संवादपत्र
NEWSLETTER
भाकृअनुप – केंद्रीय तटीय कृषि अनुसंधान संस्थान
(भारतीय कृषि अनुसंधान परिषद)
ICAR - Central Coastal Agricultural Research Institute
(Indian Council of Agricultural Research)

Vol. 21 No. 01 | *ISO 9001 : 2008 Certified Institute* | **January to April, 2019**

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

Agrisearch with a human touch

In this issue

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Director's Desk

The ICAR - Central Coastal Agricultural Research Institute (CCARI) is mandated to cater the research needs of coastal agriculture. The Institute has released two high yielding salt- tolerant rice varieties *viz*., Goa dhan-3 and Goa dhan-4 for cultivation in coastal saline soils , and one high yielding seven ridged okra variety, Goa bhendi-1 suitable for coastal states. As a part of conservation and registration of local germplasm, Shwet Kapila, cattle stock is being maintained in the Institute farm for evaluation of production traits and suitability under climate change scenario.

One brooder-cum-grower unit which can house nearly 3000 chicks and a range of 1300-1500 birds of different ages, and one parent stock unit with a capacity to accommodate 750 adult birds were established. An exclusive web portal on agricultural information of Goa (www.agrigoaexpert.res.in) was hosted during March, 2019 for the benefit of farmers and other stakeholders.

A new infrastructure facility, Dr. A. R. Bhattacharyya Farmers Exhibition hall, was inaugurated by Dr. Trilochan Mohapatra, Secretary, DARE & Director General, ICAR. Envisaging the need to foster the information on recent developments in the field of agriculture and allied sciences to the farming community, Coastal Agri Expo-2019 was organised. New technologies like high yielding varieties, best performing breeds, advanced production technologies and other inputs developed for the benefit of the farmers were disseminated during the event. Farmers, officials of State Agricultural Universities, ICAR Institutes, KVKs and other organisations from mainland and UT Lakshadweep participated in the event. Simultaneously, a Workshop on Coastal Agriculture was also organized, in which many stalwarts from various fields of Agriculture enlightened the scientists, farmers and other participants with their vibrant presentations.

DIRECTOR

RESEARCH HIGHLIGHTS

Crop varieties released by the Institute

Variety release proposals for the release of one promising Bhendi selection developed by Dr. M. Thangam, Principal Scientist, (Vegetable Science) and two promising rice cultures (GRS-1 and JK-238) developed by Dr. Manohara, K. K., Senior Scientist (Genetics and Plant Breeding) were submitted to the State Variety Release Committee (SVRC), Govt. of Goa on 6th December, 2018. The meeting of State Variety Release Committee was held on 13th February, 2019. The proposed entries were accepted and recommended for release by the SVRC as Goa Bhendi-1 and two rice cultures, GRS-1 and JK-238 as Goa Dhan-3 and Goa Dhan-4 respectively. The meeting was chaired by Shri. Daulat A. Hawaldar, Secretary, (Agriculture) Govt. of Goa in the presence of Dr. E. B. Chakurkar, Director (Acting), ICAR-CCARI, Old Goa, Shri. Madhav Kelkar, Director of Agriculture, Goa, Tulshidas Patil, Managing Director, Goa Bagayatdar Kharedi Vikri Saustha Ltd, Ponda Goa and scientists from ICAR-CCARI, Goa.

Salt-tolerant rice variety : Goa dhan-3 (GRS-1)

(Manohara KK, Rakesh Kumar Singh, Narendra Pratap Singh and EB Chakurkar)

It is a *Saltol* QTL introgressed rice line received from International Rice Research Institute (IRRI), Philippines. It is a semi-tall, white kernelled rice variety with long bold grain type. The average yield of the variety is 3.0 - 3.5 t/ha under stress condition and up to 6.0 t/ha in normal condition.

Salt-tolerant rice variety : Goa dhan-4 (JK-238)

(Manohara KK, Narendra Pratap Singh and EB Chakurkar)

A high yielding salt tolerant medium duration variety developed from the cross Jyothi x Korgut, released for the coastal saline soils of Goa. The variety does well under normal rainfed shallow lowland condition also. It is a red kernelled rice variety with long-slender grain type, suitable for both raw rice as well as par boiled rice. The average yield of the variety is 3.0 - 3.5 t/ha and up to 5.5 t/ha in normal condition.

