



संवादपत्र NEWSLETTER

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(भारतीय कृषि अनुसंधान परिषद)

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(Indian Council of Agricultural Research)



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हर कदम, हर डगर
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भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

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Major Events

- Tribal empowerment programme by ICAR-CCARI: distribution of fishing inputs to traditional fishermen of Goa
- Webinar under 'Bharat Ka Amrut Mahotsav' on the theme "Animal Health and productivity"
- ICAR-CCARI, Goa organized webinar on "VEGFASTTM technology to increase the vegetable production in coastal regions"
- Field Day at Gaodongari village and Farmers-Scientists Interaction under Scheduled Tribe Component at Canacona

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Weather-based agromet advisories



Weather and climate information plays a vital role in agricultural production and management. In order to provide the weather information and agro-advisories needed for the block/taluka level farming community, India Meteorological Department (IMD) in collaboration with ICAR initiated to set up District Agro-Met Unit (DAMU) at each district across India under Gramin Krishi Mausam Seva (GKMS) scheme. Agromet advisories are the farm decisions taken in response to past, current and future weather changes. It includes agronomical practices, pest and disease management, fertilizer and irrigation management, vaccination schedules of livestock etc. Keeping the need for Agromet Advisory Services (AAS) to be more crop and location-specific to address wide variations in weather within the district, IMD is in the process of implementing block-level AAS by establishing 530 District Agromet Units (DAMUs) in the premises of Krishi Vigyan Kendras (KVK) in collaboration with Indian Council of Agricultural Research (ICAR). Implementation of block-level AAS will be beneficial to more farmers due to high-resolution forecast with appropriate agromet advisories specific at the block level.

District Agro-Met Unit (DAMU) for North Goa district has been set up at ICAR-CCARI in 2019. Real-time weather observations are recorded from the agromet observatory located at ICAR-CCARI, KVK, North Goa. Weather forecasts and weather warnings are received from Regional Meteorological Centre, Mumbai and Meteorological Centre, Goa. Block/Taluka level weather-based agro-advisory bulletins are prepared and issued to farmers every Tuesday and Friday. Along with the AAS bulletins, nowcasts regarding rainfall at an interval of 3 hours, weather reports, warnings regarding extreme events like cyclones were also shared with farmers on a real-time basis. This will be helpful for the farmers to be prepared for extreme events and to take measures to minimize crop losses. Agromet advisories are issued for field crops like paddy, cowpea and vegetables, plantation crops namely mango, cashew, coconut and arecanut, livestock, poultry and fisheries. A framework of reaching out of advisories to farmers at village and block levels was achieved through hosting the weather forecast and advisories on websites of Institute, Directorate of Animal Husbandry and Veterinary Services and Directorate of Fisheries, IMD Panjim, Krishi Vigyan Kendra, North Goa and other line departments. Further, dissemination is done through linkages with the District Agriculture Officers, Zonal Agricultural Officer, etc. of the line departments and preparation of the groups. Awareness and capacity-building programmes were also conducted. At present 130 village-wise WhatsApp groups are created to disseminate the AAS bulletins to Farmers. It covers farmers from 195 villages of North Goa out of 215 total villages. Around 7000 farmers are receiving agro-advisory bulletins every Tuesday and Friday.

Through systematic feedback collection and impact assessment, the weather forecast based agro-advisories generated an additional income of Rs. 9.0 crores by enabling farmers to save crops from aberrant weather and plan timely agricultural operations. The timely weather warning alerts /contingency measures issued before/during extreme events like 'Tauktae' cyclone (2021) were widely acclaimed by local farmers.

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DIRECTOR

RESEARCH HIGHLIGHTS

Reproductive and productive characterization of Shweta Kapila breed of indigenous cattle

(Gokuldas PP and Amiya R Sahu)

A study was carried out to characterize important reproductive and productive attributes of Shweta Kapila cattle reared in its native tract under tropical hot and humid western coastal climate. Records and experimental data for five years were analyzed to determine different parameters of overall reproductive efficiency and production attributes. Major reproductive attributes recorded were age at puberty (25.6 ± 0.32 months), age at first service (34.1 ± 1.24 months), age at first calving (41.3 ± 1.65 months) and mean service period (92.3 ± 1.83 days). The mean gestation period was recorded to be 284.18 ± 7.22 days whereas the inter-calving interval was 392.4 ± 8.62 days. Daily milk yield ranged from 1.6 to 3.7 kg with an average of 2.95 ± 0.17 kg and lactation milk yield ranged from 130 to 680 kg with a mean yield of 304.78 ± 32 kg. Lactation length ranged from 134-238 days with a mean length of 218.88 ± 9.7 days. The mean birth weight was 13.35 ± 0.23 kg and calves showed a daily weight gain of 0.21 ± 0.01 kg/day. Most of the

reproductive and productive parameters were comparable to that of other indigenous dwarf breeds of the coastal region. Overall production attributes were improved over the period possibly due to selective breeding and good management practices. Shweta Kapila cattle reared under coastal climate had relatively shorter age at puberty and calving interval suggestive of apparently favourable reproductive potential of this indigenous breed.



Evaluation of the performance of crossbred pig 'GOYA': a novel variety

(Amiya Ranjan Sahu, Eaknath B Chakurkar and Gokuldas PP)

Pig farming is one of the economically viable options for resource-poor rural farmers in India. The study was conducted to analyze the effect of various genetic and non-genetic factors on the growth and reproductive performances of crossbred pigs (75% Large White Yaksher and 25% Agonda Goan). The body weights were recorded at birth, weaning, and monthly intervals till 10 months of age. Litter size and weights at birth and weaning and age at first farrowing were also recorded. Least-square means of body

weights were estimated considering the effects of generation, sex, litter size at birth, parity, season, and period of birth. The heritability and correlations for different traits were estimated by the restricted maximum likelihood method (REML) using WOMBAT software. There was a significant difference ($p < 0.01$) in body weights among the generations with a maximum on fifth-generation weights indicating ideal selective breeding in the herd. In the fifth-generation, average weight at birth, weaning, and 8 months



(marketing) was 1.07 ± 0.03 kg, 8.25 ± 0.35 kg, and 77.22 ± 2.092 kg, and the mean litter size at birth and weaning was 8.23 ± 0.87 and 7.62 ± 0.29 , respectively. The heritability estimate of weaning weight was 0.45 and higher heritability values were observed for all body weights. Genetic, as

well as phenotypic correlations, were moderate to high among the growth traits. The findings indicated the crossbred pigs thrived well in the prevailing hot and humid coastal climate and could be registered as a new pig variety 'GOYA'.



(I) Crossbred sow



(ii) Crossbred boar



(iii) Sow with piglets

Package of practices for optimal performance of developed 'GOYA' pig variety

(Amiya Ranjan Sahu and Eaknath B Chakurkar)

The crossbred pigs should be maintained in a semi-intensive to extensive system of rearing. Simple and durable houses should be constructed with the proper waterproof cemented floor. A proper drain should be provided to dispose of effluents. In the village-condition sheds can be constructed with pens measuring 3 m × 2.4 m with open yards of the same dimension. The walls should be 1.2-1.5 m high from the floor. Some of the pens can be converted into a farrowing shed by providing guard rails of 5 cm diameter of about 20-25 cm from the ground as well as from the wall. A creep space of about 0.75 m × 2.4 m area should be provided in one of the corners along with a guard rail. Along with freely available feed materials like hotel/ kitchen waste, bakery waste, garbage from the vegetable market, broiler offals, etc., three types of rations should be fed to pigs before they attend market weight i.e., creeper/ starter, grower and finisher ration. Starter feed should be given till the animals attain 15-20 kg body weight,

followed by grower feed up to the attainment of 50 kg body weight, and then finisher feed till marketing at around 8 months of age. The composition of the different feeds should be as follows: starter (50% maize, 22.5% rice polish, 25% soybean meal, 2% mineral mixture and 0.5% common salt), grower (45% maize, 35% rice polish, 17.5% soybean meal, 2% mineral mixture and 0.5% common salt) and finisher (40% maize, 47.5% rice polish, 10% soybean meal, 2% mineral mixture and 0.5% common salt). Flushing of breeding or pregnant sows should be followed and extra feed should be given to lactating sows to increase the litter size as well as litter weight. Dams should be dewormed 15 days before farrowing and piglets should be dewormed after 15 days of weaning. The pigs should be routinely vaccinated against Swine fever virus and Circovirus diseases as preventive health measures. Piglets should be injected with iron dextran preparations or mammary glands of sows should be smeared with ferrous sulphate



solution to prevent piglet anaemia. Piglets meant for fattening purposes should be castrated after 2 months of age. Grower pigs of same age of about 10-15 numbers can be housed in a single pen. The breeder male and female pigs should be kept in separate pens. Artificial insemination should be followed by using chilled liquid semen to enable genetic improvement in the farm. Proper care

should be taken during mating so that the same boar and sow or their relative offsprings should not be crossed repeatedly by which inbreeding can be avoided. The gilts should be selected for breeding which belongs to high litter group and their dams with more teats. Similarly, male pigs with high birth and weaning weights and early maturity should be selected for breeding.

Evaluating the performance of backyard variety CARI-Nirbheek in coconut-based multispecies cropping system

(Nibedita Nayak and AR Desai)

A progeny batch consisting of 30 CARI-Nirbheek breed chicken was raised from the parent stock and introduced at 16-week of age in a coconut-based multi-cropping system to evaluate their performance simulating the semi-intensive method of rearing in farmers' fields. The average body weight (g) for males on 17th, 20th, 30th, and 78th week was 1363, 1454, 2376, and 2581 while for females 1072, 1229, 1697, and 1752 gms respectively. The feed consumption was 80g/bird/day from 16th to 24th week and increased to 100gm/bird/day from 25th week onwards. The mortality of a few birds observed was due to predation only. The annual egg production was 3729 eggs with egg weight, shell

weight, yolk colour, and HU 52.32, 5.13, 8.43, 83.51 in the 34th week while 51.74, 7.08, 8.20, and 85.93 at the 63rd week, respectively. The total income from the poultry component was Rs 49,615 with net profit for the rearing period being only Rs 12468.5. The other benefits include the addition of droppings and loosening of soil enriches the microflora of soil thereby soil fertility. The available insects, grains, plants, and their leaves had been used as supplements in their feed which reduced the cost of production. Hence rearing poultry in this multi-species cropping system is highly sustainable and economical.

Estuarine cage culture of Pearlscale, *Etroplus suratensis* in Vembanad Backwaters, Kerala

(Sreekanth GB, Daisy K, Dinesh K, Trivesh Mayekar, Amit Patil, Saurabh Rawool, and Prasad VV)

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Cage culture of Asian seabass, *Lates calcarifer* at Mulki estuary, Mangalore, Karnataka

(Sreekanth GB, Trivesh Mayekar, Amit Patil, Saurabh Rawool, Hemraj Salian, and Jeevan Kotian)

The Mulki estuary in Karnataka is a tropical estuary with abundant seed resources of commercially important fish species such as Asian seabass, mangrove red snapper, giant trevally etc. The Asian seabass is an excellent

candidate species for estuarine cage culture and fetches about Rs. 450 per kg in the local markets. A cage culture (6 × 6 × 1.5 m) trial has been conducted in association with fishermen in a



participatory model for a period of one year during 2021-2022. The stocking density of seabass (fingerlings of 60-80 mm) was 1000 numbers per cage. The trash fish was given as feed @ 15 kg day⁻¹. The fish attained a mean growth of 1.25 kg with a total harvest of 700 kg

fish. The total cost incurred for the culture was Rs. 1.5 lakhs and the net profit obtained was 1.65 lakhs. Therefore, the cage culture of seabass can be an excellent livelihood option for farmers/fishermen along the estuarine gradient.



Identification of elite salt tolerant paddy breeding lines with high protein content

(Manohara KK and Parmesha V)

Five salt tolerant paddy breeding lines were evaluated for grain protein content in milled rice and six other physico-chemical traits including milling %, amylose %, gel consistency, etc. The paddy samples of *Kharif* 2020 harvest were analyzed during August, 2021. The quality analysis was undertaken at ICAR-National Rice Research Institute, Cuttack following the standard methods of analysis. Protein content in

milled rice was undertaken following the Kjeldhal Method. The protein content in the milled rice varied from 7.5 to 9.83 per cent. Highest protein in the milled rice was recorded in KS 19-2 (9.83%) followed by Korgut (8.33%). This is the first report of a salt tolerant genotype with higher grain protein percentage in milled rice. The other physicochemical properties of the salt tolerant genotypes are mentioned in the table.

Lines / Varieties	Milling (%)	Kernel Length	Kernel Breadth	L/B ratio	Amylose Content (%)	GC (mm)	Protein (%)
KS 16-1	69.5	5.6	2.6	2.3	23.4	29.3	7.50
KS 19-2	67.25	5.3	2.73	1.97	22.61	32.25	9.83
Goa Dhan 3	65.5	6.48	2.2	2.93	24.8	31	7.00
Goa Dhan 4	67	6.06	2.08	2.96	22.89	31	7.91
Korgut	66.25	5.49	2.52	2.17	23.21	32	8.33

Note: L/B ratio- Length and Breadth ratio; GC: Gel Consistency



NEW INITIATIVES

Smartphones as analytical chemistry laboratory for tissue nutrients and horticultural biochemicals

(V Arunachalam)

Smartphone cameras find wide applications in various research fields due to their high resolution. There are nearly 3.8 billion smartphone users across the globe. Spot test based colorimetric/spectrophotometric methods can be converted to reliable analytical chemistry tools with the help of appropriate color-measuring android apps. Frugal, quick, and reliable methods of tissue nutrients or bioactive compounds through suitable techniques are necessary to achieve the goal.

Knowledge of tissue nutrient concentration of major nutrients is crucial in the precise application of limiting nutrients to plants. A colorimetric/spectrophotometric method of potassium estimation was chosen and was suitably modified to develop a color grab android app-based potassium quantification method in banana and coconut leaf tissues. The values of L, a, b from CIE color lab were recorded to correlate the potassium content. Standard solutions of potassium and samples were used to get reliable

quantification methods. Conventional methods of measuring the color and spectrophotometric methods, and ion-specific electrodes (ISE) were compared.

Quantification of bioactive substances is crucial in the food industry and in determining the price of spices and medicinal plants at the market. A spectrophotometric method of food pigment betacyanin in amaranth leaves and glucose in areca nut leaves is conventionally used. A smartphone app color grab assisted betacyanin estimation and glucose content was attempted using L, a, b values of CIE color lab and compared with spectrophotometric method.

The work aims to develop a simple cheap and rapid method of estimation of most plant nutrients and most of the market-specific biochemical components in horticultural crops by combining an android app, nano paper-based platforms for farmers and students with resource-limited settings.

Ornamental horticulture for livelihood diversification in coastal India

(V Arunachalam and Maneesha SR)

Ornamental horticultural activities form a source of livelihood in the coastal region. Flowers and other ornamental plants are needed in plenty for all social and religious occasions. Some of the major flower markets of the country are located in the coastal region viz., Dadar, Mumbai (Maharashtra) and Thovalai, Kanyakumari (Tamil Nadu).

Ornamental nursery forms the major economic activity in coastal locations such as Kadiyam Rajamundry (Andhra Pradesh) and

Thangachimadam, Ramanathapuram (Tamil Nadu). Jasmine cultivation is a major economic activity at Shankarapura and nearby villages of Udupi (Karnataka) with geographically tagged (GI) cultivar Udupi Malliga. Nearly half of the heliconia produced in the country comes from west Godavari (Andhra Pradesh) as intercrop in coconut.

Post-harvest aspects of floral crops need special attention. Edible flowers need identification and parts without toxic compounds need to be



converted to delicacies by suitable recipes. Wealth from floral waste is a crucial area and a novel way to create livelihood opportunities through optimal technologies. Temples receive tonnes of flowers every month during festival days which later end up in rivers and lakes leading to pollution in aquatic ecosystems. Flowers become waste at different stages before or not getting harvested, after harvesting at markets by not getting sold, and after use. Floral waste can be easily converted to pigments, dyes, compost, biofuel, organic acids, and many other useful products incense sticks, papers, etc. Hence the project entitled “Agrobiodiversity, nursery techniques, and post-harvest technology

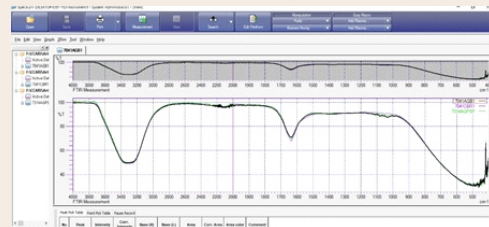
of ornamental crops for livelihood diversification in coastal India” is taken up to address these objectives to collect, conserve and characterize the jasmine, heliconia, and orchid germplasm of coastal India, to optimize the propagation techniques for ornamental crops, to optimize the post-harvest life of cut flowers, and extraction protocols for aromatic oils from flowers and also to develop wealth from floral wastes. The project anticipates delivering the output of scientific knowledge in ornamental horticulture for coastal ecology and the outcome to augment the livelihoods of coastal inhabitants through alternate ornamental crop technologies.

Biophotonic technique of Fourier Transform Infrared (FTIR) Spectroscopy for boar semen analysis and Quality Control

(Gokuldas PP, Amiya Ranjan Sahu and Bappa Das)

Most of the conventional methods used to evaluate seminal parameters and determine sperm fertility are based on general sperm characteristics like motility, morphology, and integrity of organelles. However, there exist difficulties in standardizing the techniques and results are sometimes discrepant as they depend on the technique and conditions under that they are performed. Recently, minimally invasive biophotonic techniques like Fourier Transform Infrared (FTIR) Spectroscopy have been used to explore molecular composition and biochemical variations in biological samples. FTIR technique enables the non-perturbative, label-free extraction of information and images toward diagnosis and the assessment of cell functionality. There exists a good scope to detect characteristic alterations in different semen samples, to distinguish good quality from poor quality, age-wise comparison of samples and to study membrane phase transitions, biochemical

and metabolic alterations, especially in frozen and thawed semen samples for assessing the freezability. To explore the potential of FTIR Spectroscopy in semen analysis, pilot studies on sample processing and standardization for semen profiling and quality control of indigenous pig semen were initiated using Shimadzu® IRTracer-100 and Attenuated Total Reflectance (ATR) as a sampling technology. Optimal spectra for pig semen could be obtained in mid-infrared region (wavelengths between 2.5 to 25 μm) with 2 cm^{-1} spectral resolution, 40 as scan number (n) and Happ-Genzel function as method for apodization.



FTIR Spectrograph of pig semen sample obtained in mid-infrared region



Dairy cattle microchip tagging, herd stock details, and corresponding production and fertility data were collected and digitalized for developing a prototype module of digital record management system for smart dairy farming that will enable farmers and other end users to conveniently monitor herd performance and farm management. Conventional record keeping in dairy cattle unit was transformed into a more advanced data-driven digital platform which incorporates an online recording of individual

animal production details, animal health and breeding data, herd and medicine stocks, etc. The developed system based upon important farm data gathering can be useful for increased levels of quality and production through efficient record keeping, smart monitoring of herds, and as well as through real-time assessment of dairy farm productivity.

