NEWSLETTER

ICAR-CENTRAL ISLAND AGRICULTURAL RESEARCH INSITIUTE

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From Director's Desk ...

I am happy to present some of the salient achievements made during the first quarter of the year 2022.

Our scientists have designed an efficient labour saving, hand-held implement for separation of midrib for the coconut leaflet. Leaf cups were produced with the use of coconut leaflets and Pandanus leaves for nursery production of vegetable seedlings in lieu of poly bags. Organic media has been standardized for cultivation of Asparagus densiflorus 'Sprengeri' also known as evergreen herbaceous perennial plant. A local banana cultivar namely Korangi was collected and evaluated at experimental farm for their growth, yield and biochemical parameters. Biochemical analysis of the woody pepper shows that phenolic acids were significantly higher in thin stem samples than the thick samples. *Culantro* has been found as suitable intercrop in arecanut plantations with B:C ratio of 3.19.

Application of brown seaweed *(Sargassum wightii)* extract enhanced the tomato production up to 40 t/ha under low input agricultural system. Split application of fertilizers and nano urea spray (0.4%) have significant effect on rice grain yield. Soil erosion hazard map for Andaman Islands was generated using Revised Universal Soil Loss Equation (RUSLE) in GIS environment, which indicated 47% increase (53 t ha-1 y-1) in 2019 from the 2006 rate.Feeding of poly herbal additives prepared from medicinal plants to the poultry showed anti-inflammatory effect, improved immunity and maintained innate immune homeostasis.

I am delighted to present that our institute has commercialized two technologies *viz*. Dweep Carp grower feed for fish and Dweep tickure, an herbal acaricide for treatment and control of ticks. I congratulate the Scientists of Fisheries Science Division and Animal Science Division for their contribution.

Our institute celebrated the Republic Day and International Women's Day- with fervour and gaiety. An Interface meeting between our institute and Department of Agriculture & Department of Fisheries was also conducted to discuss the various researchable and developmental issues. 'Tuber crops Diversity Fair' was organised to enhance awareness on tuber crops wealth of Andaman and Nicobar Islands and to sensitize the farmers on the potentials of tropical tubers in enhancing the livelihood security.

As a part of the capacity building programme 21 of our SSS have been trained on computer literacy. Under the Azadi ka Amrut mahotsav and Tribal Sub Plan our scientists have conducted number of field days, trainings, demonstration, webinar etcon various aspects of agri/horti/animal/fish sectors for the benefit of the farmers and stakeholders.

I thank all the officials of SMD for support and all the staff members of our institute for their dedication and hard work for the growth and development of our institute.

Research Highlights

Coconut and Pandanus leaf cups for nursery

I. Jaisankar & B. Augustine Jerard

Leaf cups were produced with the use of coconut leaflets and Pandanus leaves for nursery production of vegetable seedlings in lieu of poly bags. The average size of the leaf cup was 8cm^2. The leaf cups were filled with decomposed coir dust+soil+FYM in the ratio of 1:1:1 on volume basis and planted the sweet potato cuttings. The durability and handling of the leaf cup was studied. The result revealed that the 80 % of the leaf cup was good in condition up to 62 days after planting of the cuttings and it was very easy to handling for keeping in the nursery as well as the entire leaf cup along with the rooted cutting planted in the main field without removing the leaf cups hence it is considered as the eco friendly nursery cups may be scaling up for further exploitation

Coconut leaf midrib separator

I. Jaisankar & Dr. B. Augustine Jerard

An efficient labour saving, hand-held implement was designed and fabricated for coconut leaflet mid rib separator which could be used to separate the midrib from the leaflets. The specification of the midrib separator was about a total length of 19 cm, 7 cm blade, 12 cm round handle, width of the blade is 2.5 cm and the blade hole is 0.7 cm. From this implement the mid rib of the coconut leaf was separated easily compare to the traditional method. Well experienced person can separate 500 midribs/hour while traditional method it took to separate the mid rib of 380/hour. The clean mid ribs were obtained from the coconut leafs when using this implements compared to the traditional method. Hence, the implement may be upscale for wider use and commercialization.

Organic media standardized for *Asparagus densiflorus* 'Sprengeri'

V. Baskaran & K. Abirami

Asparagus densiflorus 'Sprengeri' also known as Emerald Featheris an evergreen herbaceous perennial with upright or trailing branches growing upto 2 feet. It can be grown as ground cover, indoor plant, hanging basket, landscape border and as attractive potted plant in landscape views. Though the species can be propagated by division of rhizomes, but for large scale cultivation of this ornamental herb, seed germination is preferred. In the use of different media combinations, maximum germination percentage (95.23%) was observed in the media combination of coircompost and vermicompost in ratio of 1:1 as compared to soil media as control (42.3%). The seedling growth was also vigorous (recorded two months after planting) in the media combination of coircompost and vermicompost (1:1) with maximum plant height (23.64 cm), no of shoots/plant (3.2), no of roots/plant (9.6) and root length (5.72 cm).

Plate 1: Root growth of Asparagus densiflorus'Sprengeri

Identification of pickling mango types in South Andaman

V. Baskaran & K. Abirami

Three tender pickling mango types identified at Little Andaman (SA 1), Sippighat (SA 2) and Garacharma (SA 3). *In-situ* characterization of these two mother trees identified are done based on descriptors. Both the trees showed cluster bearing habit and are regular bearers with good aroma in fruits. The individual fruit weight of the accessions varied from 70 g to 110 g with fruit length ranging from 7.25 cm to 8.5 cm and fruit breadth ranged from 4.8 cm to 5.6 cm.

Plate 2: Pickling mango accessions

Characterization of Korangi, a local banana cultivar

V. Baskaran & K. Abirami

A local banana cultivar namely Korangi was collected and evaluated at experimental farm for their growth, yield and biochemical parameters. Evaluation of the variety showed that the duration from planting

to shooting ranged from 360-380 days whereas, the shooting to harvest duration ranged from 106-118 days. The bunch weight ranged from 9.6 to 12.3 Kg with 7-8 hands per bunch. The number of fingers ranged from 84 to 112 per bunch with average finger weight ranging from 56 to 78 g. The biochemical characterization of Kornagi cultivar showed higher TSS content 25.86°B and high carotenoid content of 654.3 ug/ 100 g. The unique characteristic feature of Cv. Kornagi is that the inner fibres or "Strings" that exists between the fruit and peel does not remain attached with peel unlike the other banana varieties. The strings are easily separable and can be consumed with the pulp.

