseases of coconut' for 28 participants from coconut plant protection and surveillance group at Bharanikkavu Grama Panchayth, Alappuzha district on 16-10-2014, 'Participatory group approaches in management of coconut and value addition potential' for 72 CPS members of Onattukara Coconut Farmers Federation was held on 29-11-2014 and on 'Community based approaches for improving health and productivity of coconut' coconut farmers of Coconut Producers Federation (CPF) of Kandalloor Grama Panchayath, Alappuzha on 20-12-2014.

One day seminar on "Scope of Organic cultivation of vegetables and fruits for nutritional security" held on 27-10-2014 at ICAR-CPCRI Centre at Minicoy. Dr. V. Krishnakumar, Head, Regional Station attended the programme as a resource person.

At Mohitnagar,Dr. A.K. Sit, Sr. Scientist conducted 2 numbers of 6 days duration on 'Friends of coconut tree'programme sponsored by CDB from 15-20 December, 2014 and 29 December, 2014 to 3 January, 2015 and about 20 trainees in each batch were trained on coconut palm climbing and scientific coconut cultivation technologies.

Off campus training progarmme

Off campus training programme for farmers on Coconut Production Technology was organized at Chemenchery in collaboration with PanthalayaniCoconut Producers Federation on 09-12-2014. The training Programme was inaugurated by Sri ManayathChandran, President, Kozhikode District Co-operative Bank. Dr. Thamban C., Principal Scientist and Dr. Manikantan, Sr. Scientist, handled different sessions in the training progarmme.

A training was conducted on 3rd October, 2014 at Kanjikuzhy, in which three sessions on soil test-based INM, coir pith composting, microbial enrichment of composts using crop and household wastes as well as mass multiplication of bioagents were handled by Dr. Jee-

Trainees from Kunnamangalam on Coconut Production Technology along with Director, ICAR-CPCRI

EM composting of food waste as part of Swachh Bharath at Kanjikuzhy

Training on Microbial enrichment of compost at Kanjikuzhy

na Mathew, Dr. S. Kalavathi and Dr. Merin Babu, respectively. Forty eight beneficiary farmers participated in the programme and were provided with soil health cards for site specific nutrient application and Trichoderma for enriching organic manure. In addition, farmers were trained on suppressive biocomposting, on hillock composting of coir pith and on mass production and field delivery of Metarhizium anisopliae during 27th and 28th November, 2014 at Kanjikuzhy.

Off campus training programme for farmers was organized at Mokeri in collaboration with ATMA-Kozhikode and Krishibhavan, Kunnummal on 09.12.2014. Dr. Thamban C., Principal Scientist handled a session on 'Scientific coconut cultivation practices' in the training progarmme.

Womens' cell activities

Training programme on 'stingless bee culture in coconut based systems for women farmers of Alappuzha district was organized on 24-11-2014 in which 29 farmers attended. The training programme including hands on practical session was handled by Mrs. Thankamoni, Thamarakkulam, master trainer in stingless bee culture.

Coconut plant protection and surveillance women groups (CPPSG) were initiated by ICAR-CPCRI, Regional Station, Kayamkulam in Bharanikkavu panchayath on pilot basis for improving access to technologies and involvement in plant protection operations of coconut palms.

Participation in Exhibitions

ICAR-CPCRI participated in the following exhibitions during the quarter.

- Swasraya Bharat-2014 held at College of Agriculture, Padannakkad during 14.11.2014 to 19-11-2014.
- PLACROSYM XXV held at Kozhikode during 10-12 December 2014.
- ICAR-CPCRI exhibition stall was put up at University of Agricultural and Horticultural Sciences, Navile, Shimoga in connection with Krishi Mela during 18th to 20th October, 2014.
- ICAR-CPCRI exhibition stall was put up at St. Aloysius College, Mangalore in connection with 'Rejuvenating the young scientific mind- National level science fest cum exhibition' during 18th to 19th December, 2014.

Radio / TV programmes

Dr. A.K. Sit, Sr. Scientist, Mohitnagar participated in three Live Phone

Shri P. Karunakaran, Hon'ble M.P., Kasaragod visiting ICAR-CPCRI exhibition stall during Swasraya Bharat 2014 , Dr. P. Chowdappa, Director, explaining the characteristics

in Programme on "Scientific Cultivation of different horticultural crops in North Bengal region at Uttar Bangla Channel, Siliguri on 13-10-2014, 10-11-2014 and 22-12-2014.