Digital Dairy Management System												
Daily Milk Record												
Date	X-62D	GIR 871	GIR 876	25B4	GIR 767	E24D	X 71	GIR 659	X 68	IFS B	E 25B	
02/01/2021	4.5	6.2	5	8.2	7.3	6.2	1.6	6.7	3.8	0.5	1.2	
02/02/2021	4	7.7	4.3	8.5	6.6	5.8	1.7	7.5	4	0.5	1	
02/03/2021	3.8	7.5	4.4	8.6	7.2	6.8	1.7	7.2	3.9	0.5	1.3	
02/04/2021	3.3	6.4	4.4	8	6	6.2	1.8	7	3.6	0.5	1.3	
02/05/2021	3.6	6.5	6.2	8.6	7.5	6.7	2	7.7	4.1	0	1.5	
02/06/2021	3.4	6.4	5.7	8.7	6.5	6.2	1.8	7.7	3.8	0	1.2	
02/07/2021	3.8	6.1	6	9.2	6.9	6.5	1.8	7.6	4.1	0	1.4	
02/08/2021	3.9	6	7.1	8.5	6	5.9	1.6	7.1	3.9	0	1.4	
02/09/2021	3.7	6.4	6.1	9.3	6.8	6.2	1.5	6.8	3.7	0	1.3	
02/10/2021	3.5	6.6	6.9	9.1	6.2	6.1	1.9	7.3	4	0	1.3	
02/11/2021	4.1	6.6	6.4	8.9	7.3	6.5	1.5	7.7	4.1	0	0.9	
02/12/2021	3.3	6.5	4.9	8.3	6.1	6.2	1.4	7	3.4	0	1.2	
02/13/2021	3.2	6.7	6	8.6	5.1	6	1.5	7.3	3.3	0	1.4	
02/14/2021	3	7.4	6.3	8.2	5	6	1.5	7.7	3.5	0	1.3	
02/15/2021	3.2	7.2	6.1	8.2	5.9	5.7	1.7	7.5	3.2	0	1.2	
02/16/2021	2.9	6.9	6.2	8.2	6.3	4.7	1.5	7.2	3.4	0	1.2	
02/17/2021	3.5	6.8	6.6	8.25	7	6.7	1.5	7.4	3.5	0	1.5	
02/18/2021	3.3	6.9	6.4	8	6.5	6.7	1.5	7	3.2	0	1.5	
02/19/2021	2.5	6.2	6.3	8.2	6.8	5.3	1.5	6.9	3.1	0	1.2	
02/20/2021	2.7	6.2	6.4	8.6	6.9	6.2	1.7	6.8	3.2	0	1.5	
02/21/2021	2	6.5	6.5	8.7	6.6	6.7	1.5	7.3	2.8	0	0.5	
02/22/2021	1.8	6.1	6.2	7.5	5.8	6.2	1.1	7.2	3.3	0	1	
02/23/2021	1.2	6.2	5.7	7.5	5.8	6.2	1.6	7	3.6	0	1.3	
02/24/2021	1.2	6.4	5.7	7.6	5.6	6.4	1	6.9	3.7	0	1.4	
02/25/2021	1	6.7	6.1	7.9	5.8	6.6	1.2	7.4	3.1	0	1.5	
02/26/2021	1	6.7	5.8	8.7	6.2	6.1	0.5	6.9	4.1	0	0	
02/27/2021	0.5	6.9	6.1	8.7	6.2	6.3	0	7.1	3.5	0	0	
02/28/2021	0.5	6.5	4.9	8.1	6.5	6.6	0	7.1	3.5	0	0	



ITMU/IPR Cell Activities

(September 2021 to December 2021)

Patent Filing:

- A response to First Examination Report (FER) was filed in the patent application (PA #201621012413) entitled 'Process for Preparing Cashew Apple Crunch and Resultant Food Product thereof' by the Institute IPR Attorney at the Patent Office on September 22, 2021
- In the patent application (PA#202021042421) entitled 'Device and Method for Unmanned Harvesting of Nut & Fruit', which is a joint application from ICAR-CCARI, Goa & Goa University, Complete Specification was filed at the Patent Office on September 30, 2021
- Initiated process for filing provisional patent application entitled 'Method and System for Detection of Stem and Root Borer Infestation' through the Institute IPR Attorney

MTA Signed:

- A Material Transfer Agreement for salt-tolerant brinjal rootstocks, germplasm seeds with ICAR-IIVR, Varanasi was signed on 24-12-2021 as per the *26th meeting of ICAR regional committee meeting No. VII held in August 2021*



EVENTS

Tribal empowerment programme by ICAR-CCARI: distribution of fishing inputs to traditional fishermen of Goa

The institute organized a Scheduled Tribe Component (STC) programme for the welfare of tribal fishermen of Goa settled along the Zuari estuary. About 100 traditional fishermen operate currently in the Zuari estuary distributed in villages; Nauxim, Cacara, Shirdhona, Bambolim and Odxal, Tiswadi Taluka, North Goa. and about 400 fish and shellfish species are identified from the estuaries through the participatory approach. In the recent past, natural disasters and the current covid-19 pandemic impacted the fisheries livelihood in the coastal region. In this context to support the fishermen, a programme was organized on 29th May 2021 at the Institute in which 200 kg of fishing nets and 24 cast fishing nets were distributed to 25 tribal fishermen of Shree Sateri Fishermen co-operative society from Tiswadi Taluka. Dr. Parveen Kumar, Director, ICAR-CCARI welcomed the members of the society in presence of Dr. Smita Mazumdar, Deputy Director, Directorate of Fisheries, Govt. of Goa; Mr. Namdev Naik, Sarpanch (St. Cruz); and Dr. Paramesha V, Scientist (Agronomy) and STC coordinator, ICAR-CCARI. The director appreciated the efforts of fishermen in

supporting the institute to document, conserve and manage the fishery of the estuary. Deputy Director of Fisheries welcomed the great initiative from the institute and ensured complete co-operation from the directorate for research and extension activities. The members also appreciated the efforts of the institute in improving the fishing conditions, income and livelihood of the fishermen. They also assured continued participation in research and development activities. Dr. Sreekanth GB, Scientist (Fisheries resource management) and Dr. Trivesh Mayekar, Scientist (Fish genetics and breeding) co-ordinated the programme.



Farewell Programme in Honour of Dr. E. B. Chakurkar, Dr. B. L. Kasinath and Shri Dhaku N. Kankonkar on 31-05-2021

A farewell programme was arranged by the Staff Welfare Committee in honour of Dr. Eaknath Bhanudasrao Chakurkar, Ex-Principal Scientist (Animal Reproduction)/Director (A), Dr. Begur Lakshminarasimhasastry Kasinath, Principal Scientist and Head KVK, North Goa and Shri

Dhaku Nuno Kankonkar, Skilled Support Staff on 31st May 2021 at 3:00 PM on Zoom. Dr. E.B. Chakurkar, Ex-Principal Scientist (Animal Reproduction)/Director (A) was relieved from this Institute on 28-04-2021, on account of his selection to the post of Director, ICAR-Central



Island Agricultural Research Institute, Port Blair. Dr. B.L. Kasinath, Principal Scientist and Head KVK, North Goa and Shri Dhaku N. Kankonkar, Skilled Support Staff retired on superannuation on 31-05-2021.

Dr. Parveen Kumar, the Director, presided over the function. The three Chief Guests were felicitated by Dr. Parveen Kumar, with a bouquet, a shawl, and a coconut. The Staff Members shared their memories/experiences with the three Chief Guests and wished them a happy and successful future.



ICAR - Central Coastal Agricultural Research Institute organized state level Interface meeting with line departments of Goa State

The ICAR - Central Coastal Agricultural Research Institute (ICAR - CCARI), organized State level Interface meeting with the Directorate of Agriculture, Government of Goa on 3rd June 2021 and with the Directorate of Animal Husbandry & Veterinary Services and Directorate of Fisheries on 4th June 2021 at ICAR CCARI, Old Goa following covid-19 protocol. Dr. Parveen Kumar, Director, ICAR-CCARI Chaired the meeting and highlighted the significant achievements of the Institute. He also emphasized collaboration with line departments to popularise Institute technologies among the farmers of Goa State to increase their income and livelihood security.

Mr. Nevil Alphonso, Director, Directorate of Agriculture, Government of Goa, Dr. Nitin Naik, Assistant Director, Department of Animal Husbandry & Veterinary Services and Shri. Chandrakant Velip, Deputy Director, Directorate of Fisheries were present on the occasion and raised issues concerning their respective departments. The meeting was attended by Scientists of ICAR-CCARI, Subject Matter Specialists of Krishi Vigyan Kendra, North Goa, and officials of all three development

departments. The agenda points received from all the three development departments were discussed at length and the action points have been identified with a timeline. The meeting was coordinated by Dr. Manohara, K. K., member secretary (IRC).



Tribal empowerment by usage of improved coconut elite seedlings and coconut climbing devices

Coconut palm is an important horticultural crop and the State fruit of Goa which contributes an amount of Rs 225 crores to the state economy. It is a multi-purpose palm and the fruit is used extensively in Goan recipes.

Good seedlings from elite mother palms form the basis for obtaining high productivity of coconut gardens. Management of coconut palm by timely harvest and plant protection operations demands manual climbing which requires skill. Manual climbing poses an occupational hazard to farm workers of coconut gardens. Hence, padeli the person (climbing coconut) is a vanishing occupation making the harvest of coconut a challenging job. Hence under the Scheduled Tribe Component (STC) formerly known as Tribal Sub Plan (TSP) an attempt was made to train tribal people to popularise the improved planting material and simple coconut climbing devices and to provide the seedlings and devices free of cost. On 1st June 2021 at the Institute a total of 15 beneficiaries belonging to Divar village island of

Tiswadi taluk were provided with coconut climbing devices and coconut seedlings. With the help of climbing devices, the livelihoods of tribal people of the villages receive a boost. Using the devices, the farmers reduce their drudgery, harvest coconuts at regular intervals, and carry out timely intercultural operations to improve the productivity of coconut palms. The activity also brings confidence among the farmers in using the device and motivates neighbouring farmers to use the device. Dr V Arunachalam, Principal Scientist (Horticulture) coordinated the program.



ICAR-CCARI, Goa established Nakshatra Garden on World Environment Day 2021

ICAR-CCARI, Goa celebrated World Environment day on 5th June 2021 by establishing Nakshatra Garden. The Director, scientific, administrative and technical staff attended the programme by following Covid-19 protocols. Dr. Monica Suresh Singh, SMS, KVK, North Goa welcomed the gathering and Dr. Maneesha, S.R. Scientist (Horticulture) gave brief description on 2021 theme of the World Environment day "**Reimagine, Recreate, Restore**" and also briefed about importance of specific plants to be grown in Nakshatra garden. In his address Director, Dr. Parveen Kumar highlighted the significance of celebrating World Environment

day by showing respect to mother Earth. Also, he has read out a pledge to everyone gathered to protect our ecosystems and natural assets by adopting various measures like tree planting, cleaning river and water bodies, changing diet etc. The main component of the programme was planting of auspicious tree saplings by the Director and staff in the Nakshatra garden of Farm-C of the Institute. The programme was coordinated by Dr. Susitha Rajkumar, Dr. Maneesha S.R., Mrs. Sunetra Talaulikar, SMS (Home Science) Dr. Monica Singh, SMS (Agril. Extension), Mrs. Aviprit V. Janjal, and Ms. Shishira D., Young Professionals from the AET project. The



The uniqueness of this programme was that the whole programme was conceptualized and



organized by the ladies staff of ICAR-CCARI. The programme ended with vote of thanks.

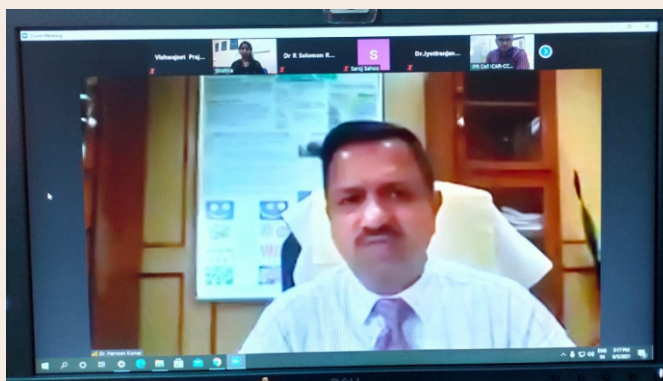


Webinar under 'Bharat Ka Amrut Mahotsav' on the theme "Animal Health and productivity"

In commemoration of India's 75 years of Independence as Bharat Ka Amrut Mahotsav, ICAR-Central Coastal Agricultural Research Institute, Goa conducted webinar on "Animal Health and productivity" on The uniqueness of this programme was that the whole programme was conceptualized and organized by the ladies staff of ICAR-CCARI. The programme ended with vote of thanks. June 5th, 2021 on a virtual platform. The topic of the webinar was 'Small scale dairy processing for doubling farmer's income' which was presented by Dr. Archana Chandran, Assistant professor, College of Dairy Science and Technology, KVASU, Pookode, Kerala. Dr. Archana Chandran is a master trainer under the programme 'Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME)' in Kerala and has trained many master trainers in small-scale dairy processing aspects.

Dr. R.S Rajkumar, Scientist (LPT) welcomed all the participants and gave brief background of the speaker. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa, explained the objective of the lecture series conducted by ICAR institutes to mark India's 75 years of Independence besides the importance of animal health in increasing the

productivity and net returns of the dairy farmers and the need for small scale dairy processing in the current scenario of Covid-19, where the demand for fresh milk/meat has reduced drastically, especially in Goa. The programme was attended by 54 participants from Odisha, Kerala, West Bengal, and Goa which included farmers, woman entrepreneurs, scientists, subject matter specialists, technical staff of the institute, and outside. Dr. Archana's presentation included dairy processing methodologies, and the preparation of various products such as Ghee, fermented products- shrikhand, curd, probiotics, yoghurt, etc. She also showed videos of the preparation and setting of processing plants for small dairy processing.



Distribution of Kokum and Jackfruit as raw materials for processing and value addition

Raw and ripe jack fruits (31 nos.) and kokum fruits (100 kg) were distributed to 15 ST groups of farmers from Divar island, Goa on 28th May 2021 for processing and value addition. The group members are highly active and actively involved in fruit processing. Kokum fruits are mostly converted as sal (dried rind) and kokum sharbat. Raw jack fruit is used for chips preparation and ripe ones are used for leather making. The leader of the group Mrs. Rina Dzouza, Dr. Paramesh, V. (STC & SCSP coordinator of the institute), Mr. Datta Velip (Technical officer) and Dr. Maneesha S.R., Scientist (Fruit

Science) were present in the distribution programme. The programme was conducted following the COVID-19 protocols.



ICAR-CCARI, Goa organized webinar on "VEGFAST™ technology to increase the vegetable production in coastal regions"

In commemoration of India's 75 years of Independence Bharat Ka Amrut Mahotsav, ICAR-Central Coastal Agricultural Research Institute, Goa conducted a webinar on "VEGFAST™ technology to increase the vegetable production in coastal regions" on 15th June 2021 which was presented by Er. Sukhwinder Singh, Principal Scientist, ICAR-CPRS, Jalandhar (Punjab). The VEGFAST™ technology is one of the trademark technology for urban gardening developed by ICAR-Central Potato Research Station, Jalandhar. This promising technology has tremendous scope in the state of Goa, where healthy and fresh vegetables can be grown on the terraces, balconies, and rooftops of housing societies, restaurants, hotels, and beachfront. The programme was attended online by 100 stakeholders (Ag. Dept. Goa state officials, vegetable growers from Goa and other coastal districts, resident welfare association executive, ICAR institute scientists, scientific and technical staff of CCARI & KVK, Goa, etc.) in zoom platform

(maximum capacity) and about 50 participants on Facebook Live from various states of the country. The Chief Guest of the webinar, Shri Kuldeep Singh Gangar IAS, Secretary (Agriculture), Govt. of Goa lauded the efforts of ICAR-CCARI, Goa in sensing the urgent need of Goa state regarding the shortage of vegetable production and emphasized for close collaboration of ICAR-CCARI, Goa and Directorate of Agriculture, Govt. of Goa to boost the vegetable production in the state of Goa. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa, highlighted the need for technologies such as VEGFAST™ for the state of Goa to make Goa self-reliant in vegetable production and reduce its dependence on Karnataka and Maharashtra. Dr. S.K. Pandey, former Director, ICAR-Central Potato Research Institute, Shimla in his remarks emphasized the initiation of VEGFAST™ technology on pilot project mode in Goa state in collaboration with ICAR-CCARI, Goa. Dr. Shivasharanappa N, Senior Scientist, Dr. R.



Solomon Rajkumar, Scientist (LPT) and Dr. Chaudhari Ganesh Vasudeo, Scientist (Vegetable Science) coordinated the webinar



Distribution under Scheduled Tribe Component (STC) and Schedule Caste Sub-Plan (SCSP) of Institute Budget Head

Seven farmers from Goa were distributed with piglets (20 nos.) under STC of Institute Budget Head on 28.05.2021. Nine farmers from Goa were distributed with chicks (540 nos.) and poultry eggs (792 nos.), medicinal supplements and extension folders (2 nos. each) under STC of Institute Budget Head on 27.05.2021. Ten farmers from Goa were distributed with chick feed (0.5 ton) and grower feed (0.5 ton) and extension folders (2 nos. each) under STC of Institute Budget Head on 29.05.2021. Eleven farmers from Goa were distributed with poultry feederers (50 nos.) and waterers (50 nos.), and

extension folders (2 nos. each) under SCSP of Institute Budget Head on 15.06.2021.



KVK, North Goa, and ICAR-CCARI, Goa organized a webinar on 'Balanced use of Fertilizers and Vermicomposting'

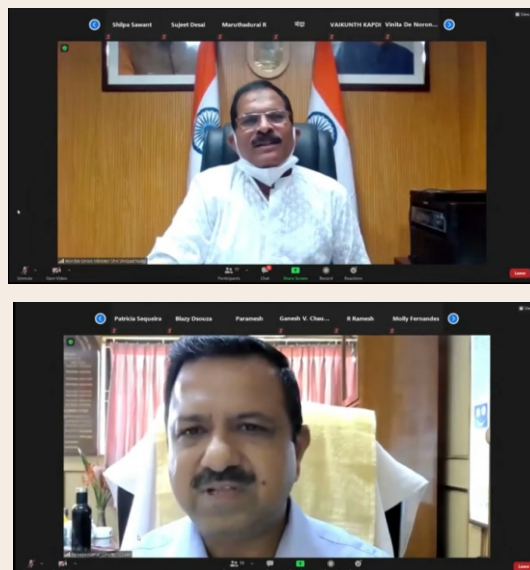
ICAR – Krishi Vigyan Kendra, North Goa, and ICAR – Central Coastal Agricultural Research Institute, Goa, organized a webinar as a Farmers Awareness campaign on 'Balanced use of Fertilizers and Vermicomposting' on 18th June 2021 through virtual mode following all the SOPs of the COVID-19. The programme was organized in commemoration of India's 75 years of Independence as Bharat Ka Amrut Mahotsav. Hon'ble Shri Shripad Naik, Union Minister of State, Ministry of AYUSH, and Minister of State for Defence, Government of India graced the occasion as Chief Guest. The average fertilizer NPK used in the State of Goa is 38 kg/ha which is

considered a suboptimal application. Thus, a programme was organized with the aim to raise awareness among the farmers about the balanced use of fertilizers and how to do vermicomposting. Almost 75 participants comprising farmers, scientists, staff of KVK, and other stakeholders attended the programme. Dr. Parveen Kumar, Director, ICAR – CCARI, Goa welcomed the Chief Guest. In his welcome address, he signified the importance of the balanced use of chemical fertilizers to improve agricultural production, productivity, and farmers' income. He presented the significant



achievements of the Institute and its role in sustainable agricultural development of State of Goa to make it self-reliant. In the context of the programme, he highlighted the information technology tool developed by the Institute, 'Fertilizer Calculator Goa'. Further, he told about the research and development done by the Institute on developing organic agricultural practices for different crops. Hon. Shri Shripad Naik, Chief Guest, in his address, highlighted upon how soil health and human health are strongly interlinked which is also one of the important aspect of AYUSH. He stressed upon the soil fertility-related constraints of the State of Goa and need to correct them through scientific approaches. He urged the farmers to do soil testing and ensure balanced use of fertilizers through soil test-based fertilizer application. He complimented the efforts of the ICAR-CCARI and its contribution to agricultural development in the State of Goa. The technical session covered 'Vermicomposting' by Shri Shashi Vishwakrama, Technical Officer (Soil Sciences),

ICAR - KVK, North Goa, and 'Balanced use of fertilizers' by Dr. Gopal Mahajan, Scientist (Soil Science), ICAR – CCARI, Goa. The programme ended with vote of thanks by Dr. Monica Suresh Singh, SMS (Agril. Extn.), ICAR – KVK, North Goa. Mr. H. R. C. Prabhu, Sr. Scientist and Head Incharge, ICAR - KVK, North Goa coordinated the overall programme.