IC numbers for the released rice varieties

(Manohara KK)

ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi, has allotted Indigenous Collection (IC) numbers for the four released paddy varieties from the Institute as follows:

Goa dhan-1: IC 629221
Goa dhan-2: IC 629222
Goa dhan-3: IC 629223
Goa dhan-4: IC 629224

Goa Bhendi-1

(M Thangam)

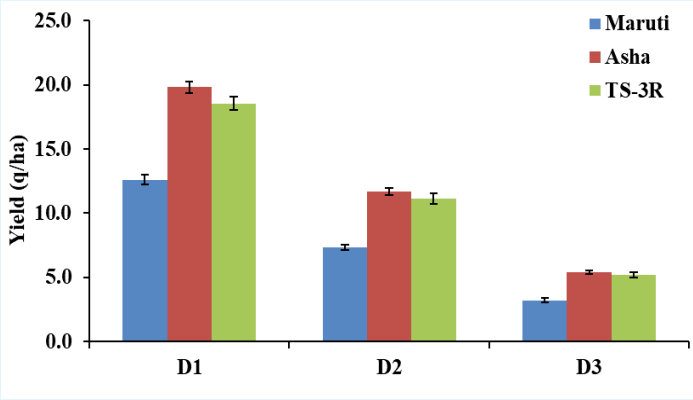
It is derived through pure line selection from local bhendi collection (Okra-10-108) from Karvem, Canacona Taluk, South Goa District, Goa state with fruit yield of 252.25g/plant which is higher than the released check variety Salkeerthi (245.50g/plant). The proposed variety is highly preferred by local people. Leaves are deeply lobed, and leaf petiole is pink in colour. Fruits are seven ridged, hairy and long (20-22cm) with less fiber and tender. Fruits are highly palatable for any vegetable cuisine preparation. Plant produces first fruit at 45 cm height from ground level with a intermodal length of 9 cm and each plant produces around 9-11 fruits per plant in 75 days of duration with an average yield of 7-8 t/ha. It is susceptible to Yellow Vein Mosaic (YVM) during *rabi* season and slightly susceptible during *kharif* season.

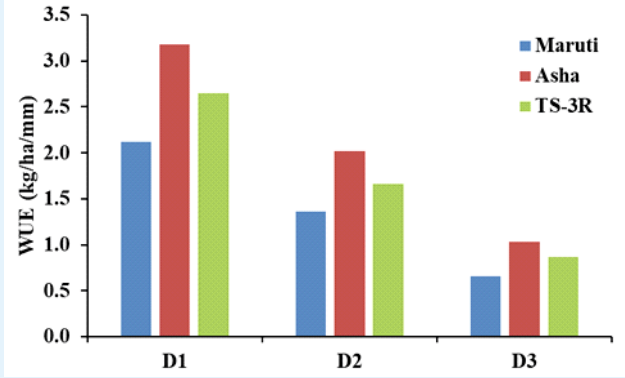
Effect of variable weather conditions on yield, water use efficiency of pigeon pea cultivars under coastal climate

(Bappa Das and Paramesha V)

Pigeon pea is generally grown as rainfed crop during *kharif* season. So, the date of sowing of pigeon pea varies from year to year due to variations in onset of monsoon which exposes the crop to variable weather conditions. An experiment was conducted at ICAR-Central Coastal Agricultural Research Institute research farm for second consecutive year to study the interactive effect of variable weather and cultivars on yield and water use efficiency of pigeon pea. Split plot design was adopted with date of sowing (early (D1), normal (D2) and late (D3) as main plot treatment and pigeon pea cultivars (Maruti, Asha and TS-3R) as subplot treatments. The results revealed that early sowing recorded the maximum yield (16.98 q/ha) followed by normal and late sowing (10.05 and 4.61 q/ha, respectively). With respect to cultivars, Asha recorded the highest yield (12.30 q/ha) which was statistically at par with TS-3R (11.63 q/ha) followed by Maruti (7.71 q/ha).

Similar trend was observed in water use efficiency (2.65, 1.68 and 0.85 kg/ha/mm for D1, D2 and D3, respectively). So, early or normal sowing of Asha may be practiced in the study area to achieve higher yield, water use efficiency.