Table 1 : Biochemical characterization of Cv. Korang

TSS (°B)	25.86	Total Sugar (g/100g)	23.42
Acidity (%)	0.71	Total Starch (g/100g)	0.14
Moisture content (g/100g)	70.81	Total phenol(g/100g)	64.00
Ash (g/100g)	0.32	Total flavonoid (mg/100g)	28.78
Fat (g/100g)	0.21	Reducing sugars (g/100g)	2.13
Protein (g/100g)	1.64	Carotenoids (µg/100g)	654.3

Plate 3: Local Cv. Korangi; Strings remain attached to pulp

Evaluation of local cinnamon collections

Ajit Arun Waman & Pooja Bohra

True cinnamon is one of the ancient spices grown for their high therapeutic potential. In order to identify island suitable genotypes, studies were conducted in the 24 identified seedling progenies of cinnamon. Results revealed significant differences among the collections for bark thickness (0.40 to 0.97 mm) and dry bark recovery (36.08 to 48.55%), and nine easy-to-peel bark type collections were identified. Cinnamon bark has significant antioxidant activity and phenolic acids are known to contribute to it. Detailed profiling of the local seedling collections from the islands was carried out. Results suggested significant differences among the collections for various phenolic acid compounds. Total phenolic acid content of the samples varied between 1351.3 mcg/g and 4667.0 mcg/g. Oleoresin content in the bark samples of 24 collections varied between 3.68% and 10.69%.

Biochemical analysis in woody pepper as influenced by stem size

Ajit Arun Waman & Pooja Bohra

Woody pepper is sold in the local markets based on thickness of the stem.In order to know the biochemical composition in stems of different thickness, chromatographic studies were carried out. Phenolic acid profiling of the thick and thin stem samples suggested presence of 18 compounds. Phenolic acids were significantly higher in thin stem samples than the thick samples studied. Ferulic acid was identified as the dominant phenolic acid in the stem of woody pepper. Of the 18 compounds, 14 compounds were found in significantly higher quantities in thin stems, two compounds were relatively higher in thick stems, while concentration of remaining two compounds remained statistical similar. Piperine, the bioactive molecule in *Piper* species, was estimated in the samples and it was observed that piperine content increased with increase in stem thickness.

Biochemical analysis in woody pepper as influenced by drying methods

Ajit Arun Waman & Pooja Bohra

Effect of two drying methods *viz*. oven drying and vacuum drying on biochemical characteristics was studied in woody pepper. In general, oven dried samples had higher quantities of phenolic acids than vacuum dried samples. Also, relative concentrations of 11 compounds were higher in oven dried produce, while concentration of five compounds was higher in vacuum dried produce. The dominant phenolic acid i.e. Ferulic acid was found to be in higher quantities in oven dried samples than those dried using vacuum. Piperine content was also influenced by the drying method and it was observed in higher levels in samples dried using vacuum.

Comparative biochemical analysis of *Piper spp*.

Ajit Arun Waman & Pooja Bohra

Piper longum and *Piper sarmentosum* are two botanical species bearing morphological similarities especially for fruits. In order to study the biochemical differences between these species, systematic

experiments were conducted. Significantly higher phenolic acid content was observed in dried fruits of *P. longum* than *P. sarmentosum*. Significant differences among the species were also noticed when profiling of phenolic acids was carried out.

Propagation studies in woody pepper

Ajit Arun Waman & Pooja Bohra

In order to produce quality planting material of woody pepper, an experiment was carried out during dry season. Response of two nodes and three nodes cuttings was studied in comparison with serpentine method of propagation. Results suggested that mean number of roots per cutting varied from 11.45 (two node cuttings) to 15.40 (three node cuttings). Serpentine method, on the other hand, produced less number of roots per cutting (9.85) but of longer length. Establishment percentage was found to be 68.9% in two node and three node cuttings, while it was significantly higher (100%) in serpentine method of propagation.

Studies in Malabar tamarind collections

Pooja Bohra & Ajit Arun Waman

Malabar tamarind is an introduced species that has been identified as potential crop for cultivation in the islands. In order to identify superior genotypes with desirable attributes under island conditions, studies were conducted in seedling progenies and six collections were shortlisted for further studies. In the dehydrated rinds of these collections, phenolic acid content was studied using chromatographic techniques. Results suggested significant variations as total phenolic acids varied between 817.4 and 7037.3 mcg/g among the collections. Hydroxycitric acid, which is known to have anti-obesity properties, also showed distinct variations among the collections. The early genotype GG-05 identified during earlier years showed earliest flowering among the collections during this year as well.

Collection and characterization of Andaman Kokum

Pooja Bohra & Ajit Arun Waman

During February- March, fruits of seven collections of *Garcinia dhanikhariensis* were collected from South Andaman Island and studied for morphological and physicochemical parameters. Significant variations were noticed for fruit morphology, total soluble solids, pH and total anthocyanins content. Superior germplasm for desirable traits are being studied in detail for biochemical parameters.

Plate 4: Fruits of a Andaman kokum

Observations on native *Garcinia* species

Pooja Bohra & Ajit Arun Waman

In Garcinia conservation block of the institute, initiation of flowering was observed in some collections for the first time. In two plants of *Garciniacelebica* of 6 to 7 years age, flowering was noticed during January-March, while a few fruits could develop in one plant during March. Male flowers were produced in a plant of *G. cowa* collected from Diglipur. Two plants of *G. dhanikhariensis* produced female flowers and fruit setting was observed, while one plant produced male flowers. After six years of planting, flowering and fruiting was noticed in *G. xanthochymus* which were harvested during February- March. During last week of March again, flowering has been initiated in *G.xanthochymus.* Flowering was also initiated during February-March in two *G. kydia* trees in the conservation block

Plate 5: Developing fruits of G. dhanikhariensis (left) and G. xanthochymus (right)

Culantro as suitable intercrop in arecanut plantations

Ajit Arun Waman

Culantro is a popular herb grown in the Islands. In order to study the profitability of this herb as an intercrop in the warm humid tropical conditions of South Andaman Island, study was undertaken in bearing arecanut palms. Results suggested that incorporation of culantro in the interspaces could

give higher B:C ratio of 3.19. The technology was recommended for the islands during the XXX Annual General Meeting of the ICAR-AICRP on Palms Project.