Distribution of poultry germplasms and other inputs under SCSP scheme of Poultry Seed Project (PSP)

The distribution of poultry chicks, medicines, feed and extension bulletin for the farmers belonging to the SC community was carried out at ICAR- Central Coastal Agricultural Research Institute, Goa for the year 2020-21. Total of eleven farmers were provided each with sixty numbers of poultry chicks along with poultry medicine containing Vimeral (500 ml), Fenbendazole bolus (150 mg), Baycox 1 liter), Ceflax (20 gm sachet), Groviplex (5 liters), Supercox power (100g) and tetracycline power (100g sachet). The chick feed and grower feed were also provided to them. This was carried out

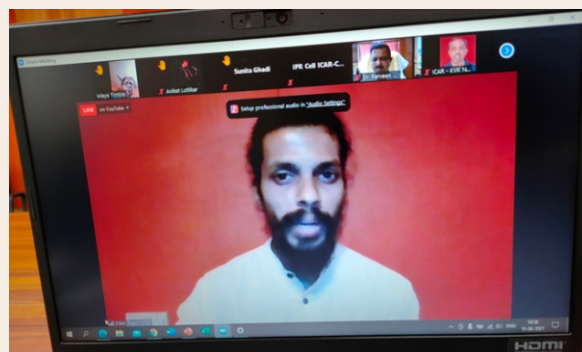
under the SCSP scheme of the Poultry Seed Project (PSP).



Awareness Programme on World Yoga Day

An online awareness programme on “Yoga for Respiratory & Immunity” was organized on 19th June 2021, for the benefit of farmers, farm women, staff of Krishi Vigyan Kendra and ICAR – CCARI, Old Goa. The programme started with a brief introduction by Mrs. Sunetra Talaulikar, SMS (Home Science), who told about present-day challenges to fight against COVID-19 pandemic and stress management. Shri H.R.C. Prabhu, Sr. Scientist and Head I/C welcomed all the dignitaries and participants and spoke on the importance of Yoga in life. Dr. Parveen Kumar, Director, ICAR – CCARI in his address briefed on the science of yoga its role in increasing immunity of our body to fight the pandemic and also fitness of mind. Shri. Dikar Pagui, Yoga Veera from Isha

Foundation, spoke on Sadguru Yoga and its benefits in boosting immunity. He also demonstrated Simhakriya, Shrashtanga, and Makarasna to enhance lung capacity and improve immunity. The programme was attended by 70 participants.



Field Day at Gaodongari village and Farmers-Scientists Interaction under Scheduled Tribe Component at Canacona

A team of scientists comprising Dr. A. R. Desai (Principal Scientist & Section-in-charge, Horticulture), Dr. Sujeet Desai (Scientist, Land and Water Management Engineering), Dr. Uthappa A. R. (Scientist, Agroforestry), Dr. Shripad Bhat (Scientist, Agril. Economics), Dr. Ganesh Vasudeo Chaudhari (Scientist, Vegetable Science) and Dr. Paramesha V. (Scientist, Agronomy & STC Coordinator), visited FLD plots at Ziltawadi and Satorlim in Gaondongrim Panchayat, Canacona and organized a Field Day on 30th June 2021 for an active Farmers-Scientists Interaction under the Scheduled Tribe Component (STC). All the scientists and the ST farmers of SHGs went around FLD plots on cashew production technology and productivity enhancement in the coconut-based cropping system and reviewed the progress of the

activities and discussed further action plans. The team witnessed the satisfactory establishment of cashew grafts and intercrops viz., tuber crops, black pepper, etc., and ascertained the benefits accrued under the programme. Farmers expressed satisfaction with the technological interventions and thus informed about enhanced the income of all the group members, especially through additional yield of intercrops like finger millet, and tuber crops in the previous seasons. They also expressed the increased yield in coconut resulting in increased income. The impact of technological interventions through the farm machinery provided to the groups was very evident in increased labour efficiency and savings in costs due to these interventions. Discussions were held on deciding the interventions in these farms for the upcoming



kharif and rabi seasons. After taking into account the prevailing conditions and the problems faced by the farmers, the scientists' team designed the interventions for future action plans involving the planting of Arka Meghana chilli, improved varieties of bamboo in the borders, and black pepper in coconut garden in the current season (Kharif); Mung bean, cowpea, sweet-corn, and introduction of fish-culture component in the rabi season.

The above scientists' team also visited the new FLD plot on cashew initiated recently at Cotigao village. Under the STC programme, 'Mahadev Self-help group, Cotigao' is provided with grafts of improved Cashew varieties for FLD programme in their community-owned land through the Sarpanch of Cotigaon village panchayat. The team demonstrated the planting of the grafts (Goa Cashew 1 to Goa Cashew 4 and other promising accessions) in this FLD and discussed with farmers on the suitable

interventions for the existing conditions.

Besides the above, the team visited the field at Badsare village where interventions on rainwater harvesting were undertaken by establishing a silpaulin polyfilm-lined water harvesting pond and a farmers-scientists interaction was held for further action plans in the current and rabi season.



ICAR-CCARI organises the National Campaign on “Ecosystem management for sustainable fisheries” on National Fish Farmers' Day

National Fish Farmers' Day is celebrated every year on 10th July to commemorate the scientists' Dr KH Alikunhi and Dr HL Chaudhury who had invented induced breeding technology for the Indian Major Carps. In this prestigious year of Bharat Ka Amrut Mahotsav, a National Campaign was planned entitled "Ecosystem Management for Sustainable Fisheries" for celebrating the fish farmers' day to ensure the sustainability of fisheries resources, seed resources and brooders from the natural aquascapes. All the institutes concerned with fisheries research and development in India participated in this campaign. Estuaries of Goa such as Mandovi and Zuari support fisheries livelihood to thousands of fishermen, hundreds of fish farmers, fresh fish to

the inhabitants and also form an integral part of Life in Goa. In this context, ICAR-CCARI organized this campaign with the fishermen and farmers of Zuari estuary at Cacara fishing village to discuss various challenges to fisheries sustainability. A total of 40 participants from different fishing villages such as Cacara, Odxel, Nauxim, Bambolim, and Siridao participated in the event. Dr. Parveen Kumar, Director, ICAR-CCARI interacted with fishermen and assured full scientific support to conserve and manage the fisheries resources in the natural waters of Goa. He also urged the fishermen to use large meshed gillnets to reduce the juvenile catch and growth overfishing in the estuaries. Dr. Baban Shruvan Ingole, Emeritus Scientist, ESSO-NCPOR and



former head, Biological Oceanography Division, CSIR-NIO described the various anthropogenic pressures such as overexploitation, pollution, habitat degradation, and invasive species that could seriously impact the fisheries resources of estuaries and rivers. He also urged the fishermen support to revive the mussel, oyster and clam beds of the estuaries in a participatory mode so as to provide sustainable livelihood to the youth and women along the coastal region. Dr. Shivasharanappa N, Senior Scientist and Section In-charge, Animal Science and Fisheries emphasized the importance of the day and ensured all technical support to fishermen and farmers in conserving and managing the fishery for future generations. The fishermen also responded and wished for scientific and technical support from ICAR for various welfare schemes in the field of fisheries. They also requested assistance in preparing applications for the schemes from the developmental departments.

Finally, they assured continuous support for the scientific research of ICAR and other organizations. A compilation of four research posters displaying the fisheries resources of Goa was also distributed among the fishermen and farmers. Dr. Sreekanth GB, Scientist (Fisheries resource management), and Mr. Trivesh S Mayekar, Scientist (Fish genetics and breeding) co-ordinated the national campaign.



ICAR-CCARI, Old Goa celebrated 'Tree Planting Campaign' under Bharat Ka Amrut Mahotsav on the occasion of 93rd ICAR Foundation Day

ICAR-Central Coastal Agricultural Research Institute, Old Goa organised a 'Tree planting campaign' on 16th July 2021 at 10:30 am on the occasion of 93rd ICAR Foundation Day under Bharat Ka Amrut Mahotsav as 75th year of Independence of India. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa greeted all the participants of programme on ICAR foundation Day. He highlighted the importance of planting trees from environmental and ecological sustainability point of view and for improving farmers' livelihood. The Sub-Mission on Agroforestry (SMAF) was launched in 2016-17 to encourage and expand tree plantation on

farmlands, with the motto of "Har Med Par Ped", along with crops/ cropping system, as the agroforestry helps in creating an additional source of income to farmers and carbon sequestration. The main objective is to improve productivity, ecosystem services and improve livelihood security of farmers. On this occasion, tree planting was done and a drive was initiated to plant 200 trees of different species including teak on the bunds of the C Block of the Institute. About 50 seedlings of the teak were provided by the Department of Forest, Government of Goa, Goa. A total of 50 participants were present on the occasion and all actively participated in the



tree plantation campaign. A brief talk was also delivered on 'Har Med Pe Ped' for improving livelihood of the farmers.



Field Day at Bandora village and Farmers-Scientist interaction under Scheduled Tribe Component at Ponda

Dr. Paramesha V. (Scientist, Agronomy & STC Coordinator), visited FLD plots at Farmagudi, Bandora village in Ponda and organized a Field Day on 19-07-2021 for an active Farmers-Scientist Interaction under the Scheduled Tribe Component (STC). In this Field day, all the scientists and the ST farmers of SHGs went around FLD plots on vegetable production technology and productivity enhancement of local vegetables like bitter gourd, cucumber, snake gourd, pumpkin etc. reviewed the progress of the activities and discussed further action plans. The team witnessed the satisfactory establishment of vegetables (bitter gourd, cucumber, snake gourd, pumpkin) under terrace system and ascertained the benefits accrued under the programme. Farmers expressed satisfaction with the technological interventions like nutrient and pest management and thus informed about the enhanced income of all the group members. Discussions were held and after taking into account the prevailing conditions and the problems faced by the farmers, the scientists'

team designed the interventions for the future action plan.



Stakeholders Consultation Meeting organized by ICAR-CCARI, Goa

The ICAR-Central Coastal Agricultural Research Institute, Goa organized a stakeholders' consultation meeting on enhancing the effectiveness of research and seeking opinions on future directions of research on 31st July 2021 through virtual mode under the Chairmanship of Dr. Parveen Kumar, Director, ICAR-CCARI, Goa. Dr. Parveen Kumar highlighted the achievements of the Institute and briefed about the objectives of this stakeholders' meeting such as assessing the research needs of the stakeholders to finalize the research agenda and refine the existing technologies for wider dissemination in the coastal region. Panellist, Mr. Shree Padre, Editor of Farm Magazine, Kasaragod, Kerala emphasized the importance of value addition in horticultural crops, especially at the farm level. Dr. Mahendra Bale, Assistant Manager, Goa Milk Union, Goa deliberated on issues like feeding and management aspects, repeat breeding in dairy animals, mineral mixture deficiency, availability of proven semen doses, and early detection and treatment of mastitis. Dr. Dinesh K, Associate Professor & Head, Dept of Aquaculture, KUFOS, Kochi, Kerala accentuated the potential of aquaculture through aquaponics, cage farming,

and biofloc technology in coastal region. An interaction was held with the stakeholders to assess the research needs, to identify issues faced by the farmers, fisher folk, entrepreneurs, and other stakeholders from the coastal region, and feedbacks were received. A total of 60 participants involving progressive farmers, entrepreneurs, processors, representatives from KVKs of coastal districts, state government officials, Agricultural Research Stations and other stakeholders from Maharashtra, Goa, Karnataka, Kerala, West Bengal and other coastal states along with scientists of the Institute participated in this meeting.



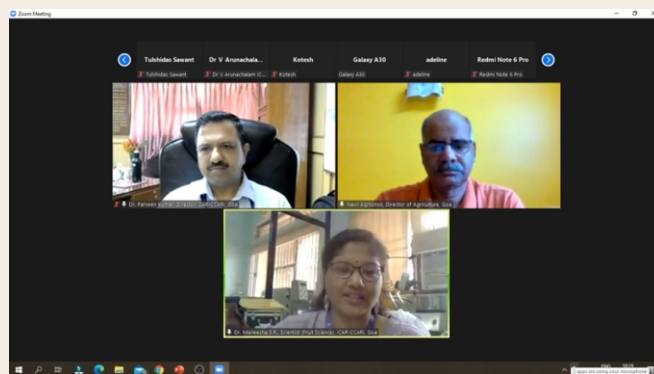
Training programme on 'Management of canopy architecture'

ICAR-Central Coastal Agricultural Research Institute has organized a virtual training programme on the management of canopy architecture with special emphasis on the mango on 7th August 2021 in collaboration with Regional Fruit Research Station (RFRS), Vengurla center of BSKKV, Dapoli. Dr. Parveen Kumar, Director, ICAR-CCARI emphasized the importance of canopy management in fruit crops like mango in his welcome speech and virtually felicitated Mr. Nevil Alphonso, Director (Ag.)

Govt. of Goa. In his introductory remarks, Mr. Nevil Alphonso pointed out the reasons for the low production of mango. He agreed to add the protocol of canopy management of mango in the state package of practices for increasing productivity and quality of mango. He also requested more trainings may be organized in the future in physical mode on canopy architecture in different crops of Goa. A lecture on 'Concepts and practices in mango canopy management' was delivered by Dr. Maneesha S.R.,



Scientist (Fruit Science), ICAR-CCARI, Old Goa. Dr. Ajay Yashwant Munj, Assistant Professor, RFRS, Vengurla, BSKKV, Dapoli delivered a lecture on 'Pest and disease management after rejuvenation in mango'. Around 60 farmers/ officials of Agriculture department of Goa participated virtually and interacted with experts in this virtual training programme. Vote of thanks was proposed by Dr. Maneesha S.R.



32nd Institute Research Council (IRC) meeting conducted

The meeting of 32nd Institute Research Council was held from 9-13th August 2021 in a hybrid mode following COVID-19 protocol. Scientists from respective section presenting on a particular day were present in the meeting hall and rest attended the meeting in the virtual mode. The meeting was chaired by Dr. Parveen Kumar, Chairman, IRC and Director, ICAR-CCARI, Goa. In his opening remarks, he expressed his happiness over the achievements of the Institute and lauded scientists for their research accomplishments, awards and recognition. He urged all the scientists to take up demand-driven and need-based quality research with good impact of the technology. He also opined that regular meetings with stakeholders must be conducted for getting feedback and prioritize the research methodologies. During the meeting, project-wise progress of research work was

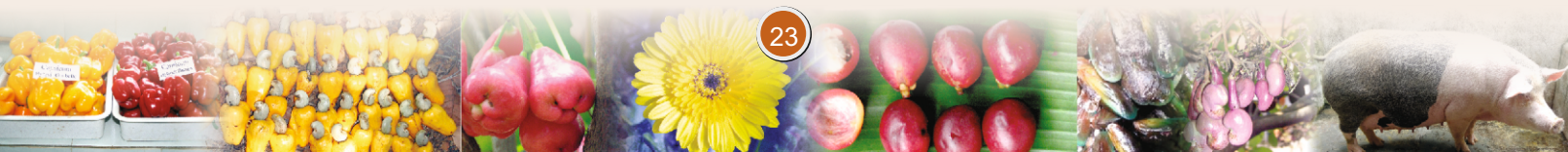
reviewed and the technical programmes were finalized. The PIs of various research projects presented the work done in their respective projects and then presented the future plan of work. The plans of work were discussed thoroughly and modified wherever required before being approved by the house. Dr. Manohara, K. K., member secretary, IRC thanked Director and all the scientists for their cooperation in the successful completion of the meeting.



ICAR-CCARI, Old Goa celebrated 75th Independence Day on August 15th 2021 under Bharat Ka Amrut Mahotsav

In commemoration of 75 years of India's Independence, ICAR-Central Coastal Agricultural Research Institute, Old Goa has celebrated Independence Day as Bharat Ka Amrut Mahotsav on August 15th, 2021 with traditional gaiety and fervour. Dr. Parveen Kumar, Director of the institute hoisted the tricolour and expressed

gratitude to the freedom fighters and to all the staff of ICAR-CCARI who have developed the technologies that benefited more than 50,000 farmers in last 45 years of institute's establishment. He sketched the future roadmap of the institute's research for developing climate-resilient technologies to increase the income of



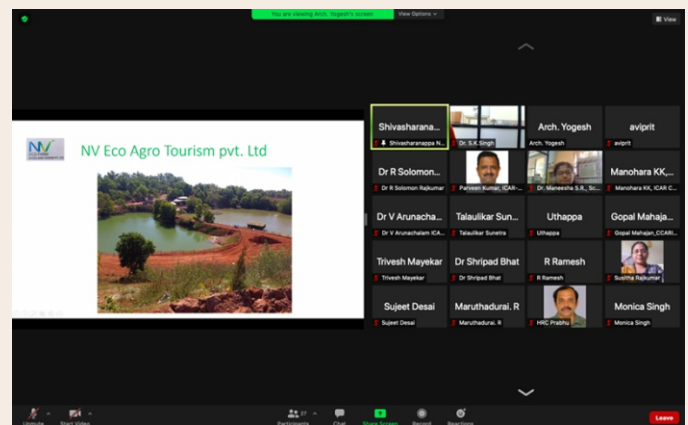
the farmers in the coastal region. The Director on this occasion also felicitated the meritorious children of staff and presented appreciation awards for outstanding staff members of the institute. The programme was coordinated by Mr. Somnath, Senior Administrative officer of the institute.



ICAR-CCARI, Old Goa organized a webinar series on Agro-ecotourism on August 18th, 2021 under Bharat Ka Amrut Mahotsav

ICAR-CCARI, Old Goa has organised a webinar series on agro ecotourism (AET) on 18 August 2021 under Bharat Ka Amrut Mahotsav. Dr. R. S Rajkumar, Scientist and Coordinator of Agro-Ecotourism Center of the institute welcomed the experts and participants. In his opening remarks, Dr Parveen Kumar, Director, ICAR-CCARI, Goa emphasized that the institute is mandated to develop and promote various sustainable AET models for east and west coastal regions of India. By this, the agri-entrepreneurs, as well as farmers, can be encouraged in bringing value addition and glamour to agriculture and allied activities for increasing the income of farmers besides attracting youth in agriculture. The webinar series included topics on “Sustainable development planning for farms with Agro-ecotourism model in Goa: experiences and future strategies” delivered by Shri Mahesh Patil, Chairman (Agriculture & Food Processing Committee), Goa Chamber of Commerce and Industry which emphasized particularly on development of AET models with diversified activities for mine-affected areas in coastal region. During this session, one project proposal on “Reclining life into Khazan lands of Chorao Islands through Agro-ecotourism” by Shri. Yogesh A Teli Pednekar, Principal Architect, AYD, Goa. During interaction with scientists, the

various AET models in Khazan lands and their feasibility was discussed. The webinar series was attended by 30 persons including scientists and stakeholders.