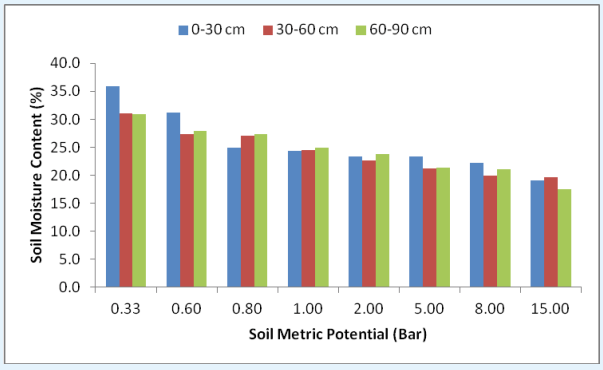


Yield and water use efficiency of pigeon pea cultivars under variable weather conditions

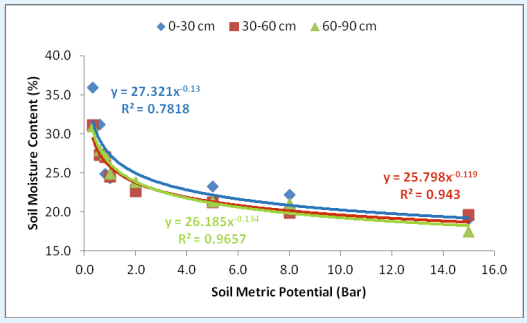
Estimation of moisture characteristics curve of laterite soils

(Sujeet Desai, Bappa Das & GR Mahajan)

The soil moisture characteristics curve is a graph obtained by plotting soil moisture tension/potential (bar) with soil moisture content (%). Soil moisture potential was measured using pressure plate apparatus. In order to develop the soil moisture characteristics curve different pressure ranges were considered (0.33, 0.6, 0.8, 1.0 2.0, 5.0, 8.0 and 15 bar). The soil samples were collected from different depths i.e 0-30 cm, 30-60 cm and 60-90 cm in the field, suitably processed and subjected to pressure, subsequently followed by hot air oven drying. This process was repeated for all the pressure ranges. The moisture content of soil samples with their respective pressure values were estimated using gravimetric method and moisture characteristics curve of soils for different depths were obtained by plotting soil metric potential with soil moisture content. The field capacity of soil samples at different depths ranged from 30.9 to 35.9% and permanent wilting point ranged from 17.5 to 19.6%.



Moisture retention of soil at different metric potential



Moisture characteristics curve of soils for different depths

DUS characterisation of Hirehalli dwarf areca progenies

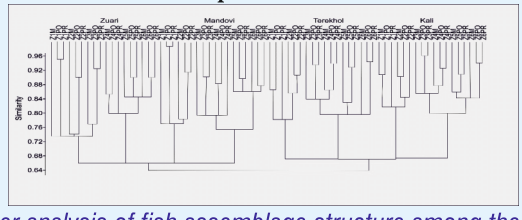
(V Arunachalam)

Nucleus seed garden of Areca cv. Hirehalli dwarf was established in different phases and being maintained with currently 281 surviving palms of which 82 are at reproductive stage. Among the 31 DUS traits (Distinctness, Uniformity and Stability) finalized by PPV & FRA (Protection of Plant Varieties & Farmers' Rights Authority), New Delhi for characterising the cultivars of areca palms, 29 traits were recorded to characterise the variation in the plants of seed garden. Three characters in early vegetative stage and eight other vegetative traits were recorded in all 281 palms over years. Eighteen inflorescence and fruit/nut DUS traits were completed for flowering/bearing plants of the block. Only about 62.86 % of the open pollinated progenies of Hirehalli dwarf bred true as dwarf seedlings. Few plants of Hirehalli dwarf also segregated for traits such as stature of inflorescence (drooping/erect), size of the fruit and kernel/chali.