Proximate composition of *Pandanus*

I. Jaisankar & B. Augustine Jerard

The oil from *Pandanus* were extracted. The oil content of *Pandanus lerum* was (74 %), *Pandanus odorifer* (67%) and *Pandanus tectorius* (80%). Proximate composition of the pulp and seeds of *Pandanus lerum, P. tectorius* and *P. odorifer* were estimated. The result revealed that the highest protein content of 19.31 g/100g was recorded in the seeds of *P. tectorius* followed by *P. odorifer* (17.50 g/100g). Highest energy of 675.73Kcal/100g was recorded in the seeds of *P. lerum* followed by *P. tectorius* seeds (598.58 Kcal/100g).

Enhancing yield of tomato grown under low input agricultural system

T.P.Swarnam, A.Velmurugan & T.Subramani

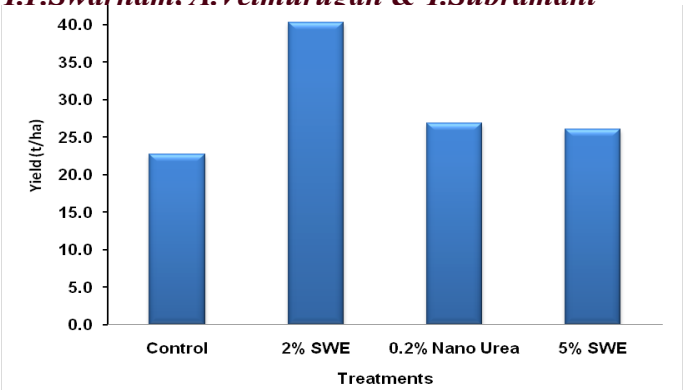

Plate 6:Effect of sea weed extracts and nano urea in tomato

An experiment was conducted during December 2021 to March 2022 to study the effect of application of sea weed extract on yield of tomato variety *ArkaRakshak*. The brown seaweed (*Sargassum wightii*) extract in 1:5 ratio was prepared. The experiment was conducted in RBD with 4 treatments *viz*., T1- control, T2- 2% SWE, T3- 5% SWE and T4-0.2% nano urea. The liquid extracts were applied as foliar spray 3 times starting from 20 days after transplanting and 1 month intervals @ rate of 50 -100ml per plant. The compost was applied 5t one week before transplanting and incorporated into the soil. This was followed by application of 1kg of compost to each plant in 2 splits at 10 days after transplanting and at the time of flowering. The study indicated that the application of brown seaweed (*Sargassum wightii*) extract and nano urea significantly increased the fruit number and fruit yield per plant. The maximum yield was recorded at 2% concentration (1.475 ± 0.180 kg/plant) followed by 5% SWE (0.936 ± 0.065 kg/plant), 0.2% nano urea (0.977 ± 0.089 kg/plant) and control (0.840 ± 0.051 kg/plant) having no liquid fertilizer application. Thus the results indicated that the application of seaweed extract can enhance the tomato production up to 40 t/ha under low input agricultural system.

Effect of Nano Urea

A.Velmurugan, T.P.Swarnam & T. Subramani

Effect of nano urea (liquid) in reducing the application of conventional urea, increasing rice productivity and profitability was studied in a field experiment with 8 treatments. The results have shown that application of mineral fertilizers (NPK) at 100% RDF tends to increase the height, shoot and root length of rice plants. At the same time, the application of nano urea (spray) with NPK addition had significant impact on the growth parameters particularly at critical periods. Thereby nano spray contributes to the increased plant yield (15-21%) than only NPK addition through chemical fertilizers. Similarly,

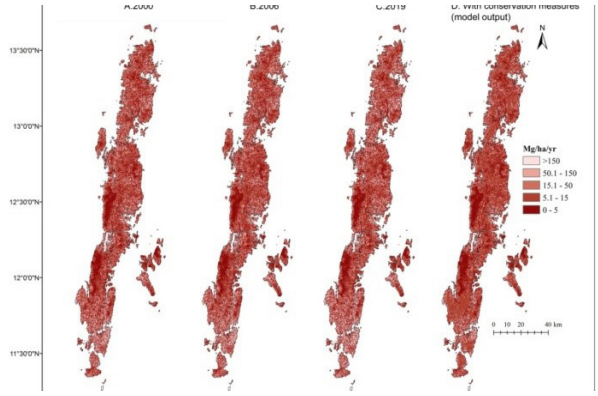

Plate 7: Average annual soil erosion rate based on RUSLE A. (2000), B & C. (2006 & 2019), and D. with proposed conservation practices

increased concentration of nano spray (0.2 to 0.4%) had significant impact on the plant growth parameters due to increased availability of N within the plant system. The results showed that split application of fertilizers and nano urea spray have significant effect on rice grain yield. Among the treatments, N66 % with nano spray (0.4%) produced significantly higher grain yield followed by 0.2% spray and inorganic fertilizer addition (N100 % PK). However, there is no significant difference between nano spray at 0.2% and 0.4% though higher concentration of (0.4%) nano spray gave 4.1% higher grain yield. It is also observed that among the treatments 0.4% nano spray has the lowest harvest index (higher grain and low straw than other treatments). This means higher allocation resource allocation for grain that resulted in higher grain yield than other treatments.

Soil erosion assessment and mapping

Soil erosion hazard map for Andaman Islands in pre-(2000) and post-tsunami periods (2006 and 2019) was generated using Revised Universal Soil Loss Equation (RUSLE) in GIS environment. This model was calibrated at the field scale based on data collected from 2x2 m^2 erosion plots of different land uses. The RUSLE estimated annual average soil erosion rates are ranged from 0.7 to 108, 0.9 to 157 and 1.1 to 226 t ha^{-1} y^{-1} for 2000, 2006 and 2019, respectively, indicating an increased rate of soil erosion over the time period in different land use categories. Similarly, the average rate of erosion for the study area indicated a 47% increase (53 t ha^{-1} y^{-1}) in 2019 from the 2006 rate, whereas it exhibited a 25% increase immediately after the tsunami from the 2000 rate (27 t ha^{-1} y^{-1}). Based on the study results, it is recommended that conservation measures such as terracing and cover crops are highly effective for arresting soil loss in plantation-based intercropping systems, while contour bunding and trenches are effective for vegetable cultivation in undulating terrain.