A Success story of the women group "Samrudhi" of Cheriyanadu Panchayath on "Value addition of Oriental Pickling Melon" with technical inputsfrom KVK, Alappuzha was telecast in "Noorumeni" programme of Farm Information Bureau, Govt. of Kerala in Dooradarshan on 23-11-2014

Smt. Jayashree M. P. attended a phone in programme on Fresh water pearl culture at F M Radio, Kannur broadcast on 28-10-2014.

Dr. Saritha Hegde delivered a radio talk on "Significance of red rice in human nutrition", AIR Dharwad, broadcast on 30-10-2014.

Dr. P. Muralidharan, Programme Coordinator, KVK Alleppey participated in Vayalum Veedum Programme on "Nutrient management in Coconut" of AIR Trivandrum, broadcast on 01-12-2014.

Dr. P. Anithakumari, Principal Scientist delivered a radio talk on 'Potentials of Neera – Benefits that could be derived for coconut farmers of Kerala' broadcast from AIR, Thiruvananthapuramon 03-12-2014.

Dr. K.B. Hebbar, Head, PB & PHT delivered a radio talk on the topic "Neera production technology" broadcast fromAIR, Mangalore on 05-12-2014.

Dr. Regi Jacob Thomas, Senior Scientist delivered a radio talk on "Neera chethan anuyojyamaya thenginangal" broadcast on 05-12-2014 by AIR, Thiruvananthapuram.

Dr. P. Chowdappa, Director addressing the farmers during banana harvest festival

Smt. Jissy George, SMS participated in Vayalum Veedum Programme on "Nutritional importance of pineapple and its value added products" in of AIR Trivandrum broadcast on 06-12-2014.

Dr. M. Shareefa, Scientist delivered a radio talk on "Neera chethunnathu thengine doshakaramayi bhadikkumo" broadcast on 19-12-2014 by AIR, Thiruvananthapuram.

Sri. R. Sanalkumar delivered a talk on "Eco friendly management practices for stem bleeding disease in coconut" in AIR, FM Radio, Kannur broadcast on 29-12-2014.

KVK Kasaragod

Harvest Festival

KVK, Kasaragod, conducted a Banana Harvest Festival at Bheemanadi on 29-10-2014 in connection with a Front Line Demonstration (FLD) on Management of Banana Pseudostem Weevil using Cassava Bioformulations with the collaboration of CTCRI, Thiruvananthapuram, West Eleri Grama Panchayath and Krishi Bhavan. The demonstrations were conducted at West Eleri and Ballal panchayaths in an area of 4 ha. comprising 10,000 plants. The results of the demonstrations proved that this technology is feasible, viable, eco-friendly and cost effective.

The programme was inaugurated by Dr. P. Chowdappa, Director, ICAR-CPCRI. In his inaugural address, he emphasized the importance of farmer participatory approach in building confidence among farmers towards organic farming practices. Shri. K.J. Varkey, President, West Eleri panchayath presided over the function. Shri. Joy Joseph, Standing Committee Chairman(Development) and Smt. Suma D.L. offered felicitations. Dr. C.A.Jayaprakas, Head, Crop Protection Division, ICAR-CTCRI, Thiruvananthapuram, appreciated the farming community for coming forward to demonstrate the effectiveness of the product. A total of 150 farmers attended the programme.

Farmer-Scientist interface programmes

Farmer – scientist interface programmes were conducted on"Crop health management for safe food production and nutritional security" at Miyapadavu of Meenja Panchayath and Bambrana of Kumbla panchayath with a participation of 170 farmers on 20th and 21st November, 2014.

On farm trials and Frontline demonstrations

Dolomite for acidity management in paddy

A Frontline demonstration on

acidity management in paddy was laid out in 10 acres of paddy field of 10 farmers at Koyankara, Thrikaripur panchayath. In this, use of Dolomite application as basal dose, prior to transplanting @ 100 kg/acre and 150 kg/acre 30 days after transplanting to check the acidity level of the paddy field was demonstrated in the soils where pH was 5.6 before trial.

Green gram – rice crop rotation

As a general practice paddy fields are kept fallow after the first crop of paddy due to the soil moisture stress and non -availability of crops which can grow in the residual soil moisture condition and minimum irrigation. Keeping view of this problem a front line demonstration was initiated in 10 acres of land at Herror village of Mangalpady panchayath by introducing high yielding green gram variety,(CO-7 in) in rice fallows.