Assessment of fisheries status in west coast estuaries of India

(Sreekanth GB)

The fish assemblage structure was analysed and the functional and ecological status of four tropical monsoonal estuaries; Zuari, Mandovi, Terekhol, and Kali along the west coast of India were established. Highest species richness was observed in Zuari (176 taxa) followed by Mandovi (154 taxa), Terekhol (131 taxa) and Kali (133) estuaries. The overall fish diversity and species richness were high in Zuari estuary and low in Terekhol estuary. Cluster analysis using the species abundance data from seasons and spatial locations from all the estuaries showed two clusters, one composed of Zuari and Mandovi, and the other cluster of Terekhol and Kali estuaries. The results indicated that the fish community structure (composition) was similar between estuaries. However, all the estuarine systems showed spatial and seasonal variations in diversity indices, ecological and feeding guilds. The study has also underlined that the tropical monsoonal estuaries offer temporary habitats in terms of shelter and feeding grounds to juveniles of marine species.



Cluster analysis of fish assemblage structure among the estuaries (Seasons: M-monsoon, PR-premonsoon, and PO-postmonsoon)

Integrated management of cowpea aphid with border crops and seed treatment

(R. Maruthadurai)

A field trail was undertaken to evaluate the influence of border crops with seed treatment for managing cowpea aphid *Aphis craccivora*. Cowpea seed (*var* Goa cowpea-3) was treated with imidacloprid @ 4 ml/kg of seed. The border crops like maize, sorghum, red gram, ground nut, brinjal and gingelly were planted along the border of each plots. Observations were taken at 30, 45 and 60 days after sowing. The results showed that the least no of aphids (10.48/leaf/shoot) was recorded in ground nut border crop + seed treatment followed by maize border crop + seed treatment (12.22 aphids/leaf/shoot) whereas highest no of aphids (183.11/leaf/shoot) was recorded in control.

Maize border crop

Gingelly border crop

Ionic contents of sodium and potassium in banana leaf as a healthy substitute for table salt

(V Arunachalam)

Banana leaf is an important by-product of banana cultivation and used in various ways in food industry as dining plate and food wrapper. Banana leaf has the potential to replace the edible salt and alkali food preservative. Potassium (K^+) and sodium ($Na^{+)}$ ion content of leaves are important for plant nutrition and salinity tolerance in banana. The content and ratio of these two cations also determine the quality of edible salt from banana leaf ash for use by cardiac patients as healthy substitute. Potassium and sodium content of seven banana varieties studied rapidly by ion meters in two seasons indicated that the Rasbali variety possessed significantly greater potassium and sodium ions than Amti. Mean foliar sodium content varied from 100 to 188 ppm among the banana varieties studied while mean foliar potassium content varied from 2948 to 5413 ppm. The molar ratio of Na/K in the banana leaves was very low <0.1 in all leaves studied. The study indicated that banana leaf ash has got scope to be used as a component/partial substitute for table salt.

NEW INITIATIVES

DST funded project on "Design and development of acoustic methods for early detection of stem and root borer *Plocaederus* spp infestation in cashew"

(R Maruthadurai)

A new project entitled "Design and development of acoustic methods for early detection of stem and root borer *Plocaederus* spp infestation in cashew" funded by DST-SERB under Core Research Grant has been initiated. The principal investigator of the project is Dr. Maruthadurai, R, supported by Co-principal investigator Dr. Veerakumar, T, NIT, Goa. The project was proposed to investigate the acoustic behaviour of stem and root borers in cashew and employing thermal imaging concepts to identify the area of the infestation, feeding galleries and various bio-stages of stem borer and finally to develop an acoustic device for early detection, monitoring and eradication of concealed insect pests.

MAJOR EVENTS

Blood donation camp at ICAR-CCARI

A blood donation camp was organised by the officials of the Blood Bank, Goa Medical College, Bambolim, Goa at ICAR-CCARI on 03-01-2019. Around 50 people including staff members and their family members participated in the noble cause. A total of 31 units of blood was collected at the camp.