Capacity building cum distribution programme on ornamental fish culture under Scheduled Caste Sub Plan in collaboration with Kerala University of Fisheries and Ocean Studies, Kochi

ICAR–Central Coastal Agricultural Research Institute (ICAR-CCARI), Old Goa, Goa is involved in fishermen Welfare projects under Scheduled Caste Sub Plan (SCSP) funded by Indian Council of Agricultural Research (ICAR), from Govt. of India, to make a change in the livelihood of coastal farmers/fishermen. In this regard, a capacity building cum training programme on ornamental fish culture was organized at Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi by ICAR-CCARI, Old Goa on 16th August 2021. A group of ten farmers participated in the programme and benefitted with the knowledge on various ornamental fish culture systems and their management. The farmers were given a full day training and exposure to the ornamental fish hatchery of KUFOS. The ornamental fish culture inputs such as fish brooders, silpaulin tanks, aeration tubes, filters, thermometers, fish medicine, hand nets, air tube connectors, polythene bags, and ornamental fish feed prepared by ICAR-CCARI were distributed to the farmers. Dr. K. Riji John, Vice Chancellor, KUFOS, was the Chief Guest for the programme. He applauded the efforts of Director, Dr. Parveen Kumar and team of ICAR-CCARI, Goa for

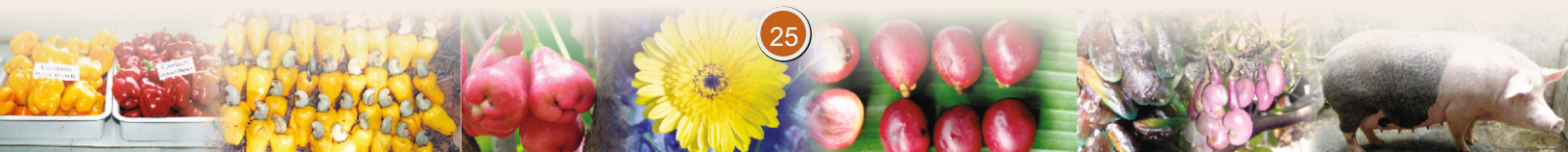
organizing a focused programme for the benefit of SC farmers from Kerala. He also assured that regular programmes on research and extension will be planned in the field of fisheries for the benefit of farmers of Kerala with the support from ICAR-CCARI. Dr. Daisy C. Kappen, Director of Extension, KUFOS urged the participants to apply the knowledge and experience gained in the field and a feedback assessment would be followed from KUFOS in this regard. Dr. K Dinesh, HoD, Dept. of Aquaculture has promised the farmers for any form of further technical support from KUFOS. The programme was coordinated by Dr. Sreekanth GB, Scientist (FRM), ICAR-CCARI, Dr. K. Dinesh, HoD, Department of Aquaculture, Faculty of Fisheries, KUFOS and Mr. Arun Das, BfSc student, KUFOS.



Memorandum of Understanding (MoU) signed between ICAR-CCARI, Goa & ICAR-CPRI, Shimla to popularize VEGFAST technology and develop a modified model for the coastal region

A Memorandum of Understanding (MoU) was signed between ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI), Goa and ICAR-Central Potato Research Institute (ICAR-CPRI), Shimla, on 18th August 2021. This MoU was signed by Dr. Parveen Kumar, Director, ICAR-CCARI, Goa and Dr. Manoj Kumar, Director (A), ICAR-CPRI, Shimla. The VEGFAST technology is one of the trademark technologies for urban

gardening developed by the ICAR-CPRI, Jalandhar, Punjab. This technology has a massive scope in Goa, where healthy and fresh vegetables can be grown on terraces, balconies and rooftops of the housing societies, restaurants, hotels and beach fronts. Recognizing the complementary strengths, both these Institutes entered into MoU to undertake collaborative research on rooftop vegetable cultivation in the form of VEGFAST



technology and to develop a modified model of this technology suitable for prevailing agronomic conditions of the coastal region. Both the Institutes agreed to share the available facilities related to this collaborative research. As part of the MoU, the ICAR-CCARI, Goa will popularize and transfer the ICAR-CPRI VEGFAST technology in the coastal region. This MoU is valid for a period of five years. The Institute Technology

Management Units of both the Institutes facilitated the signing of this MoU.



Release of “Vision document to make Goa self-reliant in agriculture”

A vision document 'Vision for Development of Agricultural and Allied Sectors: A Way Towards Making Goa Self Reliant (Swayampurna Goa)' was released during the 26th Meeting of ICAR Regional Committee No. VII at the hands of Shri Purushottam Rupala, Hon'ble Union Minister of Fisheries, Animal Husbandry and Dairying, Government of India on 25th August 2021 through virtual mode. Shri Kailash Chaudhary, Hon'ble Minister of State, Agriculture and Farmers Welfare, Sushri Shobha Karandlaje, Hon'ble Minister of State, Agriculture and Farmers Welfare, Government of India, Shri Kamal Patel, Hon'ble Minister of State, Agriculture and Farmers Welfare, Government of Madhya Pradesh, Dr. Trilochan Mohapatra, Secretary, DARE & Director General, ICAR, Dr. Sanjay Garg, Secretary, ICAR, Dr. Suresh Kumar Chaudhari, DDG (NRM & Engg.), ICAR and Nodal Officer of the Regional Committee, DDG's & ADG's of ICAR, Vice Chancellors of State Agricultural Universities and Director's of the Institutes, Dignitaries/APC/Secretaries/Director (Fisheries, Animal Husbandry, Agriculture, Horticulture of Government of Madhya Pradesh, Maharashtra, Gujarat and Goa State graced the occasion.

From the State of Goa, Sh. Kuldeep Singh Gangar, IAS, Secretary (Agriculture), Government of Goa, Sh. Nevil Alphonso, Director, Directorate of Agriculture, Dr. Agostinho Misquita, Director, Directorate of AH&VS, Dr. Shamila Monteiro,

Director, Directorate of Fisheries and Dr. Parveen Kumar, Director, ICAR- CCARI, Goa and Scientists attended the meeting. A total number of 260 participants attended the meeting from across the country.

Hon'ble Chief Minister of Goa, Dr. Pramod Sawant conducted a series of meetings and a stakeholders meet with ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI), Officials of Directorate of Agriculture, Animal Husbandry and Veterinary Services, Fisheries, Industries, Krishi Vigyan Kendras, District Rural Development Agency and concerned stakeholders to deliberate on developing a roadmap on sustainable development of agriculture.

The vision document was prepared by ICAR-CCARI under the guidance of Hon'ble Chief Minister, Government of Goa, Secretary (Agriculture), and in consultation with the state line departments. The document is also available on the official website of ICAR-CCARI, Old Goa. The Secretary (Agriculture) and Directors of State Departments, Govt. of Goa flagged pertinent issues relevant to agriculture, animal husbandry and fisheries that need to be addressed to improve the agricultural productivity and income in the State of Goa. The Director, ICAR-CCARI assured to initiate the research work on all the researchable issues raised by the Government of Goa officials.



संसदीय राजभाषा समिति द्वारा भा.कृ.अनु.प. केन्द्रीय तटीय कृषि अनुसंधान संस्थान का राजभाषा संबंधी निरीक्षण

संसदीय राजभाषा समिति की दूसरी उपसमिति द्वारा दिनांक 25 अगस्त, 2021 को भा.कृ.अनु.प. केन्द्रीय तटीय कृषि अनुसंधान संस्थान, गोवा की राजभाषा संबंधी गतिविधियों का निरीक्षण गोवा में किया गया। इस अवसर पर उपसमिति की वरिष्ठतम सदस्या माननीय सांसद महोदया प्रोफेसर श्रीमती रीता बहुगुणा जोशी ने निरीक्षण बैठक की अध्यक्षता की। इस बैठक में उपसमिति के माननीय सांसद सदस्यगण तथा समिति सचिवालय के अधिकारी उपस्थित थे। केन्द्रीय तटीय कृषि अनुसंधान संस्थान, गोवा के निदेशक डॉ. प्रवीण कुमार द्वारा निरीक्षण बैठक के दौरान एक पॉवर पॉइंट प्रस्तुतिकरण दिखाया गया। इस प्रस्तुति के माध्यम से, न केवल राजभाषा संबंधी गतिविधियों से, बल्कि संस्थान के विभिन्न कृषि अनुसंधान संबंधी क्रियाकलापों के बारे में भी माननीय संसदीय समिति को अवगत कराया गया। इस अवसर पर माननीय सांसद महोदय श्री सुशील कुमार गुप्ता द्वारा राजभाषा संबंधी संवैधानिक दायित्वों के निर्वहन के

बारे में विस्तारपूर्वक विवेचना की गयी और संस्थान में राजभाषा कार्यों को अपेक्षित स्तर तक पूरा करने के लिए निर्देश दिए गए। इस अवसर पर परिषद मुख्यालय की ओर से सहायक महानिदेशक डॉ. अदलुल इस्लाम, निदेशक (राजभाषा) श्रीमती सीमा चोपड़ा और सहायक वरिष्ठ तकनीकी अधिकारी (हिंदी) श्री. बी एस पर्सवाल उपस्थित थे। संस्थान के वरिष्ठ प्रशासनिक अधिकारी श्री. सोमनाथ एवं राजभाषा अधिकारी श्री. राहुल कुलकर्णी भी निरीक्षण बैठक में उपस्थित थे। संस्थान के निदेशक डॉ. प्रवीण कुमार द्वारा धन्यवाद ज्ञापन किए जाने के साथ बैठक संपन्न हुई।



Training and distribution of agricultural inputs to the farmers of Uttara Kannada under SCSP Programme

Under SCSP Programme, quality planting materials of arecanut, black pepper, clove, allspice, nutmeg, kokum, vanilla and vegetable seeds and honeybee boxes were distributed to beneficiary farmers of Kumta and Honavar taluks of Uttara Kannada on 25th August 2021. Honeybee boxes were also provided to these farmers for generating additional income. A Training Programme on "Strategies for Improving Farm Income" at Kadatoka, Honavar, was organized. Dr. Shripad Bhat, Scientist (Agril. Economics), highlighted the importance of new

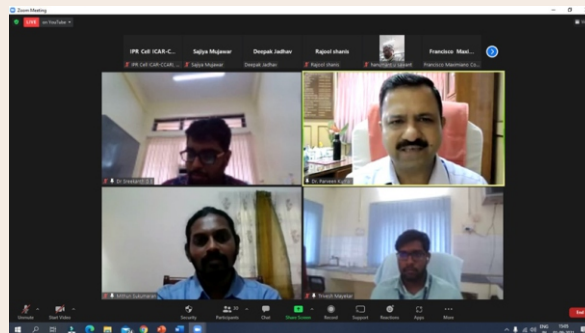
technologies and their adoption to increase farm profitability. These interventions aimed to improve the yield levels and enhance economic security and livelihood status of the beneficiary farmers.



ICAR-CCARI organized Webinar on “Integrating Agri-aquaculture systems for promoting blue economy in coastal region through productivity, income and livelihood enhancement” under Bharat Ka Amrut Mahotsav

In commemoration of India's 75 years of Independence as Bharat Ka Amrut Mahotsav, ICAR-Central Coastal Agricultural Research Institute, Goa organised a webinar on “Integrating Agri-aquaculture systems for promoting blue economy in coastal region through productivity, income and livelihood enhancement” on 1st September 2021. The webinar was organised as a part of the National Campaign on “System Diversification in Aquaculture”. The programme was attended by 50 participants including scientists, department officials, farmers, entrepreneurs, students, researchers and other stakeholders. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa, explained the objective of the lecture series conducted by ICAR institutes to mark India's 75 years of Independence. He also highlighted the importance of integrated agri-aquaculture systems for increasing productivity, net returns and enhancement of livelihood of coastal farmers. Dr. Mithun Sukumaran, Assistant Professor, Department of Aquatic Biology and Fisheries, University of Kerala delivered the

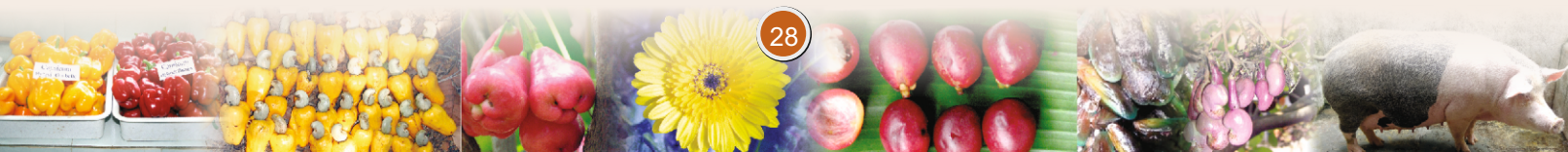
invited talk on “Aquaponics-Quality Food at Backyard to Commercial Units”. He discussed on designing an ecologically efficient and economically viable aquaponics system, challenges faced by the farmers and possible solutions to overcome these challenges. He has also demonstrated model aquaponics units involving agri-aquaculture systems through videos from farmers' backyard. His remarks also emphasized the need to develop aquaponics systems involving salt-tolerant crops and estuarine fish species. Mr. Trivesh S Mayekar, Scientist (Fish genetics and breeding) and Dr. Sreekanth G. B., Scientist (Fisheries resource management), co-ordinated the webinar.



Training programme on “Scientific Practices of Pig Rearing” under Institute Schedule Caste Sub Plan (SCSP)

One day training programme on “Scientific Practices of Pig Rearing” was conducted at ICAR-Central Coastal Agricultural Research Institute, Goa under the Institute Schedule Caste Sub Plan (SCSP) programme on 27th August 2021. Total seven participants from different parts of Goa attended the training. Dr. Amiya Ranjan Sahu (Scientists) had given the introductory remarks. He delivered lectures as well as practical sessions on different aspects of scientific pig farming, its importance, breeds, managerial practices,

feeding, breeding and its significance. Dr. Shivasharanappa, N. (Senior Scientist) delivered lecture on different aspects of disease prevalence, preventive measures, deworming, and vaccination in pigs. Mr. Sajan Naik (YP-II) and Miss. Nerina Fernandes (Project Assistant) assisted in registration of farmers, demonstration of feeding, and other activities during the training. Participants were demonstrated various techniques such as



castration in piglets, semen collection from boar, artificial insemination in sow, deworming and vaccination in pigs, etc. There was an interactive session by the scientists with the farmer trainees. Certificates were distributed to the participants by Dr. Amiya Ranjan Sahu (Scientist, Training Coordinator) along with other staff members of the institute.



Distribution of pigs under SCSP of AICRP on Pig

Seven farmers belonging to Scheduled Caste of Goa were supplied with piglets (30 nos.) and medicinal supplements on 27th August, 2021 under SCSP-AICRP on Pigs.

World Coconut day celebrated

Coconut is the state fruit of Goa and a life-supporting species in the fragile coastal and island ecosystems. On 02nd Sep 2021 World coconut day was celebrated at ICAR-CCARI Old Goa by All India Coordinated Research Project (AICRP) on Palms –Goa centre and Schedule Tribe Component (STC) of ICAR-CCARI. During the event, ten tribal farmers, farm workers, padelis of Cotigao village panchayat, eight tribal farmers, farm workers, padelis of Indrawada, Gaodongrim village and one padeli from Ponda participated in the event. A demo of the use of the coconut climbing device was organized at the AICRP (Palms) unit of B block of the experimental field of the campus. All the participants practised using the device and clarified their doubts. A formal distribution programme was conducted at Dr AR Bhattacharya farmers' exhibition hall where all the 19 participants received one coconut climbing device each free of cost under Schedule Tribe Component of ICAR-CCARI. Dr Parveen Kumar, Director ICAR-CCARI chaired the meeting and briefed the participants about the World Coconut day genesis and the importance of

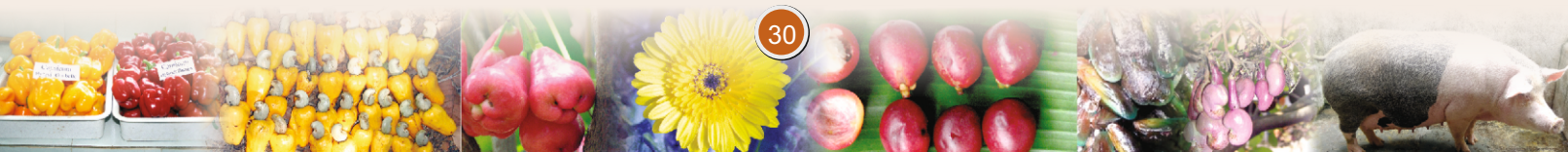
coconut in the sustainable livelihoods of coconut growers and the health of consumers. He also stressed the need for improving the productivity of coconut, enhancing the value addition of coconut-based products, and improving the diversification of coconut gardens by intercropping practices. Mr Umesh Gaonkar Sarpanch of Cotigao village panchayat volunteered for the event with local support of Cotigao villagers and also graced the occasion. Dr. V Arunachalam, Principal Scientist (Horticulture) and Scientist in charge AICRP (Palms) Goa centre, organized the event.



Visit of the parliamentary standing committee on Agriculture at ICAR-CCARI

A team of nine honourable Members of Parliament Chaired by Shri Parvatagouda Gaddigoudar along with officers of Lok Sabha secretariat and ADGs (Assistant Director General) of ICAR (Indian Council of Agricultural Research) Headquarters, visited Goa on 6th September 2021 for the study of agriculture, animal husbandry and fisheries research and development. The team visited experimental fields including coconut-based cropping systems, coconut-heliconia, mango germplasm block of ICAR-CCARI (Central Coastal Agricultural Research Institute), Ella Old Goa. The team also visited the exhibition stalls arranged on the campus and was acquainted with various technologies of the institute and the extension activities of Krishi Vigyan Kendra of North Goa. The members interacted with the scientists and few progressive farmers during the visit. Dr Parveen Kumar Director ICAR-CCARI presented

an overview of the institute and its achievements in the form of improved varieties and other technologies and their impact on sustainable livelihoods. The members of the team appreciated the work carried out at the institute and made suggestions to fine-tune the research. They suggested working on getting geographical indicator (GI) tagging for Mankurad type mango of Goa. The team interacted with scientists on ways to promote economic returns in coconut by intercropping practices. The members suggested the use of the latest drone-based techniques to the ease harvest and spraying operations of coconuts. The team emphasized the need for enhancing paddy productivity in Goa state by improved varieties. The committee suggested focusing the efforts of the scientists to improve the agriculture and allied sectors with the target to double the income of the farmers of the coastal region.