Evaluation of fodder grass

An OFT on 'evaluation of fodder grass varieties as inter crop in coconut garden'was initiated with fodder grass varieties like Sugu-na, Supriya and Thumburmuzhy-1 along with Co-3 as control. The trail is being conducted at Padanne panchayath in farmer's fields. The fodder grass slips were planted during October and interculture operations and manuring were carried out.

Coastal sandy soil management

A demonstration on introducing inter crops in coconut garden in sandy soil condition by adopting moisture conservation technology is laid out in Padanne panchayath in 3 acre of land of 10 farmers. In this programme fodder grass slips were planted in trenches after burying coconut husk. Planting of other crops like, banana, vegetable will be taken up during January month.

Varada – a boon for ginger farmers

A high yielding variety of ginger-Varada released by Indian Institute of Spices research, Kozhikode was introduced in Kasaragod district as a Frontline demonstration in Karadka panchayath.

Mechanisation in paddy

A frontline demonstration on mechanization in paddy cultivation was carried out to reduce cost cultivation at Kodla Mogaru and Kodiyamme in Manjeswar block. In this programme, land preparation with rotavator,seeding with drum seeder, transplanting with walk behind paddy transplanter and demonstration of weeding with cono weeder were carried out in villages.

Fresh water pearl culture

Fresh water pearl culture has become a novel venture being keenly looked forward by the farming community of Kasaragod district. An FLD unit of Fresh water pearl culture with 125 nucleus-implanted mussels is functioning at Ranipuram. The harvest is expected after 18 months of implantation. As an impact of a phone in programme at AIR, Kannur on fresh water pearl culture, an exposure visit was arranged to a very successful unit at Malakkal. Most of the team members have now initiated the enterprise on their own.

Wildlife prevention

Since wild life intrusion was a crucial problem in the district and there was great demand for the wild boar olfactory repellant powder and reflecting ribbons to ward off wild animals and birds respectively from cropped areas. KVK has 10 FLD units and the results have shown that there is 99% success in the field level application. It was also observed that the method of spreading the powder in thin lines along the borders of the cropped areas proved to function better that hanging it in pouches. Seminars and Farmer-Scientist interface meets at Manjeshwar and Meenja were arranged for popularizing the same.

Micronutrient management in banana

'Ayar'- a mixture of micronutrients developed was demonstrated in the 300 banana plants under the FLD plot at Kuttikkol. The first application was done in November, 2014 at 2 months stage with the next round of applicaton planned at 4 months stage.

Value addition of raw jackfruit

Processing of jackfruit and its utilization was promoted using a refined low cost indigenous technology of brining. Around 1400 kgs of raw jackfruit has been processed through FLD activity. The brined jackfruit which is extensively used for culinary purposes in the region and a special delicacy of the region was promoted for culinary use in school mid-day meal programmes, super markets, exhibitions, and

festive fairs. Two awareness programmes, one EDP programme and eight training programmes were conducted benefitting 598 people.

Value addition of banana

FLD on validated indigenous technology on banana vermicilli production as energy rich breakfast food has been promoted through training at Badiadka, Kumbla and Vorkady panchayath to SHG's, mothers group at Anganwadi centers and to parents and children through schools. Around 5 training programmes with demonstrations have been conducted with the participation of 181 beneficiaries.

Other programmes

Organized 13 training programmes, and trained 397 farmers in various topics like, soil health management, crop management in paddy, soil testing and INM in important crops, mushroom cultivation, fresh water pearl culture, communication and group dynamics, value added products from Nutrimix and Kumari +, osmo-dehydration of products. A seminar was concucted on November 13th 2014 on the topic Management strategies for wild life intrusion and prevention of crop losses.

EDP on "Food Processing'

A ten days training programme on EDP on "food processing' sponsored by District Industries Center , Kasaragod was organized at KVK, Kasaragod on topics like processing of coconut and cocoa, preservation of seasonal fruits, osmodehydrated fruit products, bakery products, food standards and safety, packaging, etc. were covered under the programme.

Two days training programme on 'Value added products from Nutrimix and Kumari plus (supplementary food for adolescent girls)' were conducted in three batches for different Kudumbasree units from Phalghat, Malapuram, Quilon, Iddukki, Kottayam, Ernakulam. Value added products like cake , biscuits, cookies, halwa, peda, avalose podi, murukku, ladoos etc. were made by incorporating coconut and cocoa along with Nutrimix powder. The kudumbasree units plan to make and market these products to anganwadi children and adolescentgirls.