Sensitization training programme on minimizing postharvest losses in paddy

Under the project, "Popularizing Good Post Harvest Management Practices for Field Crops of Goa through Research, Trainings & Demonstrations" funded by NABARD, a sensitization training programme was conducted on 19th January 2019. It was inaugurated by Sh. Vijai Sardesai, Minister of Agriculture, T & CP, Archives & Archeology, Factories & Boilers, Govt. of Goa in the presence of Dr. E.B. Chakurkar, Director, ICAR-CCARI, Ms. Kamakshi Pai, General Manager/OIC, NABARD, Goa, Mr. K.V. Prasanna Kumar, Assistant Director, Agriculture, Directorate of Agriculture, Goa at KVK Training Hall, Karmali Road, Old Goa. The event was organised by Dr. Mathala Juliet Gupta as Project Leader and Dr. R. Maruthadurai as Co-Project Investigator. There were lectures delivered by various scientists on topics like, good agronomic practices for field crops, choice of varieties for reducing postharvest losses, nutrient management practices, pest and disease management with special reference to postharvest losses in field crops. The role of machineries and other advanced engineering technologies for minimizing postharvest losses was also deliberated during the programme.

Field day at Zuari estuary and installation of artificial fish habitats structures

A field day was organised with the fishermen of Zuari estuary for the installation of dome shaped artificial fish habitats (AFH) in the Zuari estuary as a part of the Institute project and STC programme on 10th January 2019. A total of 9 AFH structures were deployed at a depth of 5.8 m in the estuarine system. The programme was organised in collaboration with Shree Shantadurga Fishermen Association, Tiswadi.

Training programme on "Diagnosis of insect pests and diseases of horticultural crops of Coastal region and their management"

A training programme on "Diagnosis of insect pests and diseases of horticultural crops of Coastal region and their management" was conducted by ICAR-CCARI, Goa during 29-30th January 2019. A total of 35 participants including zonal agricultural officers, agricultural officers from Directorate of Agriculture, ATMA, extension personnel from NGOs, private companies and progressive farmers from Goa attended the programme. The training was inaugurated by Dr. E.B. Chakurkar, Director, ICAR-CCARI. In his address, he stressed upon the need for early detection and proper diagnosis of the insect pests and diseases to minimize the damage and economic loss and the need for frequent refresher training programmes to the agricultural extension personnel. Detailed presentation and deliberations were conducted during the training by Dr. R. Ramesh, Principal Scientist (Plant Pathology) and Dr. R. Maruthadurai, Scientist (Agricultural Entomology).

The participants were also taken to field units of ICAR-CCARI for field diagnosis of insect pest and disease problems. A manual on "Diagnosis of insect pests and diseases of plantation and spice crops of Goa" and extension folders from ICAR-CCARI were provided to the participants as reference material.

Training on use of pheromone traps for the management of Red palm weevil and Rhinocerous beetle in coconut and fruit fly in mango

A training cum distribution on use of pheromone traps for the management of Red palm weevil and Rhinocerous beetle in coconut and fruit fly in mango has been organised at ICAR-CCARI, Old Goa on 31/1/19. This programme was conducted under the project "Management of economically important insect pests with the use of pheromone technology through trainings and demonstrations" funded by NABARD. More than 40 farmers from different taluks of Goa actively participated in the training programme. Detailed presentation on various insect pests of coconut, mango and their management were delivered by Dr. Maruthadurai, R., Scientist (Agril. Entomology) the principal investigator of the project. Trap placement, lure replacement, food attractants, trap servicing and insect observation were demonstrated to the farmers. Mango fruit fly traps 60 number and 160 traps and lures of red palm weevil and Rhinocerous beetle were distributed to the farmers.

Coastal Agri Expo 2019

Coastal Agri Expo 2019 was jointly organized by ICAR-CCARI, and Association for Coastal Agricultural Research (ACAR) at ICAR–CCARI, Old Goa during 2-4 March, 2019. The Expo was organized with a central focus on agriculture, livestock and fisheries in the coastal region of the country. Dr. Trilochan Mohapatra, Secretary (DARE) and Director General, ICAR, New Delhi, inaugurated the Coastal Agri Expo 2019 and Dr. A. R. Bhattacharya Farmers Exhibition Hall on 2nd March 2019 along with other dignitaries, Dr. M. B. Chetti, Vice Chancellor, University of Agricultural Sciences, Dharwad, Dr. S. K. Chaudhari, ADG (Soil and Water Management), ICAR, New Delhi, Dr. N. P. Singh, Director, ICAR-NIASM, Baramati, Maharashtra, Shri. Madhav Kelkar and Director, Directorate of Agriculture, Government of Goa.
During his inaugural address, Dr. Trilochan Mohapatra highlighted the challenges to be faced in the future by agriculture and other sectors and how can we be prepared in that direction. He stressed that dissemination of the technologies through platforms like expo/exhibitions or mela is one important way to create awareness among farmers and other stakeholders. He underlined the various research achievements of ICAR that achieved national food and nutritional security and brought prosperity and economic security to our farming communities. Dr. E B Chakurkar, Director and Dr. M Thangam, Principal Scientist and Secretary, Association for Coastal Agricultural Research (ACAR), ICAR-CCARI, Goa represented as the organizers of the event. The farmers and officers from the Lakshadweep UT were felicitated during the occasion. In commemoration of the occasion, publications of the Institute were released by the chief guest and guests of honor.