संस्थान में हिंदी पखवाड़े का आयोजन

संस्थान में हिंदी पखवाड़े का उद्घाटन समारोह 14 सितंबर 2021 को संपन्न हुआ। संस्थान के माननीय निदेशक महोदय डॉ. प्रवीण कुमार ने इस कार्यक्रम का उद्घाटन दीप प्रज्वलन से किया। सभा को संबोधित करते हुए निदेशक महोदय ने हिंदी पखवाड़ा एवं हिंदी दिवस का महत्व बताते हुए कहा कि, हमारे भारतीय संविधान के निर्माण के दौरान 14 सितंबर 1949 को संविधान समिती ने देश के आबादी के अधिकतम प्रतिशत की बोलचाल भाषा हिंदी को संघ की राजभाषा का दर्जा देने का निर्णय लिया। निदेशक महोदय ने सभा में उपस्थित कर्मचारियों को कार्यालय का अधिकतम काम-काज हिंदी में करने के लिए प्रेरित किया। इसके अतिरिक्त मंच पर उपस्थित प्रधान वैज्ञानिक डॉ एस.के.सिंह ने हिंदी भाषा के विषय में अपने मौलिक विचार सभा में रखे। इस संस्थान के पूर्व माननीय निदेशक एवं एमिरेटस वैज्ञानिक डॉ. एन. पी. सिंह ने हिंदी भाषा के सहजता एवं सरलता

पर रौशनी डाली।

संस्थान के राजभाषा अधिकारी श्री राहुल कुलकर्णी ने सभा में उपस्थित सभी को हिंदी पखवाड़े की कार्यक्रम सूची का विवरण दिया और इस दौरान आयोजित की गयी विविध प्रतियोगिताओं के बारे में अवगत किया। तदुपरांत आशूभाषण प्रतियोगिता का आयोजन किया गया। संस्थान के सभी वर्ग के कर्मचारियों ने इस प्रतियोगिता में उत्साहपूर्वक भाग लिया।



International year of Millets 2023 celebration and campaign on Nutri-Garden and Tree Plantation

ICAR - KVK, North Goa of ICAR - CCARI, Goa, celebrated International year of Millets - 2023, campaign on Nurtri-Garden and Tree plantation at Surla and Nagargaon villages on 17th September 2021. Smt Sulakshana Sawant, Social Worker, spouse of Dr. Pramod Sawant, Hon'ble Chief Minister of Goa was the Chief Guest. In her address, she appreciated works done by KVK, North Goa, and ICAR-CCARI, Goa and emphasized the importance of health of women and children, and advised the ladies participants to increase the intake of millets in their daily diet. Dr. Parveen

Kumar, Director, ICAR - CCARI, Goa highlighted the importance of millets as 'Smart food' and 'Smart Crops' because of their nutritional superiority over rice & wheat and better climate resilience and hardiness. He opined that the use of millets in daily diet will improve the income of the millets growers on one hand and improve the nutritional and health status of consumers on the other hand. Shri HRC Prabhu, Sr. Scientist & Head I/C, spoke on the importance of growing pesticide-free vegetables and tree planting. Smt. Sunetra Talaulikar, SMS (Home Science), in her



welcome address talked about the theme of the programme and gave a lecture on the importance of Nutrithali. As a part of the programme, a cooking competition using millets and leafy vegetables and a rangoli competition using cereals/pulses/vegetables were also organized. The programme was organized in collaboration with IFFCO. To promote tree plantation a total of planting materials of mango, moringa etc. were distributed to all the 105 women participants, followed by tree plantation by the guests.



Orientation programme on Agriculture for Swayampurna Mitras to make Goa Self reliant

An orientation programme on Agriculture for Swayampurna Mitras was organized by the Directorate of Planning, Statistics & Evaluation, Govt of Goa in collaboration with ICAR-Krishi Vigyan Kendra, North Goa, and ICAR-Central Coastal Agricultural Research Institute, Old Goa during 20-21 September 2021. In this programme, a total of 104 and 95 Swayampurna Mitras from North and South Goa districts participated on 20/09/2021 and 21/09/2021 respectively. The programme started with a welcome address and introduction of the programme by Shri. H.R.C. Prabhu, Sr. Scientist and Head I/C, KVK-North Goa. Dr. Durga Prasad, Director, Directorate of Planning, Statistics & Evaluation, Govt of Goa, in his address highlighted Atma Nirbhar Bharat and Swayampurna Goa Programme and gave insight about various activities conducted since its inception in October 2020. Dr. Parveen Kumar, Director, ICAR-CCARI, Old Goa in his address gave an overview of the significant research activities and technology packages developed by ICAR-CCARI for the benefit of the farming community and the current research priorities of the institute. During the technical session various presentations which included, 'Technologies developed by different Sections of the ICAR-CCARI were briefed by the respective Section

incharges followed by a brief of the activities of 'ATMA' by Mrs. Vismita Marathe, Deputy Project Director, ATMA-North Goa and "Various Schemes in Agriculture' by Rouchelle Fernandes, Zonal Agricultural Officer, Tiswadi. This was followed by a field visit, and demonstration of various units including Virgin coconut oil unit.

The valedictory function of the Orientation programme was graced by Dr. Pramod Sawant, Hon'ble Chief Minister, Govt. of Goa. In his address, he appreciated the efforts of ICAR-CCARI in developing technologies for the farmers of Goa. He also urged the Swayampurna Mitras to visit ICAR-CCARI regularly and help in disseminating ICAR technologies to the farming community to increase their income by increasing the productivity of different crops.

The programme ended with a vote of thanks by Mrs. Sunetra Talaulikar and Mr. Rahul Kulkarni, ACTO, ICAR - CCARI, and was compered by Dr. Monica Singh, SMS (Ag. Extn).



Visit of Shri Kailash Choudhary Hon'ble Union Minister of State for Agriculture and Farmers' Welfare at ICAR-CCARI, Goa

Hon'ble Union Minister of State for Agriculture and Farmers' Welfare, Shri Kailash Choudhary visited ICAR-Central Coastal Agricultural Research Institute, Goa on 24th September 2021. On the occasion, Shri Chandrakant Babu Kavalekar, Hon'ble Deputy Chief Minister, Govt. of Goa was also present. Hon'ble Union Minister of State appreciated the achievements and innovations of the Institute and complimented the team for addressing challenges of such a vast operating environment of the coastal region spread in 9 states and 2 UTs covering 75 districts. He stressed upon development of FPOs, focusing on post-harvest processing for increasing the income of farmers and to avoid losses, developing stress-tolerant improved varieties, and organization of the farmer awareness programmes like Kisan Melas to have better connectivity with farmers and stakeholders. He further appealed and urged the Scientists and staff of the Institute to work with enthusiasm and zeal to address the challenges of the most

vulnerable ecosystem. Dr. Parveen Kumar, Director, ICAR-CCARI presented the achievements of the Institute the technologies and products of the Institute were showcased through an exhibition.

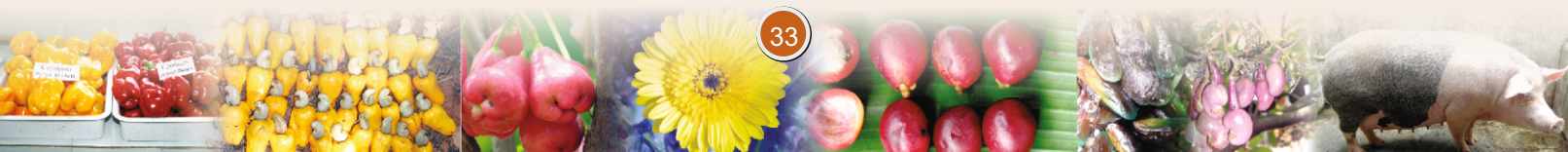
Representatives from the State line Department of Agriculture, Animal Husbandry and Veterinary Services and Fisheries, Scientists, officers and staff of the Institute and KVK, North Goa attended the programme.



Webinar on organic farming under Bharat Ka Amrut Mahotsav

In commemoration of India's 75 years of Independence as Bharat Ka Amrut Mahotsav, ICAR-Central Coastal Agricultural Research Institute, Goa organized a webinar on "Organic farming; Indian perceptive of research and technology" on 27th September 2021. Dr. Shivasharanappa N, Senior Scientist, Coordinator of the AKAM programme, welcomed the speaker and the participants. Dr. Gopal R Mahajan, Scientist (Soil Science), introduced the speaker, Dr. N. Ravisankar, Principal Scientist (Agronomy) ICAR-IIFSR, Modipuram, UP. Dr. S.K. Singh, Principal Scientist, ICAR-CCARI, Goa, explained the objective of the lecture series conducted by

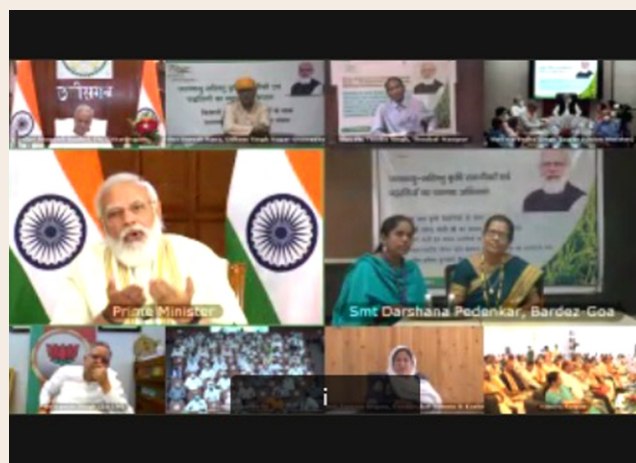
the institute and welcomed the speaker on behalf of Dr. Parveen Kumar, Director, ICAR-CCARI, Goa. Dr. N. Ravisankar has described organic production systems, organic farming in relation to climate resilience, integrated organic farming system models, organic foods regulations, certifications, organic bio-clusters, niche area approach, and scope of organic farming in the coastal region. The programme was attended by 90 participants including scientists, PIs of the AICRP-IFS project, department officials, farmers, entrepreneurs, students, researchers, and other stakeholders. Dr. Paramesha V, Scientist (Agronomy) gave the vote of thanks.



Interaction of Hon'ble Shri Narendra Modi, Prime Minister, Government of India with a woman farmer Smt. Darshana Pednekar from Goa

Hon'ble Shri Narendra Modi, Prime Minister, Government of India interacted with Mrs. Darshana Pednekar, a woman farmer from a village Parra of Bardez taluk, North Goa, Goa on 28th September 2021 during a programme on 'Climate Resilient Agriculture and inauguration of ICAR-NIBSM' through a virtual programme platform. During the interaction, she spoke about technologies and training provided by ICAR – CCARI and KVK, North Goa like crop diversification, improved varieties of rice, cowpea, watermelon, chilli, and their cultivation practices, production of vermicompost and Jeevamrut, and backyard poultry farming, which helped her to improve the productivity and income. Hon'ble PM was impressed by the adoption of farm mechanization and use of tractors and accessories by herself to reduce the labour cost. As 'seeing is believing' more than 50 farmers from her village and nearby areas

adopted these technologies and earned better income, and made agriculture a profitable venture. She thanked the Hon'ble PM for allowing interacting with him and for the support and guidance by Dr. Parveen Kumar, Director and team of ICAR-CCARI and KVK to improve the income and livelihood of the family.



Farmers-Scientists Interface on Climate Resilient Varieties, Technologies & Practices

On the occasion of the Nation-wide programme on Climate Resilient Agriculture and inauguration of ICAR-NIBSM by Hon'ble Shri. Narendra Modi, Prime Minister, Government of India, a programme on “Farmers-Scientist Interface on Climate Resilient Varieties, Technologies and Practices” was organized by ICAR-CCARI and Krishi Vigyan Kendra, North Goa, Goa on 28th September 2021. Mr. Vasudev M Govekar, Ex MLA and President, Kisan Morcha was the Chief Guest. In his address, he appreciated the efforts of ICAR – CCARI and KVK, North Goa in developing and disseminating the climate resilient varieties, technologies, and practices. Dr. S.K. Singh, Principal Scientist (Soil

Science) spoke on the mitigation of climate change using improved technologies. Dr. Manohara K.K., Senior Scientist (Genetics & Plant Breeding) made the farmers aware about the climate resilient varieties for cultivation in the State of Goa and other parts of the coastal region, and Dr. G.R. Mahajan, Scientist (Soil Science) made an elaborate presentation on technologies & practices for climate resilience and improved income. Mr. H.R.C. Prabhu, Senior Scientist & Head I/c in his welcome address briefed about the importance and the theme of the programme. Mrs. Sunetra Talaulikar, SMS (Home Science) compered the programme and proposed vote of thanks. The programme was attended by 125



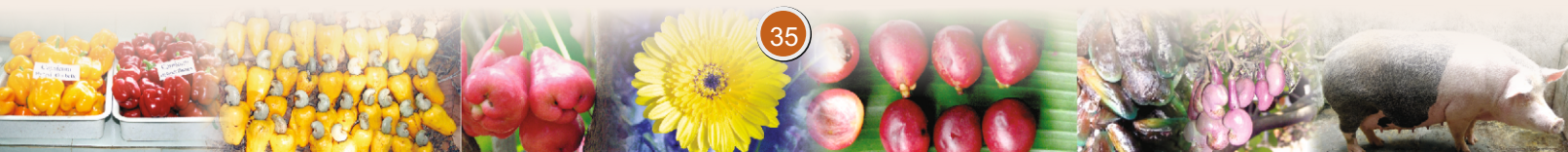
participants which included mostly women farmers, scientists, and technical staff of the Institute.



Visit of Sushri Shobha Karandlaje, Hon'ble Union Minister of State for Agriculture and Farmers' Welfare, Government of India at ICAR-CCARI, Goa

Hon'ble Union Minister of State for Agriculture and Farmers' Welfare, Sushri Shobha Karandlaje visited ICAR-Central Coastal Agricultural Research Institute, Goa on 29th September 2021. Hon'ble Minister was welcomed by ICAR staff at the exhibition where all the innovative technologies of the Institute and KVK were showcased. During the exhibition, agricultural inputs like coconut climbing machines, vegetable seeds of improved varieties, etc. were distributed to the women farmers at the hands of the Hon'ble Minister. On the occasion, she appreciated the achievements and innovations of the Institute and complimented the team of ICAR-CCARI and KVK for addressing the challenges of the operating environment spread over 9 coastal states and 2 UTs covering 75 districts. A tree plantation was done by Minister which was followed by a field visit to the Livestock Farms and Fodder Museum. Dr. Parveen Kumar, Director, ICAR-CCARI presented in brief the achievements of the Institute through a presentation. Shri. Kuldeep Singh Gangar, Secretary (Ag.), Govt. of Goa, Dr. Pratibha, OSD to Chief Minister of Goa, Shri. K. N. Verma, Director, MIDH, Mr. Nevil Alphonso, Director, Directorate of Agriculture, Government of Goa, representatives from the State line Department of Agriculture, Animal Husbandry and Veterinary

Services and Fisheries, Scientists, officers, and staff of the Institute and KVK, North Goa attended the programme. Dr. Maneesha SR coordinated the event and proposed a vote of thanks.

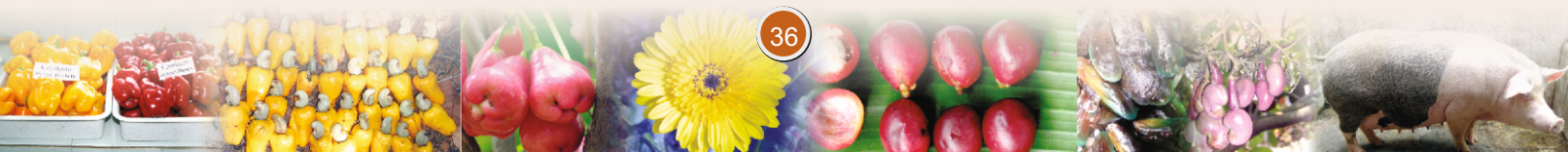


हिन्दी पखवाड़े का समापन कार्यक्रम

भा.कृ.अनु.प. – केन्द्रीय तटीय कृषि अनुसंधान संस्थान, एला, ओल्ड गोवा में 14 सितम्बर से 28 सितम्बर 2021 के दौरान हिन्दी पखवाड़े का आयोजन उत्साहपूर्वक किया गया। इसके दौरान विभिन्न प्रतियोगिताओं का आयोजन किया गया था जैसे कि आशुभाषण प्रतियोगिता, टिप्पण एवं प्रारूप लेखन, सुलेख प्रतियोगिता, हिन्दी निबंध प्रतियोगिता, कम्प्यूटर पर यूनिकोड में टाइपिंग, सामान्य ज्ञान प्रश्नोत्तरी और काव्य पाठ प्रतियोगिता। श्री मनोज कुमार, मुख्य तकनीकी अधिकारी, हिन्दी राजभाषा विभाग, भा.कृ.अनु.प. नई दिल्ली, ने आभासी पद्धति से हिन्दी कार्यशाला ली जिसमें उन्होंने कार्यलयीन पत्र, टिप्पण, आदेश पत्र, इत्यादि कार्यलयीन कामकाज में हिन्दी का उचित उपयोग करने के बारे में अवगत कराया। इसके अलावा बच्चों के लिए भी विभिन्न प्रतियोगिताओं का आयोजन किया गया था। सभी वर्ग के कर्मचारियों ने उत्साहपूर्वक भाग लिया। पखवाड़े के समापन समारोह में गोवा से राज्यसभा के माननीय सांसद श्री. विनय दिनु तेंडुलकर ने मुख्य अतिथि के रूप में, और विद्या प्रबोधिनी वाणिज्य महाविद्यालय पणजी के प्राचार्य डॉ. भूषण भावे विशेष अतिथि के रूप में मंच पर उपस्थित रहे। श्री. कपिल कुमार वरिष्ठ परिवहन अधिकारी O.N.G.C., विशेष अतिथि के रूप में उपस्थित थे। इनके अलावा इस संस्थान के पूर्व निदेशक एवं एमेरिटस वैज्ञानिक, डॉ. नरेंद्र प्रताप सिंह भी कार्यक्रम में उपस्थित रहे। कार्यक्रम की शुरुआत आईसीएआर गीत से हुई, तदुपरांत संस्थान के राजभाषा अधिकारी श्री राहुल कुलकर्णी ने हिन्दी पखवाड़े के दौरान आयोजित विभिन्न प्रतियोगिताओं एवं कार्यक्रमों का संक्षिप्त में विवरण प्रस्तुत किया। मान्यवरों

के हाथों दीप प्रज्वलन किया गया। संस्थान के माननीय निदेशक डॉ. प्रवीण कुमार ने अतिथियों का पुष्पगुच्छ एवं मानचिन्ह देकर स्वागत किया। इसके उपरांत, काव्य पाठ प्रतियोगिता प्रारंभ हुई। संस्थान के सभी वर्ग के कर्मचारियों ने इस प्रतियोगिता में बढचढकर भाग लिया। मुख्य अतिथि श्री. विनय दिनु तेंडुलकर ने हिन्दी भाषा सभी प्रांत के लोगों को जोड़ने वाली भाषा है एवं हिन्दी की सरलता से सभी को अवगत कराया। डॉ. भूषण भावे ने हिन्दी भाषा का गोवा से पुराना नाता क्या था इसपर प्रकाश डाला। श्री. कपिल कुमार ने स्वयं रचित कविता सभा को सुनाई। पखवाड़े के दौरान आयोजित विभिन्न प्रतियोगिताओं के विजेताओं को मान्यवरों के हाथों पुरस्कृत किया गया। श्रीमति श्रेया बर्वे, आशुलिपिक ने आभार प्रदर्शन किया। आखिर में राष्ट्रगीत से कार्यक्रम की समाप्ती हुई।

कोरोना महामारी से बचाव के लिए सभी निर्देशों का पालन करते हुए हिन्दी पखवाड़ा बहुत उत्साह के साथ संपन्न हुआ।



ICAR-CCARI, Goa Organized Press Meet

A Press Meet was organized at ICAR-CCARI Goa on 4th October 2021 in which officials/ correspondents from Press and Information Bureau, Goa, Doordarshan, All India Radio, and important daily newspapers both in English & Marathi like Navhind Times, Times of India, Tarun Bharat, Gomantak, Lokmat, and Private TV channels, Prudent media, Goa 365 participated. Dr. Parveen Kumar, Director, ICAR-CCARI made a presentation about the research achievements of the Institute and its socio-economic impact. The Director also sketched the future research roadmap for the next 5 years based upon the feedback received from the farmers and other stakeholders from the state of Goa as well as all other coastal states of India. Head in charge of different sections of the Institute and scientists also interacted with the press and media

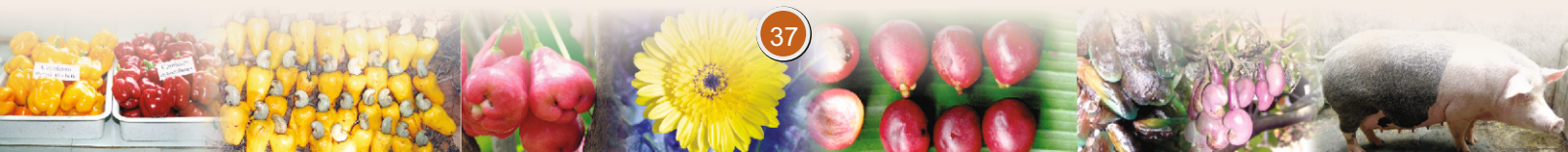
personnel. The Print & electronic media personnel had a detailed interaction with the Director and scientists on various current issues about agriculture in the state of Goa. Mr. Rahul M. Kulkarni ACTO & Press & Publicity Incharge and Mrs. Pranjali Wadekar Senior Technical Officer coordinated the programme.