Exhibitions

a) KVK participated in Krishi Melaorganized by Sri Kshethra Dharmasthala Gramabhivridhi Yojana at Mujangavu on 27thand 28thDec, 2014.

b) KVK participated in exhibition during "Social Justice Day"organized by Social Welfare Department, Kasaragod at Municipal Stadium between Nov 21st to 23rd,2014.

KVK, Alleppey

Training programmes

Organized 37 training programmes benefitting a total number of 1223 farmers/rural youths/ extension officials during the period. The details of the training programmes were as follows:

Training	No of batches	Participants		
		Men	Women	Total
On campus	13	162	222	384
Off campus	20	295	397	692
Sponsored	1	3	16	19
Extension officials	3	52	76	128
Total	37	512	711	1223

KVK-ATMA Linkage

Dr. P. Muralidharan, Programme Coordinator and Lekha, G. (SMS) attended the monthly technology advisory meetings of October, November and December, 2014 organized by ATMA at Alappuzha.

Extension activities

KVK-Alappuzha participated in the exhibition organized in connection with " Onattukara Fest" by Association of Onattukara Farmers' Clubs from 19th to 23rd Decemebr, 2014 at Charumoodu.

Other extension activities: (i) help line service (calls attended and responded) – 417nos,(ii) field visits for diagnosis and problem solving – 194 nos, (iii)scientific field visit – 47 nos, iv) farmers visit to KVK – 1347, (v) field day – 1 nos, (vi) method demonstrations – 4 nos.,(vii)group meeting - 4 nos., (viii) newspaper coverage – 3 nos, (ix) soil health campaign – 5 nos, (x)soil test camps- 5 nos, (xi)exposure visit-1.

Symposia/Siminar/Conferance/ Workshop attended

Name & Designation	Title of the programme	Place & Duration
Dr. P. Chowdappa, Director	Asian Solanaceous Round Table Conference	IIHR, Bangalore 09-09-2014 to 10-09-2014
	22nd Group Meeting of AICRP MAP & BV	Bangalore 19-09-2014 to 20-09-2014
Dr. P. Anithakumari, Principal Scientist and Dr. D. Jaganathan Scientist laya	7th National Extension Education Congress (NEEC) – 2014	ICAR research complex for NEH region, Barapani, Megha- 08-11-2014 to 12-11 2014
Dr. Anitha Karun, Dr. Vinayaka Hedge, Dr. Ravi Bhat, Heads, Dr. Maheswarappa H.P., Project Coordinator (Palms), Dr. P. Anithakumari, Dr. V. Niral, Dr. B.A. Jerard, C. Thamban, P. Subramanian, Dr. A.C. Mathew, Principal Scientists, Dr. M. R. Manikantan, Dr. M.K. Rajesh, Dr. K.P. Chandran, Senior Scientists, Shri S. Jayasekhar, Dr. V.H. Pratibha, Dr. V. Selvamani, Shri M. Arivalagan, Scientists and Shri P. Raveendran, Technical Officer	PLACROSYM XXI - International Symposium on Plantation Crops	Kozhikode 10-12-2014 to 12-12-2014
K. B. Hebbar, Dr. Anitha Karun, Dr. Ravi Bhat, Dr. Vinayaka Hegde, Heads, Dr. K. Muralidharan, Dr. V. Niral, Dr. B.A. Jerard, Dr. K. Samsudeen, Principal Scientists, Dr. M.K. Rajesh, Dr. K.P. Chandran, Dr. Alpana Das, Sr. Scientist, M. Arivalagan, Dr. Nagaraja, N. R., Scientists, Dr. Neema Mohammed and Dr. K.K. Sajini, CTO and Dr. K.S. Muralikrishna, Technical Asst.	National Seminar on 'New Horizons and Challenges in Biotechnology & Bioinformatics'	Kasaragod 09-10-2014 to 10-10-2014
M. R. Manikantan, Senior Scientist	International conference on Agribusiness Management- Opportunities and challenges	Mangalore 09-10-2014 to 11-10-2014
Dr. A.C. Mathew, Principal Scientist and Shri H. Muralikrishna, ACTO (TIO)	Agr-IP 2014	IIHR, Bangalore 10-10-2014 to 11-10-2014
Dr. Maheswarappa H.P., Project Coordinator (Palms)	National Symposium on "Agricultural Diversification for Sustainable Livelihood and Environmental Security	PAU Ludhiana 18-11-2014 to 19-11-2014
Dr. T.S. Manojkumar and Dr. S. Leena	International conference on Organic Livelihoods, which is part of the event,BIOFACH India together with India Organic 2014	Angamaly, Cochin 06-11-2014 to 07-11-2014
Shri R. Sanalkumar	Workshop on Organic farming in Kerala – Lessons from Organic Kasaragod	KAU, Thrissur 27-11-2014