The participants for the expo were Institutes of ICAR, state agricultural universities, Krishi Vigyan Kendras, central and state government organizations, cooperative societies, agro-based private companies and industries, self-help groups, NGOs and farmers of the state of Goa, adjoining states and Lakshadweep UT. The total number of the exhibition stalls during the expo was around 70 and 4000 people visited the expo on all three days. The exhibition stalls displayed technologies and products by various organizations for the benefit of farmers.

Visit to the experimental farms of the Institute was also organized during the event where the scientists introduced the newer research and development to the guests and farmers. During the event, Dr. Trilochan Mohapatra also visited different farms in the state of Goa wherein different technologies of the Institute have been disseminated and demonstrated successfully. He visited a demonstration plot, where improved varieties of cashew nut have been planted and intercropped with papaya. This was funded by Tribal Sub Plan and taken up by a group of farm women at village Ziltawadi, South Goa. The team also visited another cashew plot of Mr. Angelo Baretto, located at Kakoda, South Goa, where in commercial cultivation of improved cashew varieties of the Institute has been established. A private agro-eco-tourism farm called Tanshikar Spice Farm, Netravali, South Goa was also visited by the team.

Simultaneously, a three-day workshop on "Coastal agriculture for sustainable production vis-à-vis doubling farmer's income" was organized by ACAR and ICAR-CCARI, Old Goa during the Expo for the benefit of the farmers. During the workshop, experts from various fields of agriculture and allied sectors addressed the gathering and shared their valuable experiences with the audience. The farmer-scientist interaction provided the farmers with an opportunity to express the practical farming related problems in the forum.

The valedictory function of the three day 'Coastal Agri Expo 2019' was held at ICAR-Central Coastal Agricultural Research Institute, Old Goa, Goa on 4th March 2019. The programme was graced by Dr. Trilochan Mohapatra, Secretary

(DARE) and Director General, ICAR, New Delhi as the chief guest. The chief guest congratulated ICAR-CCARI and ACAR, Old Goa for successfully organizing the first 'Coastal Agri Expo 2019' and urged to continue to organize such event in future for the benefit of farmers and other stakeholders. He spoke on important issues of coastal region like water management, crop diversification, climate change, waste management, marketing infrastructure, agro-ecotourism, public-private partnership, etc.

Dr. N. P. Singh, Director, ICAR- National Institute of Abiotic Stress Management, Baramati, Maharashtra, during his address, appreciated the efforts for successful organization of the event. Various participants like firms that exhibited their technologies, the farmers, student volunteers from schools and agriculture college etc. were felicitated during the occasion. Dr. M Thangam, Principal Scientist of the Institute and Secretary, ACAR delivered the formal vote of thanks.

International Women's Day

ICAR-CCARI celebrated the International Women's Day on 8th March, 2019. On this occasion, the Hon'ble Prime Minister's address was telecasted at the conference hall of the Institute at 10.00 A.M., which was attended by all the Staff Members of the Institute. The chief guest for the function was Dr. Leena Naik, MD Pathologist. She delivered a talk on 'Health & Diet' to all the lady staff of this Institute. Many staff members expressed their views on women empowerment on this occasion.