Training and Distribution of Agricultural Inputs to the Farmers of Coastal Maharashtra under SCSP

A one-day training programme under SCSP on 'Site-specific nutrient management for improving the productivity and income of coastal farmers' was organized by ICAR – CCARI, Goa at Ghavanale village of Kudal taluka of Sindhudurg district of Maharashtra on 8th October 2021. The training included technical sessions on site-specific nutrient management in important crops, preparations of the organics and their use in important crops for improving productivity and income and water harvesting structures suitable for the west coast region. Quality vegetable seed kits of five vegetables, green manuring seeds, ingredients for jeevamrut preparation and training material were also distributed to beneficiary farmers. A hands-on practical demonstration on the preparation of Jeevamrut was organized with an interactive session. The training programme was organized with an aim of capacity building of the farmers to

improve the productivity and income through SSNM and water management in the pulse and vegetable cultivation during the rabi season ahead. The programme was organized by Shri Vinod A. Ubarhande, ACTO (Farm Superintendent), Dr. Gopal R. Mahajan, Scientist (Soil Science), Dr. Sujeet Desai, Scientist (LWME) and Shri Ravi Kadam (SSS).



Special National Swachhta Campaign on “Waste to Wealth”

A Special National Swachhta Campaign was organized by ICAR-Central Coastal Research Institute (CCARI), Goa, on 12th October 2021 at R.C. Pai Raikar School of Agriculture, Savoi-verem to sensitize diploma students and farmers regarding the decomposition of agriculture waste and vermicomposting. The theme of the campaign was “Waste to Wealth”. Dr. Parveen Kumar, Director, ICAR – CCARI, Goa, chief guest of the programme, in his address highlighted the importance of cleanliness in day-to-day life and how a small step can lead to making ultimately the country clean. He also informed us about the AGNI-Agri Business Incubator project of ICAR-CCARI to provide support to startups for the initial six months to start their business. Mrs. Rupa Naik, Deputy Sarpanch, Savoi-verem opined that it is difficult to conceptualize waste, as every waste if reused properly will turn into wealth. Shri Pradeep Lotlikar, the executive member of the Education Society, highlighted the role of youngsters in spreading awareness about swachhta. Shri Shrirang Jambhale, Principal, R.C. Pai Raikar School of Agriculture, in his address thanked ICAR – CCARI, Goa, for their support in agricultural technologies and explained various activities of the school. Shri H.R.C. Prabhu, Head, KVK, North Goa, emphasized the importance of

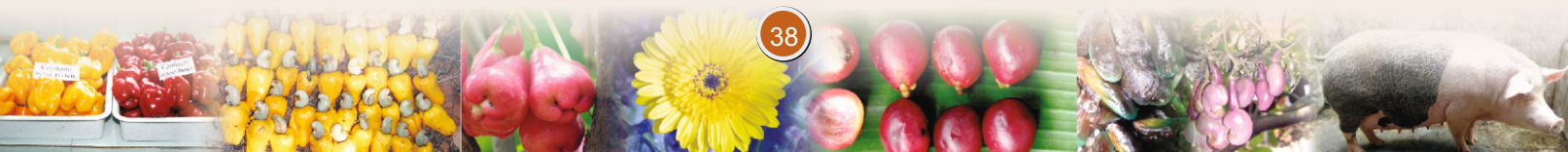
conducting the programme and gave a brief introduction to the Special National Swachhta Campaign. Shri Shashi Vishwakarma, Tech. Officer (Soil Science), KVK, North Goa delivered lecture on vermicomposting during technical session. The videos and presentations were shown to the participants. Extension material was also distributed to the participants. In addition to this ICAR – CCARI, Goa, distributed vermicomposting bags and dust-bin to school. Mrs. Sunetra Talaulikar, SMS (Home Science), KVK, North Goa proposed the vote of thanks. Mr. Rahul Kulkarni ACTO, KVK, North Goa and Mr. Vishwajeet Prajapati, KVK, North Goa helped in recording and documentation of programme. The programme was moderated by Dr. Monica Singh, SMS (Agril Extension), KVK, North Goa. The programme was attended by 80 participants.



Training and demonstration programme on ornamental fish culture

A Field Day cum Farmers-Scientists Interaction on 'Improving productivity of coastal saline soils was organized by the Institute under Bharat Ka Amrit Mahotsav on 14th October 2021 at typical salt-affected farmer's fields (locally called Khazan lands) at Merces, Tiswadi, Goa. Dr. Parveen Kumar, Director, ICAR-CCARI briefed the activities and technologies of the Institute and urged the farmers to take up cultivation to make the uncultivated and fallow lands using the technologies developed by ICAR-CCARI, Goa. He

assured the farmers of the technological backstopping to make the cultivation under saline environment and sustainable utilization of the khazan lands. The programme was organized to demonstrate how uncultivated salt-affected lands can be made productive and profitable through scientific paddy cultivation and other technological interventions. Live field demonstration on interventions on improved crop establishment methods and nutrient management practices in salt-tolerant rice



varieties showcased to the farmers. Around 30 paddy growers having khazan lands attended the programme. Further, land shaping for including fisheries and cultivation of pulses and vegetables was explained to the farmers. On the occasion, stocking of the fish seed was done in the pond prepared by land shaping to control the salinity besides water harvesting for use in

subsequent rabi crops. The meeting was attended by farmers, scientists, young professionals, etc. Through a farmer-scientist interaction, plans and strategies to improve productivity and income from the coastal saline soils were discussed and deliberated at length. Dr. Gopal Ramdas Mahajan, Dr. Sreekanth GB, Mr. Trivesh Mayekar, and Mr. Joaquim, a farmer coordinated the programme.

ICAR – CCARI, Goa inks MoU with Montfort Academy, Goa

A Memorandum of Understanding (MoU) was signed between ICAR - Central Coastal Agricultural Research Institute (ICAR-CCARI), Goa and Montfort Academy, Industrial Training Institute, Corlim, Goa on 14/10/2021 at ICAR-CCAR. The MoU aims to strengthen the activities on scientific farm mechanization on small and marginal landholding and for capacity building of the students on different aspects of agriculture. On the occasion, Dr. Parveen Kumar, Director, ICAR-CCARI, Goa briefed the scope of the MoU and emphasized an active collaboration for mutual benefit. He impressed on capacity building on different aspects of farm mechanization and agricultural engineering through the MoU. Mr. Brother Prem, Principal and Director, Montfort Academy ITI explained the activities of the academy. Attracting and retaining

youth in agriculture through entrepreneurship development is targeted through this MoU. The programme was attended by Coordinators, PME and IPR Cell, scientists, and officials of the Montfort Academy, Goa. Mr. Sidharth Marathe, STO (Technical Cell), and Mrs. Pranjali Wadekar, STC (Computer) assisted in the organization of the programme.



Farmers-Scientist Interaction on 'Improving productivity of Coastal Saline Soils @ Bharat Ka Amrit Mahotsav

A Field Day cum Farmers-Scientists Interaction on 'Improving productivity of coastal saline soils was organized by the Institute under Bharat Ka Amrit Mahotsav on 14th October 2021 at typical salt-affected farmer's fields (locally called Khazan lands) at Mercedes, Tiswadi, Goa. Dr. Parveen Kumar, Director, ICAR-CCARI briefed the activities and technologies of the Institute and urged the farmers to take up cultivation to make the uncultivated and fallow lands using the technologies developed by ICAR-CCARI, Goa. He assured the farmers of the technological

backstopping to make the cultivation under saline environment and sustainable utilization of the khazan lands. The programme was organized to demonstrate how uncultivated salt-affected lands can be made productive and profitable through scientific paddy cultivation and other technological interventions. Live field demonstration on interventions on improved crop establishment methods and nutrient management practices in salt-tolerant rice varieties showcased to the farmers. Around 30 paddy growers having khazan lands attended the



programme. Further, land shaping for including fisheries and cultivation of pulses and vegetables was explained to the farmers. On the occasion, stocking of the fish seed was done in the pond prepared by land shaping to control the salinity besides water harvesting for use in subsequent rabi crops. The meeting was attended by farmers, scientists, young professionals, etc. Through a farmer-scientist interaction, plans and strategies to improve productivity and income from the coastal saline soils were

discussed and deliberated at length. Dr. Gopal Ramdas Mahajan, Dr. Sreekanth GB, Mr. Trivesh Mayekar, and Mr. Joaquim, a farmer coordinated the programme.



World Food Day celebration @ Azadi Ka Amrit Mahotsav

ICAR - Central Coastal Agricultural Institute (ICAR-CCARI), Goa and Krishi Vigyan Kendra, North Goa, celebrated World Food Day on 16th October 2021 at Diwar Island of Tiswadi taluka of State of Goa under the Azadi Ka Amrit Mahotsav in commemoration of 75th year of independence. Dr. Parveen Kumar, Director, ICAR – CCARI, Chief Guest, said that this year World Food Day is being celebrated as a tribute to 'food heroes' and to create awareness to mitigate hunger & malnutrition, maintain sustainability and increase food production. He gave an insight on wastage of food at different levels and emphasized that 17% of food is wasted at the consumer level. This can be saved to feed the under-nourished population of the world. Shri Mario Pinto, Sarpanch, Goltem-Navelim, informed that the Diwar island was once a major paddy growing area but due to the ingress of saline water and mangroves, the area under cultivation has decreased drastically and requested the technological backstopping from the ICAR-CCARI and KVK, North Goa to bring back some area again under paddy cultivation in kharif and under vegetables during rabi season. He thanked the Institute for demonstrating the various technologies and support extended time to time to the farmers of the Island. Shri H. R. C. Prabhu, Head, KVK briefly introduced the

significance of celebrating World Food Day and apprised about its history. During the technical session, Smt. Sunetra Talaulikar, SMS (Home Science) talked on 'Better nutrition and better life' and Shri Rahul Kulkarni, ACTO briefed about 'Better production and a better environment'. On the occasion coins released by the Government of India since 1970 to Commemorate World Food Day were also displayed. To promote healthy and nutritious food items, a cooking competition using millets, pulses and vegetables was also arranged, where 24 farm women participated and prizes were awarded. Smt. Alba Silvera, Computer Trainer, Goltem-Navelim gave the welcome address and Smt. Rina D'Souza, a Progressive Farmer proposed vote of thanks. The programme was coordinated by Dr. Monica Singh, SMS (Agril Extension) and documented by Shri Vishwajeet Prajapati, Technical Officer (Computer). The programme was attended by 52 farmers and farm women.



भाकृअनुप - केन्द्रीय तटीय कृषि अनुसंधान संस्थान, गोवा को राजभाषा पुरस्कार।

भाकृअनुप - केन्द्रीय तटीय कृषि अनुसंधान संस्थान, गोवा को क्षेत्रीय कार्यान्वयन कार्यालय (पश्चिम) क्षेत्र के अंतर्गत "ग" क्षेत्र में स्थित केंद्रीय सरकार के कार्यालयों में (50 से अधिक कर्मचारी वाले केन्द्रीय कार्यालयों में) वर्ष 2017-18 के दौरान संघ की राजभाषा नीति के कार्यान्वयन के क्षेत्र में उत्कृष्ट योगदान के लिए भारत सरकार, गृह मंत्रालय, राजभाषा विभाग के ओर से प्रथम पुरस्कार प्रदान किया गया, तथा वर्ष २०१८-१९ के लिए द्वितीय पुरस्कार प्रदान किया गया। केंद्रीय गृहमंत्रालय के राजभाषा विभाग के ओर से मडगाव (गोवा) में पश्चिम और मध्य क्षेत्र संयुक्त प्रादेशिक राजभाषा संमेलन का आयोजन दिनांक 22/10/2021 को किया गया था। इस कार्यक्रम में मुख्य अतिथि माननीय गृह राजमंत्री श्री अजय कुमार मिश्रा और विशेष अतिथि के रूप में केंद्रीय पर्यटन, बंदरे, नौकावहन और जलमार्ग राजमंत्री, श्री श्रीपाद येसो नाईक उपस्थित थे। माननीय अतिथियोंके

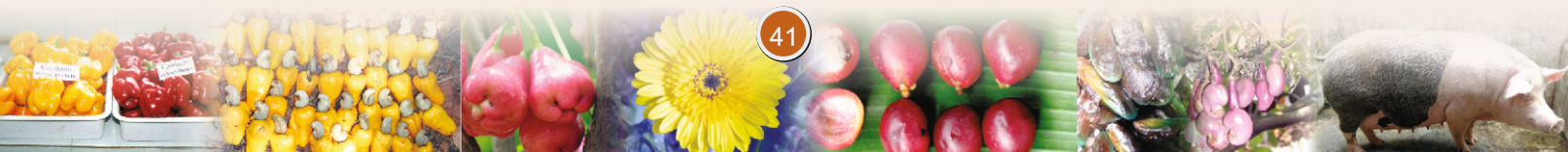
करकमलों द्वारा संस्थान के निदेशक डॉ. प्रवीण कुमार, राजभाषा अधिकारी श्री राहुल कुलकर्णी एवं आशुलिपिक श्रीमति श्रेया बर्वे को यह पुरस्कार राजभाषा विभाग द्वारा प्रदान किए गए। इस अवसर पर केंद्र सरकार की राजभाषा सचिव श्रीमति अंशुली आर्या और राजभाषा विभाग की सयुक्त सचिव डॉ. मीनाक्षी जॉली उपस्थित थी। राजभाषा क्षेत्र में विभिन्न केंद्रीय संस्थानों में उल्लेखनीय कार्य करने वाले १३२ अधिकारी एवं कर्मचारियों को प्रमाण पत्र एवं सन्मानचिन्ह प्रदान किए गए।



ICAR-CCARI organized 'Rice Field Day' at Chorao village, North Goa

A field day on rice was organized by the Institute at Sadeti Wada of Chorao Island in North Goa district, Goa on 25th October 2021 to showcase the varietal performance of the salt-tolerant rice varieties of the Institute. Dr. Parveen Kumar, Director, in his address urged all the farmers to grow salt-tolerant rice varieties developed by the Institute which have better yield potential than the locally cultivated variety Korgut. He further added that a lot of paddy fields affected by salinity (locally called Khazan land) are lying fallow in the state and that the new salt-tolerant rice varieties of the Institute will help in increasing the

productivity and income of the farmers. Earlier Dr. Manohara KK, Senior Scientist (Plant Breeding) welcomed the Director and all the farmers of Chorao Island to the field day. He briefed the farmers about the yield potential and salient features of four salt-tolerant rice varieties developed by the Institute, namely, Goa Dhan 1, Goa Dhan 2, Goa Dhan 3, and Goa Dhan 4. He further added that all these four varieties can able to withstand multiple stress prevailing in the low-lying Khazan fields. About 30 farmers from the Island village attended the field day. Farmers were happy to see the performance of all the four



varieties demonstrated in the field. They were informed to use the quality seeds available with ICAR and state agricultural department and other reliable sources to increase the yield potential. Dr. Manohara KK and Dr. Paramesha V organized the programme.

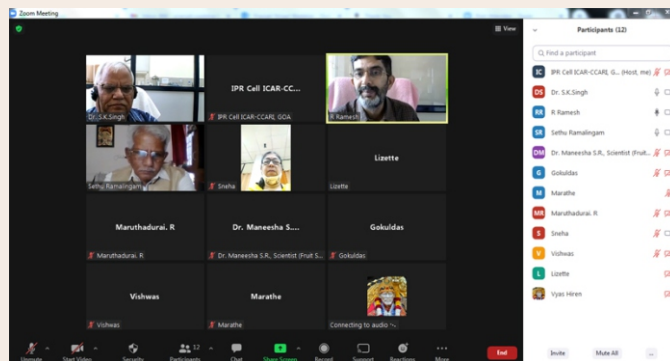


Vigilance Awareness Week celebration

The 'Vigilance Awareness Week' was celebrated at the Institute from 26th- 1st November 2021. This year the main focus of Vigilance Awareness Week was Independent India @75: Self Reliance with Integrity; “स्वतंत्र भारत @ 75: सत्यनिष्ठा से आत्मनिर्भरता।”

under this programme, the following activities were carried out. Online integrity pledge was administered to all the Staff Members on 26th October and banners on 'Vigilance Awareness Week' were displayed at various places on the premises. An online talk on “Vigilance awareness” by Shri. Sethuramalingam, Former Deputy Director (Vigilance), IST, New Delhi was held on 27th October 2021. An essay writing competition on the topic “Ethics and Corruption”

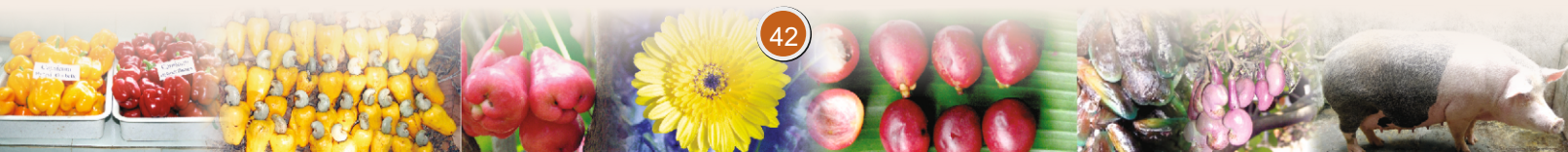
was organized for the employees on 28th and a total of 8 staff members participated. The distribution of pamphlets on vigilance awareness was carried out on 29th and weeding out of old files was done on 30th October. Vigilance awareness programme for students in Old Goa School was organized on 1st November 2021.