Pharmacological efficacy of medicinal plants in poultry

T.Sujatha, Jai Sunder, A.K. De & D. Bhattacharya

The pharmacological efficacy of *Tabernamontana crispa, Psidium gujava and Lee indica* collected from tribal farming community of Car Nicobar were evaluated in poultry by using sero-cytokines as biomarkers. Biological experiment was carried out on the herbal decoction of these plants. Experimental birds watered with poly herbal formulation @ 3 ml per bird twice a weekhad better body weight as compared to antibiotic fed groupwhich was well correlated withthe higher serum growth promoting hormone (0.3 to 0.4 ng/ml) during starter phase. On 22ndday, all the birds were injected with lipopolysaccharide of *E. coli*@ 100 mg per kg body weight. The preliminary parameters viz., lower values of TBARS with supplementation of antibiotics and poly herbal and reduction in total intestinal and caecal bacterial count indicated reduction in stress and better antioxidant properties and is on par with antibiotic growth promoters.Lower serum level of IL-6 (279.78± 34.42 pg/ml) and higher level of IFN-ɤ (771.91± 66.8 pg/ml) and MHC (2.091± 0.077 ng/ml) with decoction of poly herbal additive enhanced anti-inflammatory effect, improved immunity and maintained innate immune homeostasis.

Impact of Dweep Sale Counter of ICAR-CIARI

S.K. Zamir Ahmed, R. Jaya Kumaravaradan and D. Karunakaran

Plate 8: Feedback from the volunteers

A study was conducted to assess the performance of CIARI Sale Counter that was opened on 14.10.2021. Sale Counter has generated a revenue of Rs.6,10,246 in 3 months wherein Sippighat farm contributed 56% followed by ASD (20%), NRM (11%), H&F (7%), FSD (4%) and FCIP (2%). Planting material contributed 47% of revenue followed by farm produce (42%) and technology (11%). The quantum of Farm Section's revenue increased 10 times when compared to the corresponding period last year. During the 3 months, 877 purchases happened wherein SSS made maximum number of purchases (25%) followed by public / farmers (21%), Technical staff (16%), Scientist (15%) and Contractual staff (14%). Hence, the contribution of technology need to be increased, frequent / wide publicity should be given about the Sale Counter, and the work space of the Sale Counter should be expanded with required furnishings.

Important events held

Republic Day Celebration

Plate 9: Republic Day

Institute celebrated the 73rd Republic Day with fervour and gaiety. Dr.Eaknath B. Chakurkar, Director, ICAR-CIARI unfurled the National flag. In his address, he lauded the efforts of the scientists, technical, administrative, skilled supporting and project staff of the institute for their contribution and urged the staff to continue to work with same zeal and vigour in coming years. He also highlighted the significant achievements made by the institute during the previous year.

International Women's Day-2022 celebrated with fervour at ICAR-CIARI

Plate 10: International women's day celebration

Women Cell of ICAR-Central Island Agricultural Research Institute celebrated International Women's Day on March 8, 2022 in a befitting manner. This year, the theme was ***"Gender Equality today for a Sustainable Tomorrow"***. The event was chaired by Dr. E.B. Chakurkar, Director of the Institute. Dr. Chakurkar called upon the women participants to prioritize their life goals and to explore and strive for the opportunities in the areas of their choice. Dr.Pooja Bohra, in charge, Women's Cell and organizer of the programme, gave a presentation on glorious achievements of Indian Women Scientists and currently available opportunities for female students to pursue their career in Science. It was followed by three spot games for the participants, which were coordinated by Ms.Deepitha R.P. and Dr. Sirisha Adamala, Scientists of the Institute. Winners of the competitions were also awarded on the occasion.

Interface meeting with Secretary, Ag & Fisheries

An Interface meeting between ICAR-CIARI, Port Blair and Department of Agriculture & Department of Fisheries was held on 15th February, 2022 under the Chairmanship of Secretary, Agriculture & Fisheries, A& N Administration to review the

Plate 11: Interface meeting with A & N Administration

various researchable and developmental issues. The meeting was attended by Director, ICAR-CIARI, Scientists, Directors from Department of Fisheries and Senior officers from Department of Agriculture, A & N Administration. Dr.Eaknath B. Chakurkar, Director, ICAR-CIARI, Port Blair welcomed the Chairman and briefed about the purpose of the meeting. An overview of the institute activities and the technologies developed was presented by Dr Jai Sunder, Pr Scientist & I/c PME Cell, ICAR-CIARI. Shri. G.Sudhakar, IAS, Secretary, Agri. & Fisheries appreciated the achievement made by the institute and suggested to disseminate the appropriate technologies to the farmers through the Development Department. He assured all possible collaboration for successful demonstration and dissemination of the technologies.

Tuber crops Diversity Fair

Plate 12: Array of Tuber crops diversification

ICAR- Central Island Agricultural Research Institute, Port Blair has conducted 'Tuber crops Diversity Fair' at Sippighat, Port Blair on 30th March 2022 to enhance awareness on Tuber crops wealth of Andaman and Nicobar Islands and to sensitize the farmers on the potentials of tropical tubers in enhancing the livelihood security under All India Coordinated Project on Tuber Crops with the collaboration of ICAR-KrishiVigyan Kendra, South Andaman in which about 80 farmers and 25 school children have participated. Dr.Eaknath B. Chakurkar, Director, highlighted the scope of

marketing and value addition opportunities in tuber crops and appreciated the accumulation of array of tuber diversity of Andaman and Nicobar Islands. He called upon the farmers to make use of the improved technologies available with ICAR-CIARI and AICRP on tuber crops for incorporation of successful tuber cultivation in island cropping/farming systems. He underlined the ability of various tuber crops in meeting the carbohydrate, vitamins, minerals and protein requirement of human. He urged the participants to undertake the tuber crops cultivation to increase the profitability and productivity of farms and stressed upon the value addition to enhance the consumer base of tuber crops.The participants were imparted technical information on various tuber crops cultivation techniques, storage, planting season, crop duration and value addition avenues. Quality planting material of sweet potato were also distributed to the enthusiastic woman farmers who come forward to take up home garden planting of tuber crops. ICAR-CIARI has already demonstrated the doubling of income and employment generation through tuber-based farming systems in tribal areas. Through this programme, the Institute has reached the Island farmers to double their income through integration of tuber crops in the cropping systems.

During the programme, an array of diverse, conserved accessions and varieties of tuber crops grown in the Islands viz., Cassava, Sweet Potato, Colocasia, Elephant foot yam, Cylindrical yam, Yam bean, Greater Yam, lesser yam, Coleus, Costus, Curcuma, Tannia, Tacca, Typhonium, Giant taro were displayed. The participants have enthusiastically seen the diversity and shown keen interest in conservating them in their gardens. The potentials of improved varieties of Cassava viz., CIARI SP-1 Swarna, CIARI SP-2 Aparna, Greater Yam Yamini, SreeVijaya, Sree Jaya, Vellayani Hirsua, sweet potato varieties viz., Bhu Krishna, BhuSona, ColocasiaMegha Taro-2 were explained to the participants.