43rd Foundation Day

The 43rd foundation day of ICAR-CCARI Goa was celebrated on 2nd April 2019 in the Institute auditorium. Shri Madhav Kelkar, Director of Agriculture, Government of Goa graced the occasion as chief guest, while the guest of honour was Dr. Santosh Desai, Director of Animal Husbandry, Government of Goa. Dr. E. B. Chakurkar, Director of ICAR-CCARI, Goa welcomed the guests and briefed the gathering about the research achievements of this Institute. Shri Madhav Kelkar and Dr. Santosh Desai appreciated the research and valuable contributions of ICAR-CCARI, Goa. On this occasion progressive and award winning farmers were felicitated at the hands of the guests. The staffs of the Institute were awarded with various annual awards.

30th Institute Research Council (IRC) Meeting

The 30th Institute Research Council (IRC) meeting of ICAR-Central Coastal Agricultural Research Institute was held from 29th April to 1st May 2019. The meeting was chaired by Dr. E. B. Chakurkar, Director, ICAR-CCARI. At the outset Dr Manohara KK., Senior Scientist (Plant Breeding) & Secretary, IRC welcomed the chairman and members of IRC. Chairman of the IRC Dr. E. B. Chakurkar in his inaugural address, welcomed the scientists and suggested to incorporate the RAC recommendations in the existing ongoing projects or new project proposals if any. He also requested scientists to take up need based research projects as per the requirements of the coastal region. The scientists from different sections presented their research achievements for the period April 2018 to March 2019 under their respective Institute as well as externally funded projects. The action taken on recommendations of last IRC meeting and research activities carried out during the last one year was presented and discussed. The Chairman appreciated the research accomplishments of the scientists. During the plenary session, Secretary, IRC presented the rapporteurs report and the decisions pertaining to each of the project were finalized. The meeting ended with formal vote of thanks proposed by Secretary, IRC.

Entrepreneurship training on dairy farming and clean milk production

Three days entrepreneurship training programme on "Dairy farming and clean milk production" was conducted from 27th-28th April 2018 at Ibrampur village, and on 4th May 2019 at Tambose village, both located at Pernem Taluka. This training programme was sponsored by Scheduled Caste Sub Plan programme, Govt. of India and co-ordinated by Dr. Susitha Rajkumar, Scientist (Veterinary pathology). The training programme was attended by 33 participants from Ibrampur, Hankane, Tambose and Mopa villages of Pernem taluka of North Goa. Various experts on veterinary sciences delivered lectures on importance and scope of dairy farming in Goa, scientific dairy cow nutrition and housing management, important diseases of cattle and control of disease by vaccination and deworming. Practical demonstration was carried out for proper milking method, pre and post milking hygiene, use of teat dips and detection of mastitis by abnormal signs of udder and changes in milk. Technique for screening of subclinical mastitis using California Mastitis Test kits was also demonstrated. The inputs like mastitis test kits, teat dip solution and cups, vitamin and mineral supplements were also distributed.

WORKSHOP/ SEMINAR/SYMPOSIA/ TRAINING ATTENDED

Date	Name	Programme	Venue
29/01/2019-30/01/2019	Dr. Gokuldas PP	UNDP Regional Workshop on Biological Diversity Laws	VM Salgaocar College of Law, Panaji
09/02/2019-11/02/2019	Dr. Gokuldas PP	National Agri-Business Entrepreneurship Conclave	ICAR-RC for NEH region, Umiam, Meghalaya

LECTURES DELIVERED

Date	Name	Programme	Venue
15-03-2019	Dr. Gokuldas PP	Reproductive management of dairy animals	ICAR-KVK, North Goa
15-03-2019	Dr. Gokuldas PP	Hormonal Therapy and use of Colour Doppler ultrasonography in reproductive management of	ICAR-KVK, North Goa
18-03-2019	Dr. Susitha Rajkumar	Metabolic diseases in dairy cattle, Vaccination and deworming in dairy cattle	ICAR-KVK, North Goa

AWARDS AND RECOGNITIONS

Mrs Anuradha Naik, Research Associate working in IPR/NAIF Project was conferred with prestigious Nari Shakti Puraskar at the hands of Shri Ram Nath Kovind, Hon'ble President of India on 8th March 2019 at Rashtrapati Bhawan. The Award was presented by Ministry of Women and Child Development, New Delhi for her exceptional and pioneering work towards empowerment of tribal women in Khola village, South Goa who are actively involved in conservation of local *Khola* chilli varieties for generations.