Sensitization Workshop on Agri-Business Incubation

Agri-based Growth opportunities for Nurturing start-ups through Incubation (AGNI), the ABI Centre of ICAR – Central Coastal Agricultural Research Institute organized “Sensitization Workshop on Agri-Business Incubation” for aspiring entrepreneurs on 10th November 2021. Dr. Parveen Kumar, Director, ICAR-CCARI, Old Goa & Chairman, Advisory Committee, AGNI,

highlighted the technologies available at the Institute and motivated the aspiring entrepreneurs to take advantage of incubation facilities at the Institute. He underlined that the Incubation Centre at the Institute would extend all possible support to entrepreneurs in setting up agri-business ventures. Dr. Vithal. S. Sukhathankar, Associate Professor (Systems),



Goa Institute of Management and Mentor of AGNI, stressed the resilience of the agriculture sector, which performed well even during the COVID-19 pandemic and spoke about the opportunities available in the agriculture sector for entrepreneurs. Dr. Lalat Indu Giri, Assistant Professor (ECE) & Co-ordinator, Startup Centre, NIT, Goa, and Mentor of AGNI, deliberated upon the scope for innovative solutions in the agriculture sector such as use of drones, mechanization and agricultural waste management and urged the participants to explore these opportunities. Dr. K.P. Sudheer, Associate Director of Research, RAFTAAR Agri-Business Incubator, Department of Agricultural Engineering, College of Horticulture, KAU, Thrissur, Kerala, Mentor of AGNI, and the invited speaker for the workshop, explained about agri-business incubation with a special emphasis on the food business ecosystem. He spoke about the scope of value addition for the entrepreneurs and farmers in the food business sector through which they can tap into new markets and reap the benefits. Dr. Mathala Juliet Gupta, P.I., AGNI, ICAR-CCARI, Old Goa, briefed about the facilities and services offered by AGNI, the ABI centre of the Institute and encouraged the entrepreneurs to

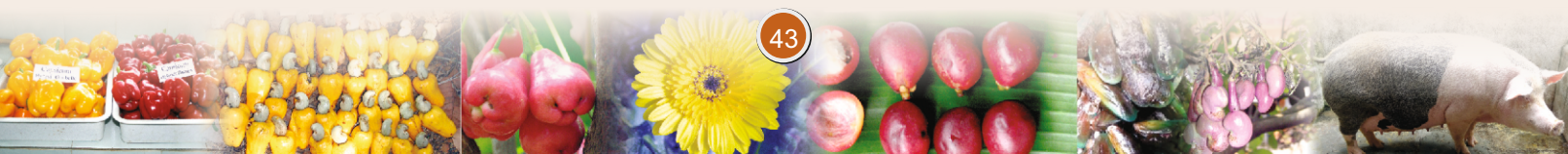
set up successful agri-business enterprises. Dr. R.S. Rajkumar, Scientist (LPT), Section Incharge, Animal Science & Fishery Section, and Dr. Shripad Bhat, Scientist (Economics), Co-P.Is., AGNI, also spoke about the technologies available at the Institute for farmers and prospective entrepreneurs. About 40 participants, including registered incubatees, prospective entrepreneurs, farmers, students, participated in this workshop.



Ethnic Seafood Recipe Competition as part of the World Fisheries Day celebration

World Fisheries Day is celebrated across the world on 21st November. The main purpose behind the celebration of this prestigious day is to highlight the importance of the sustainability of fish stocks and fisheries. To mark the significance of the day, an "Ethnic Seafood Recipe Competition" was organized at ICAR-CCARI to explore and display the ethnic food recipes prepared from finfish, shrimp, clam, oyster, and squid. A total of 36 participants displayed the traditional fish recipes from various coastal states such as Goa, Karnataka, Maharashtra, and

Kerala. The recipes were evaluated by expert food critics (Mrs. Mini Rebeiro, Shri Miguel Braganza and Shri Subendra Mehta) and judged based on sensory attributes. The best recipes were awarded and all recipes were given acknowledgements with a certificate of participation. At the outset, Dr. Parveen Kumar, Director, ICAR-CCARI highlighted the importance of World Fisheries Day and mentioned that the institute is in process of developing the technologies for ready-to-eat type ethnic fish products in times to come. Dr. Solomon Rajkumar,



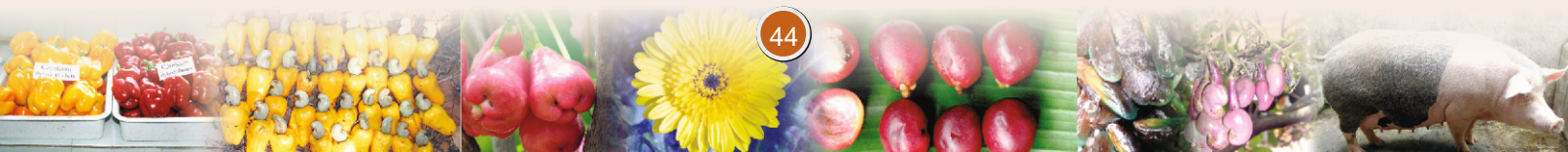
Senior Scientist and Section in Charge (Animal and Fisheries Science) welcomed the participants and delegates and briefed about the importance of World Fisheries Day Celebrations. Dr. Solomon Rajkumar, Dr. Trivesh Suresh Mayekar and Dr. Sreekanth G.B., Scientist (Fisheries Resource Management) co-ordinated the World Fisheries Day Celebrations.



ICAR-CCARI celebrated World Fisheries Day by organising campaign on Conservation and Management of Small Indigenous Fishes of Goa

As part of the World Fisheries Day, ICAR-CCARI organised a campaign on “Conservation and Management of Small Indigenous Fishes of Goa” at Mangueshi temple, Mardol, Goa. A total of 500 fingerlings of seven indigenous fish species were released into the temple pond, which is considered as a method of in situ conservation. To spread awareness about fish conservation, tourists, students, and local villagers were also invited to the campaign. Dr. Parveen Kumar, Director, ICAR-CCARI highlighted the importance of World Fisheries Day to address the conservation of fish and fishermen livelihood and briefed about research activities of the institute that focus on increasing sustainable livelihood for fish farmers and fishermen. Shri Trivesh Suresh Mayekar, Scientist (Fish Genetics and Breeding) highlighted the importance of conservation of small indigenous fishes and their role in providing food and nutritional security to the rural population. Shri Sudin Ambe, Secretary, Mangueshi Devasthan congratulated the institute for this prestigious event and ensured their wholehearted cooperation for such initiatives in the future. Shri K.D. Sadhale from Nirmal Vishva, an environmental NGO stated the importance of fish in human life and water quality management. Shri H.R.C. Prabhu, Programme Co-ordinator Incharge, KVK, North

Goa and Dr. Sreekanth G.B., Scientist (Fisheries Resource Management) also spoke on the importance of conservation of indigenous fish germplasm. On this occasion, an extension folder entitled “Promoting indigenous ornamental fishes of Goa: Breeding and seed production of the melon barb, Haludaria pradhani for conservation and management” was released by the dignitaries. Posters displaying the freshwater fishes of Goa were also distributed to tourists, students, villagers, and staff of Mangueshi Devasthan. Shri. Trivesh Suresh Mayekar, Dr. Sreekanth G.B., Dr. Solomon Rajkumar, and Shri. Rahul Kulkarni coordinated the World Fisheries Day campaign.



National Campaign on 'Agriculture and Environment: the Citizen Face' @Azadi Ka Amrit Mahotsav

ICAR – Central Coastal Agricultural Research Institute (CCARI), Old Goa and ICAR – Krishi Vigyan Kendra (KVK), North Goa, in collaboration with Old Goa Educational Institute, Old Goa, Tiswadi organized an 'Orientation programme cum exposure visit of school students to Agroecotourism (AET) Centre of the Institute on 26 November 2021. Students of Class IX of Old Goa School along with their teachers participated in the programme. Orientation to the students and teachers on different activities of the Institute and agroecotourism was imparted through the exposure visit. The programme was organized under National Campaign on 'Agriculture and Environment: The Citizen Face' in the series of events under 'Azadi Ka Amrit Mahotsav'. Dr. Monica Suresh Singh, SMS (Agril. Extension), ICAR – KVK, North Goa, explained briefly about importance of AET in the State. Shri Vinod Ubarhande, ACTO (Farm Superintendent),

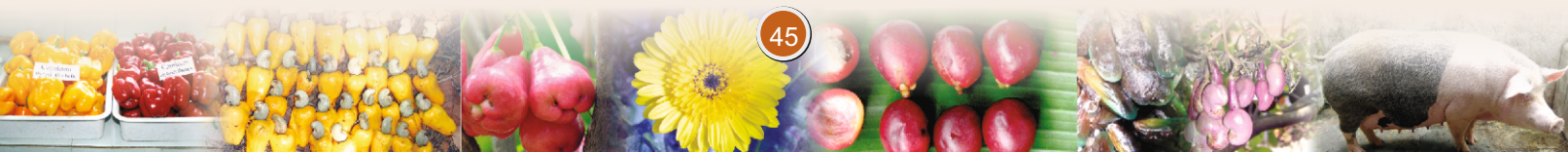
ICAR – CCARI, Goa, explained all the components of AET unit of the Institute. Shri Rahul Kulkarni, ACTO, ICAR – CCARI, Goa, explained the functioning of ICAR – CCARI, Goa. A guided tour to the AET Centre was coordinated Ms. Avipreet Janjal and Ms. Shishira, Young Professionals. The programme was coordinated by Shri H. R. C. Prabhu, Sr. Scientist and Head-In-Charge, ICAR – KVK, North Goa and documented by Shri Vishwajeet Prajapati, Technical Officer (Computer), ICAR – KVK, North Goa.



Outreach Programme of India International Science Festival-2021

ICAR-Central Coastal Agricultural Research Institute (CCARI), Goa under the banner of 'India International Science Festival-2021' (IISF-2021) organized an outreach programme on 29th November 2021 at V.D. & S.V. Wagle High School, Mangeshi, Mardol, Goa. The programme was conducted to create awareness and sensitize the importance of science education among high school students. Around 150 students of classes VIII, IX and X and school staff actively participated in this event. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa, in his talk, enlightened and encouraged the students to take up science streams and to set their future career goals. He also briefed about upcoming IISF-2021

to be held at Panaji, Goa from 10th - 13th December 2021 and invited students to actively participate in the science festival. The Headmistress of the school Mrs Mithasha M. Aigal briefed the gathering regarding IISF-2021. Dr. Amiya Ranjan Sahu, Scientist (Animal Genetics and Breeding), ICAR-CCARI, Goa delivered lecture on importance of scientific interventions applied in veterinary science and animal husbandry. Dr. Uthappa, A.R. Scientist (Agroforestry), ICAR-CCARI, Goa delivered lecture highlighting the role of agricultural scientists in addressing the issue of food security and self-sufficiency in India. They also spoke about career options for students in science,



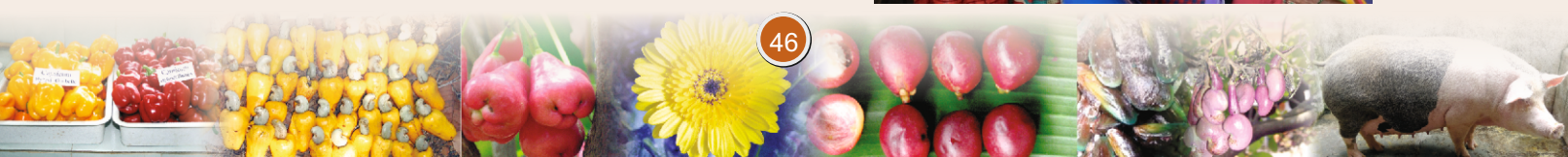
especially in agriculture and allied sectors. Rahul M. Kulkarni, Asst. Chief Technical Officer compered the programme and briefed the gathering about salient features of IISF-2021. Dr. Amiya Ranjan Sahu, Dr. Uthappa, A.R and Rahul Kulkarni coordinated this programme.



PMFME Sponsored Training Programmes for New and Existing Beneficiaries on Plantation and Spices Crops Processing

Two concurrent training programmes, funded by Pradhan Mantri Formalization of Micro Food Processing Enterprises (PMFME) for New and Existing Beneficiaries on Plantation and Spices Crops, were organized between November 16-23, 2021 ICAR-CCARI. The training was coordinated by Dr. Mathala Juliet Gupta, Senior Scientist (AS&PE). Thirteen New beneficiaries were trained on various aspects of Processing of Coconut into Minimally processed Coconut, VCO, Snowball Coconut, Chips, Vinegar processes, SOPs, Packaging, Storage, FSSAI guidelines, EDP, Supply chain, plant layout, machinery selection, Cleaning of processing machinery, Advances in packaging, different packaging materials, methods and machinery involved (Primary, Secondary and tertiary) in packaging of fruits and vegetable products, advances in storage of Plantation & Spices Crops, cleanliness etc. Eight existing beneficiaries were trained on Processing of Turmeric, Curry leaves, Cashew Apple, Nutmeg, White Pepper processes, SOPs, Packaging, Storage, FSSAI guidelines, EDP, Supply chain, plant layout, machinery selection, Cleaning of processing machinery, Advances in packaging, different packaging materials, methods and machinery involved (Primary, Secondary and tertiary) in packaging of fruits and vegetables products, advances in storage of Plantation & Spices Crops, cleanliness etc. The trainees underwent extensive hands-on training at Post-Harvest laboratory of ICAR-CCARI and VCO unit

of KVK, North Goa. The Beneficiaries were examined by third-party examiners "FICSI" on the final day. The trainers were Dr. Ravindra Naik, Principal Scientist (AS&PE), ICAR-CIAE RC, Coimbatore, Dr. Manikantan M.R., Principal Scientist (AS&PE), ICAR-CPCRI, Dr. Solomon Rajkumar, Scientist (LPT), Dr. maneesh S.R. Scientist (Horticulture), Dr. Sripad Bhat, Scientist (Economics), Mrs. Sunetra Talulikar, SMS (Home Science), KVK North Goa, Er. Vinod Atkari Assoc. Prof. Ag. Engg. Don Bosco College of Agriculture, Sulcorna, Sh. Pravin Sabnis, Sh. Avin Naik, Sh. Ramchandra Salgaonkar, Er. Sudip Faldessai (DST), Sh. Tushar Sawant FiiRE, G.R. Shanbag (Chartered Accountant).



Rural Fisheries Work Experience training and exposure programme for final year Bachelor of Fisheries Science (BFSc.) students from Kerala University of Fisheries and Ocean Studies, Kochi

Rural Fisheries Work Experience programme (RFWE) designed by the Fisheries universities of the country focuses on exposure to farms/fields/natural ecosystems/technologies in the field of fisheries and agriculture sectors for students pursuing their final year Bachelor of Fisheries Science (BFSc.) programme. In this regard, ICAR-CCARI organised a twenty-two days RFWE programme for twenty final year BFSc. students from Kerala University of Fisheries and Ocean Studies, Kochi, Kerala. The training was organised in two batches of nine and eleven students during 1st to 11th October and 1st to 11th November 2021 respectively. At the institute, the students were exposed to fisheries section field units (wet laboratory, pond culture, hatchery sections and integrated pond culture systems), integrated farming systems (low land and upland), animal science units, Mango and cashew germplasm blocks, Soil and Water conservation units, Agro-meteorology station, Agro-eco-tourism unit, rice fields, and KVK, North Goa. They were given hands-on-training on fish breeding, seed production, aqua scaping, fish pedicure, bio-floc, aquaponics, cage culture, ornamental fish culture, value-added fish products, underwater visual census system, food and feeding biology of fish, fisheries and biodiversity analysis softwares (*PAST 4.0*, *tpsutil*,

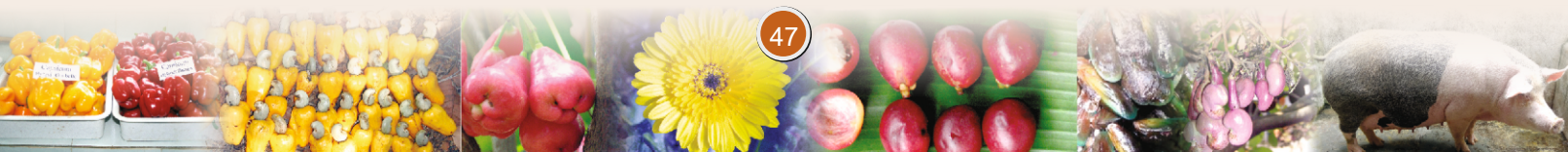
tpsDig, and *R*). They were given awareness on the research activities carried out the Institute. In addition to this, field exposure visits were arranged in farmer's fields/fish markets/fishermen villages/natural ecosystems such as Betim/Shirdhona fishing sites, shrimp farms, Fisheries Department farm-Dhauji, Integrated Livestock-Fish-Horticulture farm, Agro-eco-tourism unit, Biofloc units, Khazan agro-ecosystem, Salim-Ali Bird sanctuary, Curtorim lake and biodiversity management committee, Terekhol-Keri reef, and Choroa Island. On the last day, the students participated in the agri-business incubation workshop organised at the institute and projected their novel concepts for agri-business start-ups. The RFWE programme was coordinated by Dr. Sreekanth G.B., Scientist (Fisheries Resource Management) and Shri Trivesh Suresh Mayekar, Scientist (Fish Genetics and Breeding).



ICAR-CCARI, Goa participated in India International Science Festival -2021

The 7th India International Science Festival-2021 (IISF-2021) was jointly organised by the Ministry of Science & Technology, Ministry of Earth Sciences and Vijnana Bharati (VIBHA) during 10-13 December 2021 at Panaji, Goa. The

theme of the IISF-2021 was "Celebrating Creativity, Science, Technology and Innovation for a prosperous India". This mega event was inaugurated by Dr. Jitendra Singh, Hon'ble Union Minister of State (Independent Charge) Science &



Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space. In inaugural address, he said that the series of IISF is an integral part of India's long-term vision of developing and widening the spectrum of scientific temper for sustainable development and new technological innovations in India. Hon'ble Union Minister of Ayush and Ports, Shipping and Waterways Shri Sarbananda Sonowal, Hon'ble Union Minister of State (MoS) for the Ministry of Tourism and Ports, Shipping and Waterways Shri Shripad Naik, Hon'ble Chief Minister of Goa, Dr. Pramod Sawant, Dr M. Ravichandran, Secretary, Ministry of Earth Sciences, Dr. Vijay Bhatkar, President Vijnana Bharati and scientists and officials from different departments graced the inaugural function.

ICAR-CCARI, Goa and ICAR-KVK, North Goa participated in the Mega Science and Technology Expo and exhibited various technologies developed by the Institute at Campal ground, Panaji, Goa. Shri Om Prakash Sakhlecha, Hon'ble Minister of MSME, Science and Technology, Govt.

of Madhya Pradesh visited our exhibition stall and appreciated the work done by our Institute. During the exhibition period around 4000 delegates (scientists, technocrats and students) from different parts of country visited our exhibition stall and discussed various technological advancements in field of agriculture. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa visited the stall and briefed the visitors regarding importance of ICAR in bringing evergreen revolution in agriculture sector. KVK (I/c) Shri H.R.C. Prabhu, Drs Uthappa, A.R., Maneesha, S.R., Amiya Ranjan Sahu and all the staff of KVK actively participated in this event.



World Soil Day celebration

ICAR-Central Coastal Agricultural Research Institute (CCARI), Old Goa and ICAR – Krishi Vigyan Kendra (KVK), North Goa celebrated 'World Soil Day' on 5th December, 2021. The theme of World Soil Day for the year 2021 is 'Halt Soil Salinization, boost soil productivity'. Shri Shripad Yesso Naik, Hon'ble Minister of State, Ministry of Tourism and Port, Shipping and Waterways, Government of India graced the occasion as chief guest. On the occasion, he highlighted the importance of the soil and referred it as our mother and explained how soil health and human health are intricately related. He complimented the work of the ICAR-CCARI and ICAR-KVK towards improving the

agricultural productivity and income of the farmers of Goa and coastal region. Dr. Parveen Kumar, Director, ICAR-CCARI, Goa in his address explained the background of celebration of the World Soil Day. He briefed about the soil health and its status in the State and spoke about the Institute and its achievement and how it contributed significantly to the agricultural development in the Goa and other parts of the coastal region. On the occasion, he appealed for bringing the agroecotourism to the mainstream tourism so as to attract and retain youth in agriculture. Shri. HRC Prabhu, Sr. Scientist and Head In-charge, ICAR-KVK, North Goa welcomed the dignitaries and participants and explained in



brief regarding importance of 'World Soil Day' and the theme of the year 2021.