Vigyan Sarvatra Pujyate

Under the week long programme Vigyan Sarvatra Pujvate organized by the Zoological Survey of India, Port Blair, an exposure visit was conducted on 25/2/2022 wherein the 43 students from Colleges & Schools along with Teachers were exposed to the different technological Interventions of CIARI viz. Microplots with pulses, Horticulture crops propagation unit, Dragon Fruit block, Fisheries Museum.

Plate 13 : Visit of student to ICAR-CIARI

Human Resource Development (HRD) Trainings to the stakeholders/farmers

Multiple training programmes on "Livestock and Poultry Production in Nicobar Islands" were conducted at Car Nicobar

ICAR-Central Island Agriculture Research Institute in collaboration with the KVK Nicobar conducted three one-day training programmes during 09-11 Feb 2022 on different aspects of "Livestock and Poultry Production in Nicobar Islands". Dr. R. R Alyethodi presented various aspects of livestock and poultry production with emphasis on Nicobar Island conditions. A total of 96 villagers from three villages viz. Big Lapathy, Sawai and Tapoiming villagers were benefited by this training programmes.

Computer literacy for Skilled supporting Staff of ICAR-CIARI

Plate 14: SSS undergoing computer literacy training

Social Science Section and Agricultural Knowledge Management Unit (AKMU) of ICAR-Central Island Agricultural Research Institute is jointly organising a 5 days training program from 17th -21st Jan, 2022 at AKMU on "Computer Literacy for Skilled Supporting Staff " of the institute under HRD. A total of 22 Skilled Supporting Staff are participating in two batches

Fish Nutrition and Health Management in Freshwater Aquaculture

ICAR-CIARI in collaboration with NABARD, Port Blair and KVK, South Andaman organised a training programme on "Fish nutrition and health management in freshwater aquaculture" at Marine Research Laboratory of ICAR-CIARI, Marine Hill during 23 to 25 March, 2022 in which a total of 21 farmers have participated.

Awareness program on Natural farming on 23.03.2022 at Beodnabad

An awareness programme on "National Surveillance Programme for Aquatic Animal Diseases" was organised by ICAR-CIARI at New Bimblitan on 25thMarch, 2022. A total of 19 participants have attended the programme.

Awareness programme for AYUSH personnel organized at ICAR-CIARI

Plate 15: Trainees at nursery

An awareness programme on "Planting and Aftercare of Immunity Boosting Plants" was organized on January 7, 2022 by ICAR-CIARI, Port Blair under NABARD-Urban Horticulture Project. The programme was formally inaugurated by watering medicinally important long pepper plant.The programme was organized by Dr. PoojaBohra and Dr.A. A. Waman under the guidance of Dr. E.B. Chakurkar, Director, ICAR-CIARI as a part of ongoing '*AzadikaAmrutMahotsav*' celebration. Dr. Kalyan P. Kadbhane, Deputy Director, AYUSH Hospital, Port Blair along with his twelve colleagues attended the programme.

Awareness programme for the Mahila Anganwadi workers

ICAR-Central Island Agriculture Research Institute in collaboration with the KVK Nicobar conducted an Awareness programme for the MahilaAnganwadi workers on 08.02.2022 at KVK Car Nicobar.Dr. R.R Alyethodipresentedtopic "Benefits and potentials

Plate 16: Awareness programme for the MahilAnganwadi workers

of quail farming at Nicobar" under the banner of "Livestock and Poultry Production in Nicobar Islands". A total of 13 Women were participated and benefited from this programme.

Sensitization Programme On Woody Pepper

A sensitization programme on 'Woody pepper as a potential crop for the Islands' was conducted for the farmers of LalPahad area of South Andaman under DBT, New Delhi funded project on Woody Pepper on February 18, 2022. Dr. AjitArunWaman, Scientist, ICAR-CIARI and Organizer of the programme, explained the participants about importance of local flora in livelihood and nutritional security of island dwellers. He also emphasized on promoting local species for diversifying island agriculture apart from supporting tourism sector of the islands. Field visits were also made to guide the farmers for taking up woody pepper cultivation. To give impetus for promoting this novel spice, planting material of woody pepper was distributed to seventeen farmers in the area.

Plate 17: woody pepper distribution

Sensitization programme on Immunity Boosting Plants

A sensitization cum input distribution programme on Immunity boosting plants for tribal folks of urban areas of Andaman was organized for the Nicobarese

Plate 18: Sensitization programme on Immunity Boosting Plants

youth residing in urban areas of South Andaman on February 26, 2022 under the Schedule Tribe Component of the ICAR-Central Island Agricultural Research Institute. Dr. Pooja Bohra & Dr Ajit Arun Waman, Organizers of the programme, educated the participants on various immunity boosting plants, which could be grown in the urban areas. She also explained use of various containers and systems of cultivation suitable for terraces, balconies and backyards. The programme was attended by eighteen participants including urban youth and students from ANCOL and JNRM.

Sensitization on GMP in Coconuts at Minicoy, Lakshadweep

Regional Station Minicoy of ICAR-CIARI Port Blair conducted a "Sensitization programme on GMP in Coconuts and also Input Distribution under Schedule Tribe Component (STC)" at its farm and different cluster of villages from 22nd to 25th March, 2022. Speaking on the inaugural occasion, the Chief Guest Dr Shrikant R. Tapdiya, the Deputy Collector of Minicoy expressed his happiness on the technological intervention in coconut plantation, exhibiting practical demonstration of clean plantation, crown cleaning, coconut climbing using device and vermicompost application. The programme was attended by the officials of Department of Agriculture and farmers from different cluster of villages. The Nodal Officer Dr. S. K. Zamir Ahmed and the scientific team comprising of Dr. A. K. O. Ratheesh, Dr.Gladston Y. and Dr. Ajina S. M. interacted with the farmers and impressed upon the benefits of good management practices (GMP) in coconuts. Shri. Shareefuddeen Hassan, Technical Assistant and the Coordinator of the programme informed about the technical know-how and do how to the participants in 'Mahl' (the local language). A total of 1000 Lakshadweep Ordinary coconut seedlings, 100 bags of vermicompost (10 Kg each) and 25 coconut climbing devices were also distributed. A total of 105 farmers of which 68 were women got benefitted.