CELEBRATION

Mahatma Gandhi Jayanthi

Awareness campaign cum demonstration of EM composting of kitchen wastes and household level bio-resource management was conducted in Kanjikuzhy Block Panchayath campus in connection with Mahatma Gandhi Jayanthi Celebration and Swachh Bharath Programme on 1st October, 2014. The programme was inaugurated by Adv. D. Priyesh Kumar, President of the Block Panchayath. The training sessions were handled by Dr. S. Kalavathi, Principal Scientist and Dr. Merin Babu, Scientist in which all staff members of the Block Panchayath and farmers participated.

Food waste management as a part of Swach Bharat campaign

Vigilance Awareness Week

At Kasaragod, vigilance awareness week and oath taking were held during 27-10-2014 to 01-11-2014 in headquarters, Regional Stations and Research Centres of ICAR-CPCRI.

Communal Harmony Week

Communal Harmony Week was celebrated during 19-11-2014 to 25-11-2014 in headquarters, Regional Stations and Research Centres of ICAR-CPCRI. RastriyaEkta Divas was also observed by all the staff on 31-10-2014 .

Hindi Chethana mas

The valedictory function of Hindi Chethanamas celebration was conducted on 1st November 2014 under the chairmanship of the Director Dr.P.Chowdappa. ShriM. Ravi, Pradhyapak (Hindi) Kadanappally Higher Secondary Govt.School, Payyannur was the chief guest. He highlighted the importance of Hindi language and explained the difference between the National Language and the Official Language. Director suggested employees to make maximum use of Hindi in their official work.

Dr. P. Chowdappa, Director addressing the staff during the valedictory function of Hindi Chetana mas

Dr. A. Panickar, Hindi Professor(Retd.), Bharat Mata College, Trikkakara addressing the staff

Prizes for the winners of different competitions conducted during the period were distributed by the chief guest. The Director awarded the cash prize to those officials who participated in the ProtsahanYojana for doing maximum official work in Hindi.

A Hindi workshop was conducted on 15-12-2014 at ICAR-CPCRI, Regional Station, Kayamkulam. Dr. A. Panickar, Hindi Professor(Retd.), Bharat Mata College, Trikkakara was the Chief Guest, who inaugurated and conducted the workshop. He taught the participants to write simple Hindi sentences describing about themselves, their name and their daily activities.

Obituary

Shri. K. Sasi

Director and staff mourn on the sudden demise of Shri. K. Sasi, SSS of ICAR-CPCRI, RS, Kayamkulam, who breathed his last on 08th Nov. 2014. We praythe Almighty that departed soul may rest in peace.

PERSONALIA

Appointment

Name of the official	Designation	Location	w.e.f.
Dr. Indhuja S.	Scientist (Ag. Microbiology)	ICAR-CPCRI, Kasaragod	13-10-2014
Shri Krishna Prakash	Scientist (SP&M&A)	ICAR-CPCRI, Kasaragod	13-10-2014
Kum. Aparna Veluru	Scientist (SP&M&A)	ICAR-CPCRI, Kasaragod	13-10-2014

Promotion

Name of the staff	From (Designation)	To (Designation)	w.e.f.
Shri A.R. Padmanabha Naik	Technician (Field/Farm) ICAR-CPCRI, Kasaragod	Sr. Technician (Cat. I), ICAR-CPCRI, Kasaragod	16-07-2013
Shri Jinu Sivadasan	Sr. Technician (Cat. I), ICAR-CPCRI, RS, Kayamkulam	Technical Assistant (Cat. II)	10-03-2013
Shri R. Vijayan	Sr. Technician (Cat. I), ICAR-CPCRI, RS, Kayamkulam	Technical Assistant (Cat. II)	30-04-2013
Shri Balen Kalita	Sr. Technical Assistant (Cat. II), ICAR-CPCRI, RC, Kahikuchi	Technical Officer (Cat. II)	01-01-2013

Retirement

Name	Designation	Place	Date
Shri K.V. Kunhikannan	Asst. Admin. Officer	ICAR-CPCRI, Kasaragod	31-10-2014
Shri A. Jayantha	Technical Officer	ICAR-CPCRI, Kasaragod	30-11-2014
Shri M.V. Krishnan	Technical Officer	ICAR-CPCRI, Kasaragod	30-11-2014

हर कदम, हर डगर
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