Technical session included lectures on 'Balanced use of fertilizer' by Dr. Gopal Ramdas Mahajan, Scientist (Soil Science), ICAR – CCARI, 'Soil sampling and analysis' by Shri Shashi Vishwakarma, Technical Officer (Soil Science), ICAR-KVK, North Goa and 'Yogic Kheti' by BK Darshana Didiji, Brahma Kumaris, Goa. During the programme, 100 soil health cards were distributed to the farmer. The programme was attended by farmers, students, scientists, subject matter specialists and staff of Institute and KVK. The programme was organized and coordinated by Shri H.R.C. Prabhu, Dr. Gopal Ramdas Mahajan,

Dr. Monica Suresh Singh, Shri Shashi Vishwakarma, Shri Rahul Kulkarni and Shri Vishwajeet Prajapati.



Visit of Shri Parshottam Rupala, Hon'ble Union Minister of Fisheries, Animal Husbandry and Dairying, Government of India at ICAR-CCARI

Hon'ble Union Minister of Fisheries, Animal Husbandry and Dairying, Shri Parshottam Rupala, Union Minister for Fisheries, Animal Husbandry and Dairying visited ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI), Goa today. He was accompanied by Dr. Pramod Sawant, Hon'ble Chief Minister of Goa, Shri Filipe Neri Rodrigues, Minister for Fisheries and Water Resources Department, Govt. of Goa, Shri J.N. Swain, Secretary, Department of Fisheries, Dr O. P. Chaudhary, Joint Secretary (NLM/PC) and Shri J. Balaji, Joint Secretary (Marine Fisheries). Dr. Parveen Kumar, Director, ICAR-CCARI extended a warm welcome to all the dignitaries. Hon'ble Minister took stock of Institute activities, visited dairy cattle unit, eco-friendly wastewater treatment facility and appreciated the efforts being taken by the Institute in enhancing animal and fisheries production. A tree plantation was done by the minister followed by inauguration of newly developed Fodder Museum which boasts of

growing 35 different fodder species suitable for the coastal region and can act as a live demonstration unit for farmers.

Union Minister also Chaired a meeting which was organized to create awareness about benefits of revised and realigned schemes of DAHD, Govt of India. Dr. Lipi Sairiwal, Asst. Commissioner (AH) demonstrated the functioning of NLM and AHIDF portals. Dr. Parveen Kumar, Director, ICAR-CCARI, moderated an interactive session with farmers, entrepreneurs, ICAR scientists, state officials and representatives from dairy federation. Issues related to subsidies, bank procedures, saltwater intrusion, animal diseases etc. were raised. All the issues were answered and wherever necessary it was taken note by government officials for further necessary action. During the meeting, Union Minister highlighted benefits of the revised schemes for creating entrepreneurship in the field of animal husbandry and fisheries. Chief Minister, Dr. Pramod Sawant highlighted the measures taken



by state government for the benefit of farmers and motivated them to take advantage of these schemes. Meeting was followed by a press conference in which Union Minister and Chief minister spoke about Central and State government achievements and efforts towards development of the Animal Husbandry and Fisheries sector.



Events to witness live programme of Hon'ble Prime Minister Shri Narendra Modi's address on "Natural Farming" organized by ICAR-CCARI, Goa and ICAR-KVK, North Goa

Events were organized to witness the live programme of Hon'ble Prime Minister Shri Narendra Modi's valedictory address on "Natural Farming" on 16th December 2021 by ICAR-CCARI, Goa. ICAR - Krishi Vigyan Kendra, North Goa organized an event to witness the live programme at A J de Almeida High School, Ponda, South Goa. ICAR-CCARI, Goa organized an event at the Institute where all the scientists attended and watched this live programme. After the live programme, Dr. Parveen Kumar, Director, ICAR-CCARI, highlighted the importance of natural farming in the coastal regions and asked the scientists to streamline the experiments related to natural farming to generate scientific data. A total of 155 participants watched this live

programme in physical mode, which included 43 farmers, 69 students and 43 staff members; around 870 farmers watched this live programme virtually.



The progressive farmer of ICAR-CCARI, Goa receive KRISHI VIBHUSHAN Award and ICAR-KVK, North Goa farmer receive "Fr. Inacio Almeida Annual Award" for organic farming

The progressive farmer of ICAR-CCARI, Goa was honoured with KRISHI VIBHUSHAN Award and ICAR-KVK, North Goa farmer with Prestigious "Fr. Inacio Almeida Annual Award" for organic farming for the period 2021 by the hands of Hon'ble Chief Minister of Goa, Dr. Pramod Sawant on 19th December 2021 on the occasion of 60th

Goa Liberation Day celebrations. Smt. Anitha Mathew Vallikkappen (Assonora) received the KRISHI VIBHUSHAN Award while Shri. Deelip Pundalik Narulkar (Pernem) was given the "Fr. Inacio Almeida Annual Award" for organic farming. Smt. Anitha Mathew and her husband, Shri. Mathew Vallikkappen follows sustainable



fish-based integrated farming system in 1.87 ha area including polyculture of predatory fish along with forage fish (seabass, tilapia, carps and Bhasa), piggery (Agonda Goan, Crossbred, Hampshire, Large black, Large White Yorkshire, Land race, and Duroc), poultry (Srinidhi, Vanaraja, and Gramapriya), fruit crops (pineapple, banana, papaya, and passion fruit), vegetables (chilli, ladies finger, ivy gourd, amaranthus, tapioca, brinjal), vermicompost, and biogas. The biogas and vermicompost are the waste recycling components of the farm. This system gives them a gross return of Rs. 75.4 lakhs (with a net profit of Rs. 46.4 lakhs). During the COVID-19 pandemic, the scientists from the institute guided the farm family in developing the fish-based IFS, which is found more profitable, sustainable, and resource efficient. The benefit cost ratio for the farm was estimated to be 2.6. By adopting this IFS model, risk of crop loss was reduced due to diversified components (13 types) and the farm income has been doubled compared to the mono-crop practice. Shri. Deelip follows organic farming system in an area of 5.8 ha that includes crop components such as paddy, cashew, arecanut, coconut and black pepper and

livestock components- dairy (Gir cow) and backyard poultry. He also prepares specific products such as protein powder (from plant seeds), organically made pesticides (guava leaf, neem leaf, lemon leaf, adulsa leaf, chili powder and cow urine) and Jeevamrut. The vermicomposting and biogas units are also established in the farm facility. The gross income and net profit of the farm are Rs. 23.6 lakhs and Rs. 12.7 lakhs respectively. The ICAR-Central Coastal Agricultural Research Institute, Ela, Goa provided all the scientific and technical support for the development of the farming systems of the awardee farmers.



भाकृअनुप - केन्द्रीय तटीय कृषि अनुसंधान संस्थान में राष्ट्रीयस्तर पर हिन्दी कार्यशाला का आयोजन

भाकृअनुप - केन्द्रीय तटीय कृषि अनुसंधान संस्थान में दिनांक १५.१२.२०२१ को हिन्दी कार्यशाला का आयोजन ऑनलाइन माध्यम द्वारा किया गया था, इस कार्यशाला का विषय “वैज्ञानिक संस्थानों में हिन्दी को बढ़ावा कैसे दिया जाए” और इस विषय के मार्गदर्शक वक्ता, श्री राजीव रंजन, मुख्य जनसम्पर्क अधिकारी – हरियाणा पावर यूटिलिटीस हरियाणा सरकार थे। इस संस्थान के राजभाषा अधिकारी श्री राहुल कुलकर्णी ने मुख्य वक्ता का परिचय उपस्थित मान्यवरों को कराया। माननीय

निदेशक महोदय डॉ. प्रवीण कुमार ने इस कार्यशाला के विषय के महत्व के बारे में सभी गणमान्यों को अवगत कराया। श्री राजीव रंजन ने वैज्ञानिक संस्थानों में हिन्दी को बढ़ावा देने हेतु महत्वपूर्ण मुद्दों से उपस्थित गणमान्यों को अवगत कराया तथा हिन्दी एवं क्षेत्रीय भाषाओं की सहजता एवं सरलता पर रोशनी डाली तथा मातृभाषा एवं क्षेत्रीय भाषा में सिखाये गए विषय हमेशा याद रहते हैं। यदि कोई वैज्ञानिक उपलब्धि क्षेत्रीय या हिन्दी में सामने वाले को समझायी जाती है तो वह बात



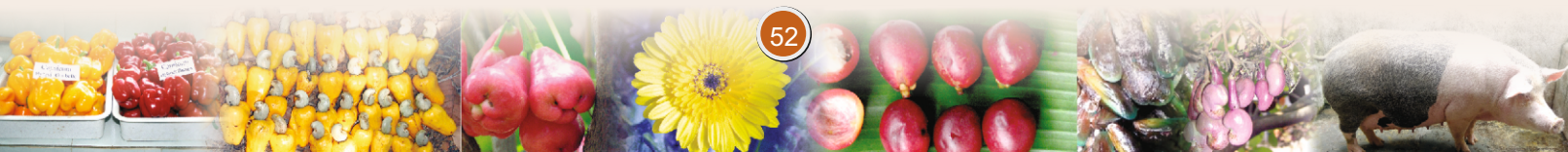
सामने वालों को तुरंत समझ आती है। श्रीमति सीमा चोपड़ा - निदेशक महोदया, राजभाषा विभाग नई दिल्ली से इस कार्यशाला में ऑनलाइन माध्यम से जुड़ी उन्होंने भी अपने मौलिक विचार प्रकट किए। इस कार्यशाला में देश के विभिन्न क्षेत्र के २२ संस्थानों के ६६

अधिकारियों/कर्मचारियों ने भाग लिया था। कार्यशाला के अंत में संस्थान के माननीय निदेशक महोदय डॉ. प्रवीण कुमार और उप राजभाषा अधिकारी श्री शशि विश्वकर्मा, तकनीकी अधिकारी मृदा विज्ञान कृषि विज्ञान केंद्र उत्तर गोवा ने सभी को आभार एवं धन्यवाद प्रकट किया।

ICAR – CCARI Celebrates Kisan Diwas

ICAR-Central Coastal Agricultural Research Institute, Ela, Old Goa and ICAR – Krishi Vigyan Kendra, North Goa celebrated 'Kisan Diwas' on 23rd December 2021 on the birthday of the 5th Prime Minister of India, Shri Choudhary Charan Singh, a farmer's leader, who introduced many policies to improve the lives of the Indian farmers. Dr. Parveen Kumar, Director, ICAR-CCARI applauded the farmers for their role in achieving food security and the untiring effort to produce surplus food production amid the pandemic situation of COVID-19. He further stressed on improving the cropping intensity and promotion of organic farming. On the occasion, he congratulated the farmers who received the appreciation from the Institute. Shri Uttam Murgaonkar, Sarpanch, Carambolim Panchayat, highlighted the problems faced by Karmali farmers, especially in coastal saline soils, locally called khazan lands, and urged scientists for developing climate-resilient technologies for the benefit of the farmers. He heartily thanked the Institute and KVK for the support extended to the farmers. Dr. R.L. Meena, Principal Scientist, ICAR – CSSRI, Karnal enlightened the farmers about problems and constraints of the salt-affected soil and the technologies developed by ICAR-CSSRI, Karnal, a premier Institute working on soil salinity research, for utilizing these problem soils. Shri H.R.C.Prabhu, Senior Scientist & Head I/C, KVK-North Goa, welcomed the guests and

participants and informed them about the importance of celebrating 'Kisan Diwas'. The progressive farmers benefited from the Institute and KVK support and were awarded by the Goa State Level Awards - Krushi Vibhushan Awardee Smt. Anita Mattew Vallikkappem, Assonoda and Shri Deelip Narulkar, Pernem, who received Fr. Inacio Almeida Annual Awardee for Organic farming were felicitated for their untiring efforts and innovativeness to make farming a sustainable and profitable venture. Progressive farmers, Shri Suhas Hari Phadte, Smt. Hema Bugde, Smt. Vishranti Surlakar and Shri Sadanand Gaude were felicitated for their cooperation to transfer of ICAR-CCARI technologies and transfer of technology programmes of KVK. The farmers have been a source of motivation and inspiration for the fellow farmers. Shri Deelip Narulkar appealed the fellow farmers to be innovative and build entrepreneurship in agriculture in general and organic farming in particular. Smt. Sunetra Talaulikar, SMS (Home Science), KVK proposed a vote of thanks. Dr. Monica Singh, SMS (Agril Extension) and Shri. Shashi Vishwakarma, Tech Officer coordinated the programme. The programme was attended by 95 farmers, farm women, scientists and staff of the Institute and KVK.

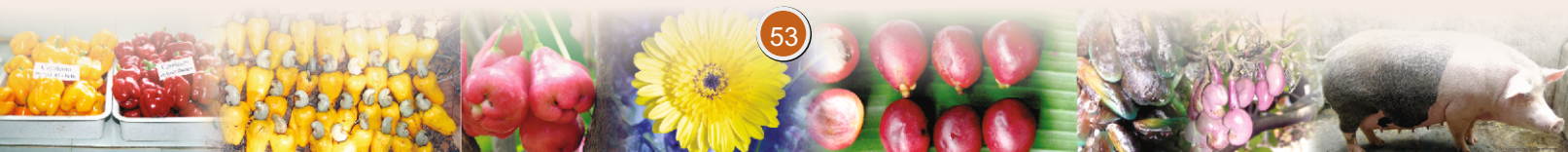




Interface meeting organized between ICAR-CCARI and Directorate of Agriculture, Govt. of Goa

The ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI), organized interface meeting with officers of Directorate of Agriculture, Government of Goa on 30th November 2021 at ICAR-CCARI, Old Goa. Dr. Parveen Kumar, Director, ICAR-CCARI, in his introductory remarks, highlighted significant research achievements of the Institute and mentioned that the interface meeting with the line departments will help in formulating research programmes as per the demand and interest of the coastal farmers. He further emphasized that pulses and oilseeds are very important for diversifying agriculture in the State with added advantage of nutrition and income. Shri. Sanjeev Mayekar, Deputy Director Agriculture (INM) sought solutions for new emerging problems in field and horticultural crops due to present day changing climate. The meeting was attended by all the Scientists of ICAR CCARI and 12 officers from Department of Agriculture, Govt. of Goa and Krishi Vigyan Kendra, North Goa and Krishi Vigyan Kendra, South Goa. During the meeting, action points pertaining to decisions of the pre-kharif meeting were discussed. About 25 new agenda points

received for the current meeting were discussed in length and action points were formulated to address the same. The important discussion points were introduction of Ragi, solution for irregularities in flowering in Mango and Cashew due to erratic rainfall pattern, imparting training on processing of turmeric and kokum and introduction of short-duration pigeon pea. The meeting was coordinated by Dr. Manohara, K. K., member secretary (Interface meeting).



Conference/Symposia/Workshop/Training attended:

Date	Name of Scientist	Programme	Venue
23 rd June 2021	Dr V Arunachalam	Delivered invited talk Online workshop on Single Nucleotide polymorphisms tiny changes but huge consequences- a step towards business opportunity in bioinformatics	Virtual platform organised by Periyar Maniammai Institute of Science and Technology Periyar Nagar Thanjavur Tamil Nadu
1 st June 2021	Dr. Gokuldas PP Scientist (AR)	National Webinar on Organic Animal Production: Opportunities and Strategies in India	Directorate of Research, Maharana Pratap Agriculture University of Technology, Udaipur
1 st July 2021	Dr. Gokuldas PP Scientist (AR)	International webinar on Impact of oxidative stress on male and female reproduction	IDP-NAHEP project, ICAR-NDRI, Karnal
7 th July 2021	Dr. Gokuldas PP Scientist (AR)	Virtual Symposium on Sustainable Buffalo Production Through Integration of Reproduction, Nutrition, Health and Knowledge Dissemination	ISBD, ICAR-CIRB, Hisar
19-20 th July 2021	Dr. Gokuldas PP Scientist (AR)	Virtual International Symposium on Harnessing the potentials of genome editing tools to augment the productivity and health of farm animals	ICAR-NDRI, Karnal
23 rd September 2021	Dr. Gokuldas PP Senior Scientist (AR)	National Webinar on Coastal Ecosystems: sustainable livelihoods and protection from climate change	Virtual Platform by TERI, collaboration with MoEFCC
05 th October 2021	Dr. Shripad Bhat	ZTMU/ITMU Sensitization Virtual Workshop organized by IP&TM, Unit	Virtual Platform by IP&TM, Unit
29-30 th October 2021	Dr. Gokuldas PP Senior Scientist (AR)	International Conference on Smart Agriculture for Resource Conservation and Ecological Stability	ANRCM, Lucknow
10 th Novemebr 2021	Dr. Shripad Bhat	'Commercialization of ICAR CCARI Technologies' in the Sensitization Workshop on Agri Business Incubation	ICAR-CCARI, organized by Agri-Business Incubation Centre (AGNI)
27 th November 2021	Dr. Gokuldas PP Senior Scientist (AR)	Orientation Workshop for Nodal Officers of DRIVE Dashboard and DST organized National S&T Survey 2020-21	ICAR-NAARM, Hyderabad (Virtual mode)
27-29 th December 2021	Dr. Gokuldas PP Senior Scientist (AR)	International Symposium on 'Novel knowledge, Innovative practices and Researchin Theriogenology'-2021	CVAS, Thrissur (Virtual mode)



Administration:

- Study Leave: Dr. Sanjaykumar Vithalrao Udharwar, Subject Matter Specialist (Animal Science), North Goa KVK has been granted extension of study leave for a period of 02 years (i.e. 24 months) from 01-01-2022 to 31-12-2023 for pursuing Ph.D. in Veterinary Surgery and Radiology at Kerala Veterinary and Animal Sciences University, Kerala.

Superannuation:

- Dr. B.L. Kasinath, Principal Scientist and Head, KVK North Goa retired on superannuation on 31-05-2021.
- Shri Dhaku Nuno Kankonkar, Skilled Support Staff retired on 31-05-2021

Appointments :

- Dr. Parveen Kumar, Principal Scientist(Agronomy), NRM, Division, ICAR Headquarters, New Delhi assumed the charge of Director, ICAR-Central Coastal Agricultural Research Institute, Goa on the forenoon of 01-05-2021
- Smt. Montia Rita D'Silva, Assistant Administrative Officer assumed the charge of Administrative

Promotion:

S.No	Name/designation of the Scientists	Promoted to the higher grade	effective date of placement/promotion
1	Dr. Udharwar Sanjaykumar V., Subject Matter Specialist (T-6)	Assistant Chief Technical Officer (T-7/8) (Animal Science)	02-09-2019
2	Smt. Tarika S.Ussapkar, Personal Assistant	Private Secretary	19-07-2021
3	Shri Ravi S. Kadam, Skilled Support Staff	Financial Upgradation under MACPS	20-07-2021
4	Smt. Sohini S. Sawant, Assistant	Assistant Administrative Officer	18-11-2021
5	Shri Payak Padkar, Skilled Support Staff	Technician	22-12-2021



Clearance of Probationary Period and Confirmation :

Sl.No	Name and Designation of the Scientist	Date on which Probation cleared	Date of Confirmation in the Scientist grade of ARS
1.	Dr. Nibedita Nayak Scientist (Poultry Science)	04-07-2019	05-07-2019
2.	Dr. Amiya Ranjan Sahu Scientist Animal Genetics & Breeding)	01-07-2020	02-07-2020

Transferred from ICAR-CCARI:

- Dr. Shivasharnappa N., Senior Scientist (Veterinary Pathology) was relieved of his duties at ICAR-CCARI, Goa on 08-10-2021, to join at ICAR-NIVEDI, Bengaluru.
- Shri Somnath, Senior Administrative Officer was relieved of his duties at ICAR-CCARI, Goa on 27-10-2021, to join at ICAR-Headquarters, New Delhi