Plate 19: Vermicompost and coconut climbing devices distributed

Interactive meet

- An interaction meeting was held on 16.03.2022 at Lakshadweep with the officials of KVK, Department of Agriculture, Scientists from CIARI and RS, Minicoy for collaboration for taking forward the technologies for the betterment of the stakeholders of the Lakshadweep islands.
- Interaction programme was held on 23. 02.2022 with Dweepsree Sunflower SHG, Minicoy with RS, Mincoy to sensitize the SHGs on interventions like nursery of ornamental plants, vegetables, value addition products with branding and marketing. They were also suggested to visit our farm to know about the agricultural activities and other enterprises for livelihood.

Commercialization of Technology

Dweep-Carp Grower Feed Technology and Incubation Facility on Fish Feed Mill to M/s Meyor Nature

ICAR-Central Island Agricultural Research Institute (ICAR-CIARI), Port Blair, Andaman & Nicobar

Plate 20: Dweep Carp Grower Technology Commercialised

Islands signed the Memorandum of Understanding (MoU) with M/s. Meyor Nature, Garacharma, South Andaman on 18th February, 2022 for the commercialisation of Dweep-Carp Grower Feed technology and incubation facility of pilot scale fish feed mill.Dr. Eaknath B. Chakurkar, Director, ICAR-CIARI and Smti. Jaya Lakshmi, authorized representative from M/s. Meyor Nature signed the MoU on behalf of their respective organizations. Dweep-Carp Grower Feed formulated by ICAR-CIARI can be fed to the Indian Major Carps from fingerlings to marketable size. A pilot scale fish feed mill was established by ICAR-CIARI with a production capacity of 80 to 100 kg per hour which is extended as an incubation facility in order to promote startups in fish feed production for Island aquaculture. The technology and incubation facility were developed by ICAR-CIARI with the financial support from NABARD, Port Blair through Farm Sector Promotion Fund (FSPF) project. he technology and incubation facility were developed under the overall guidance of Dr. Eaknath B. Chakurkar, Director, ICAR-CIARI by the scientific team comprising of Dr. K. Saravanan, Dr. T. Sivaramakrishnan, Dr. R. KirubaSankar, Dr. J. Praveenraj and Dr.SreepriyaPrakasan, Scientists of ICAR-CIARI, Port Blair.

Dweep-tickure a herbal based formulation for control of ticks in livestock

Plate 21: "Dweeptickure" Technology commercialised

ICAR-Central Island Agricultural Research Institute, Port Blair signed Memorandum of Understanding on March 11, 2022 for licensing of Dweeptickure, a herbal based formulation for control of ticks in livestock. Dr. E.B. Chakurkar, Director, ICAR-CIARI signed the MoU with Shri. Vijay VishwasraoPatil, C/o Natural Agro Products Pvt Ltd., Port Blair, South Andaman. The team comprising Dr.Jai Sunder, Dr.T.Sujatha, Dr.D.Bhattacharya, Dr.E.B.Chakurkar and Dr.A.K.De have developed oil based herbal topical formulation as acaricides for control of tick infestation in livestock. This herbal based formulation kills all stages of ticks in cattle and goat and safe to be used all stages of livestock including pregnant and lactating animals.

Bharat ka Amrut Mahotsav

"KishanGosti" at Shaheed Dweep on "Livelihood security through livestock based farming system"

Plate:22:KishanGosti" at Shaheed Dweep

A 'KishanGosti' was organized jointly by ICAR-Central Island Agricultural Research Institute, Port Blair and Department of Animal Husbandry and Veterinary Services at Bharatpur village, Shaheed Dweep on 30th March, 2022. The main theme of the programme was "Livelihood security through livestock based farming system". Dr. Subhash B Palve, Senior Veterinary Officer, ShaheedDweep, Dr. P. A. Bala, Senior Scientist, ICAR-CIARI and Dr. A. K. De, Scientist, ICAR-CIARI were the resource persons for the programme. A total of 35 farmers, mostly small and marginal, from different parts of the island participated in the discussion forum. Smt. Pinki Das, Pradhan, Gram panchayat, ShaheedDweep graced the occasion and encouraged the participants to draw maximum advantage from the programme. Farmersraised different issues and problems faced related to livestock farming. During the discussion, non-availability of quality livestock germplasm, poor conception rate of cows after artificial insemination (AI), high cost of concentrate feeds, high mortality rate of indigenous desi poultry birds, marketing issues of the animal produce and nuisance caused by the stray dogs emerged as the major impediments in growth of livestock sector of the serene island.

Webinar

Under Azadi ka Amrit Mahotsav, 08 webinars were conducted during the reporting period as detailed below:-

Date	Speaker	Topic
22.01.2022	Dr. C. Sivaperuman, Scientist-E & Officer-in-Charge Zoological Survey of India,Andaman & Nicobar Regional Centre	Avian diversity of Andaman & Nicobar Islands
29.01.2022	Dr. Satya Ranjan Das,Honorary Professor, Department of Plant Breeding and Genetics,Orissa University of Agri-culture and Technology, Odisha	Conventional breeding approaches for meeting the future demands in rice: A critical analysis
05.02.2022	Shri H. Manoj,GM, NABARD, Port Blair	NABARD and its support for Farm sector Promotion
11.02.2022	Dr. N.V. Vinithkumar,Scientist - F, Officer In-Charge Atal Centre for Ocean Science and Technology for Islands (ACOSTI), NIOT, Port Blair	Open sea cage fish culture and seaweed culture activities of NIOT
19.02.2022	Dr. Jose Romeno Faleiro ,FAO Expert (Red Palm Weevil)	Management of Red Palm Weevil based on the experiences in South Asia, Middle East and North Africa
26.02.2022	Dr. Latha Shenoy,Principal Scientist (Retd.),ICAR-CIFE, Mumbai	Responsible Fisheries : Path to sustainable growth
11.03.2022	Dr. B.K. Swain,Principal Scientist (Poultry Science)ICAR-Directorate of Poultry Research Regional Station, Bhubaneswar	Low cost feed formulation for poultry and duck production
26.03.2022	Dr. Kalyan P Kadbhane,Deputy Director (AYUSH)Directorate of Health Services, A&N Administration, Port Blair	Ayurveda for immunity

Swachh Bharat Abhiyan

Beach Cleaning Drive, at Minicoy, Lakshadweep

A beach cleaning programme were conducted by the Scientific team of RS Minicoy at Southern side of the coast along with officials from IMD and RPRS in a stretch area of 250 meters (from 20 bedded hotel site to the boundary of lighthouse) under SwachthaAbhiyan on 23/03/2022. The team collected around 9 bags of litters comprising of abandoned nylon nets, plastic caps, bottles, plastic bags, Styrofoam, etc. The team sensitized the people in the area on good citizen practice to be followed and to spread the message of clean and green India.

Plate 23: Beach cleaning programme conducted at Minicoy, Lakshadweep

STC/TSP

A total of 16 training and 9 demonstrations were conducted wherein, 931 farmers were benefitted. Besides, the farmers were also provided with 19238 planting materials, 474 kg of seeds and 418 agricultural implements and other inputs.

- Hands on training were given for nursery raising, etc. that gave additional knowledge on crop production to the participants.
- Awareness on quail production, livestock and poultry production in Nicobar Islands: The training programme was imparted to 13 Anganwadi workers with an idea to disseminate knowledge on quail production. The probable impact assessed as to disseminate knowledge for adopting quail production to have the access of protein supplement in tribal villages through quail meat and egg.
- Training on livestock and poultry production in Nicobar Islands: Through this training programme a total 96 tribal farmers of three different villages were benefitted. After understanding scientific rearing of livestock and poultry the tribal farmers became aware about vaccination coverage, therapeutic approach, nutritional and reproductive intervention.
- Demonstration of agricultural and allied apps for enhancing production and income of tribal

farmers: Nicobari tribal farmers at Harminder Bay, Little Andaman, South Andaman district have learned to use mobile apps on coconut farming practices, banana production and pest management, scientific pig rearing with regard to rationing and summer stress, and vegetable nutrition and health benefits. Farmers also learned how to install the app from Play Store. Overall their knowledge and skill levels in installing and handling the agriculture and allied apps have increased 56% and 35% respectively.

- Sensitization programme on GMP in Coconuts: The knowledge and skill levels of ST farmers at 11 villages of Minicoy, Lakshadweep on GMP in coconut and climbing device have enhanced to the tune of 50% and 35% respectively.
- Agricultural technologies for enhancing the income and nutritional security of tribals under Scheduled Tribe Component: The knowledge level of Nicobari tribal farmers at 3 villages of Car Nicobar, Nicobar district about the benefits of improved vegetable varieties increased by 62% and their skill in laying out the nutritious kitchen garden increased by 47%.

Interaction Meet with Tribal Council members, Car Nicobar organized

ICAR-Central Island Agriculture Research Institute in collaboration with the KVK Nicobar organized an Interaction Meet with Tribal Council members of Car Nicobar on 08.02.2022 to discuss about the issues of farmers at Car Nicobar. The major issues of lack of feed and fodder and availability of good cattle germplasms were pointed by the Chairman, Tribal Council. A total of 7 members were attended the interaction meet. Feasibility of multiple programmes, training and technology transfers under the banner of Tribal Sub Plan were explained by Dr. R.R Alyethodi. Mr. Mohammed Sarief, KVK, facilitated the event.

Training on agricultural technologies at Car Nicobar

Plate 24: Nicobari trainees with vegetable seed kits

A scientific team visited Tapoiming, Kinyuka and Chukchucha villages of Car Nicobar between 15th and 22nd March 2022 and conducted a capacity building programme for Nicobari tribal farmers on "Agricultural technologies for enhancing the income and nutritional security of tribals". In total, 350 farmers participated who were given vegetable seed kit for establishing nutritious kitchen gardens in their backyard.

Demonstration of Agricultural and allied apps for enhancing production and income of tribal farmers

ICAR-CIARI organized one day training programme on 20th March, 2022 at Harminder Bay Village, Hut Bay, Little Andaman on "Demonstration of Agriculture and allied apps for enhancing production and income of tribal farmers". Shri. D. Karunakaran, Scientist explained, how Smartphone apps in agriculture help farmers to increase productivity. During this training he demonstrated app on coconut farming practices for increasing yields, Banana production management and pest management and apps related to Pigfarming, Pig ration and Pig summer stress. Shri. K. Shyam Sundar Rao, Technical Assistant explained about Vegetable Nutrition facts and Healthbenefits.A total of 70 tribal farmers were participated in the training programme. Vegetable seeds of Tomato, Okra, Chilli, French bean and Palak were distributed to the farmers.

Training on Regenerative Agricultural Practices to Nicobari farmers at Car Nicobar

A scientific team of ICAR-Central Island Agricultural Research Institute, Garacharma visited Tapoiming, Kinyuka, Chukchucha, Tamaloo, Perka and Big Lapathy villages of Car Nicobar between 15th and 22nd March 2022 and conducted capacity building programmes for Nicobari tribal farmers on "Regenerative agricultural practices for Island based Cropping System" and "Agricultural technologies for enhancing the income and nutritional security of tribals". During the programme, Dr. I. Jaisankar, Senior Scientist (Forestry) explained about the use of multipurpose tree species for efficient resource utilization, conservation of endemic plant biodiversity to mitigate the impact of climate change, and organic waste management and integrated pest and disease management. Dr. R. JayakumaraVaradan, Scientist (Agricultural Economics) explained about the CIARI technologies and package of practices of potential vegetable crops for a nutritious kitchen garden.

Plate 25: capacity building programmes for Nicobari tribal farmers

Dr. K. Venkatesan, Scientist (Economic Botany) explained about the nutritional benefits of millets and pulses; and package of practices of ragi.In total, 350 farmers from 6 villages participated in this series of awareness cum training programme. All were given quality planting materials of vegetables, ragi, sweet potato, passion fruit, jamun and jack fruit; and farm implements such as hand hoes, secateurs and hand sprayers for establishing nutritious kitchen gardens in their backyard.

Demonstration of Agriculture and allied apps for enhancing production and income of Nicobari tribal farmers

Plate 26 : Face to face interaction with expert and Nicobar farmers

Social Science Section organized one-day training programme on 20th March, 2022 at Harminder Bay Village, Hut Bay, Little Andaman on "Demonstration of Agriculture and allied apps for enhancing production and income of tribal farmers". The participants were explained, how Smartphone apps in agriculture help farmers to increase productivity. During this training demonstrated app on coconut farming practices for increasing yields, Banana production management, pest management, pig farming, pig ration and pig summer stress. Seeds of Tomato, Okra, Chilli, French bean and Palak were distributed to 70 tribal farmers for cultivating under backyard.

Exposure visit of farmers to Regional Station, Minicoy, Lakshadweep"

Based on the request of the community resource person of the SHG's groups an "Exposure visit on technological intervention for SHG's at Regional Station, ICAR- CIARI, Minicoy, Lakshadweep" was conducted on 24/03/2022 for the members hailing from 11 villages. The farmers were informed on the technological options namely mini-incubator, coconut varieties, GMP in coconut, fodder, chilly, drumstick cultivation under coconut as intercrop.The highlight of the programme was practical demonstration on coconut climbing device which was later used by two active women for climbing the coconut tree. They were also exposed to Laccadive mini micro coconut tree and its nuts. The group were also sensitized to start a start-up on fish mart as there is no centralized fish selling outlet at Minicoy. A total of 32 women participated. A field visit was made in the evening of 16/03/2022 along with the KVK team to see the unit run by Mr. Naushad and Mr. Abu Hassan, an entrepreneur, Kavarathi Islands. The KVK head explained in the details of the functioning of feed and manure processing line developed by ICAR-CIFT, Kochi under Swachhta Action Plan of GOI. Visit made to Mrs.Ayshomma Begum (Age-39) in Bandaramareaof Minicoy Islands, wherein our station had introduced CO-5 fodder variety in 11 cents of area to provide the green fodder for the cattle's. She has purchased mini-incubator of 540 birds capacity at the rate of Rs/; 65000 from Kochi after undergoing hands-on training at our station. Visit was also made to Mr. Mohmmad (Age-51) for imparting advise on land scaping and gardening of ornamental plants.

Demonstration of technology

Establishment of Immunity Boosting plants demonstration unit

Pooja Bohra & Ajit Arun Waman

In order to create awareness among the masses about the significance of immunity boosting plants, a demonstration unit has been established in the premise of Primary School and Anganwadi at Calicut, South Andaman. Plants of 25 species have been planted in different systems with display boards having supplementary information about the species. The species included local fruits, herbal plants, rhizomatous and other spices. A unit of DweepHanGreens has also been demonstrated in the premise. Through an awareness programme, local people in the area were sensitized about the importance of planted species.

Technological Demonstrations of Palak var. Pusa All Green & Bhendi var. A-5

S.K. Zamir Ahmed and R. Jaya Kumaravaradan

Under the National Extension Programme of IARI, New Delhi various vegetable varieties of IARI, New Delhi are being demonstrated across the Islands since Rabi 2017. Shri G. Renukapathy, M/s. GSR Enterprises who started a seed shop at Prothrapur got impressed by the burgeoning demand for IARI varieties among the farmers during his field visits. When he approached the Social Science Section, he was sensitized with the performance of the varieties and guided in procuring the seeds from IARI and IIHR. During *rabi* 2021-22, the Dealer sold 150 kg seeds of palak var. Pusa All Green to 15 farmers spreading over 8 ha across 6 cluster across 6 cluster of villages *viz*. Maccapahad, Caddlegunj, Aniket, Chouldari and Guptapada @ Rs.280/kg. The scientific team visited the fields of adopted farmers at Maccapahad who appreciated the performance of the variety.

Plate 27 : Demonstration of palak & bhendi

Participation in Training/Meetings

Name of staff	Details of the training	Duration/Venue/Organizer
Dr A. Velmurugan	Emotional Intelligence at Workplace for Scientists / Technologists	21st to 25th February, 2022; Centre for Organization Development, Hyderabad
Dr. R. J Kumaravaradan	Training programme on FPOs	09th to 11th March 2022; NABARD, Port Blair
Dr. Sirisha Adamala	Training course on 'Climate Change Risk Assessment and Water Security Challenges'	23rd to 24th February, 2022 by Environmental Science and Engineering Department, IIT Bombay
Dr. Sirisha Adamala	National Training Course on 'Sustainable Entrepreneurship in Agriculture, Horticulture, Fisheries, Animal Husbandry & Allied Sectors for Economic Development of India'	1st to 21st March, 2022 by SKUAST-TAJ, SKUAST-JAMMU, Jammu & Kashmir
Dr. T. Sujatha	Emotional Intelligence at Workplace for Scientists/ Technologists	21st to 25th February, 2022; Centre for Organization Development, Hyderabad
Dr. T.P.Swarnam	Competency enhancement programme for effective implementation of training functions by HRD Nodal Officers of ICAR	21st to 23rd February, 2022 by ICAR-NAARM (Virtual)

Participation in national Seminars/ symposia/conference/workshop/meeting

Name	Programme	Date/venue/organizer
Dr. Ajit Arun Waman and Dr. PoojaBohra	Attended the International Conference on "Recent Advances for Managing Sustainable Soil Health and Crop Production" (Virtual)	18th to 20th February, 2022 by GKV Society, Agra
Dr. I. Jaisankar	Participated Annual Group Meeting of AICRP on Agroforestry in virtual mode	24th to 25th February, 2022 by ICAR-CAFRI, Jhansi

Name	Programme	Date/venue/organizer
Dr. I. Jaisankar,	Participated and presented Genetic diversity assessment in *Pterocarpusdalbergioides* (Andaman Padauk) trees of Andaman and Nicobar Islands through molecular approaches in the International Conference on Advanced Biology (ICAB 2022, Virtual mode)	23rd to 25th February, 2022 by University Centre for Evolutionary and Integrative Biology (iCEIB), University of Kerala on
Dr. Jai Sunder	Annual review meeting of AICRP on Goat	8th March 2022, (Virtual)
Dr. K. Abirami	Annual group meeting of AICRP on Fruit Crops	8th to 11th March, 2022
Dr. K. Abirami	Presented oral paper on "Dragon fruit (*Hylocereus sp*): A crop for diversification in Island ecosystem in the National seminar on "Fruit production on Eastern Tropical region of India: Challenges and Opportunities"	24th to 26th March, 2022 organized by CHES and SPH
Dr. K. Abirami	Presented oral paper on "Horti Business: Entrepreneurial avenues through fruit crops" in the national seminar	25th March, 2022 by JNRM, Port Blair
Dr. K. Saravanan	An oral presentation on "Scenario and opportunities for fish nutrition and health management in freshwater aquaculture sector of Andaman and Nicobar Islands"	25th March, 2022. National Seminar on Role of Agri-Entrepreneurship, FPO and Fisheries in Atmanirbhar Bharat: Issues and Challenges with Special Reference to Andaman and Nicobar Islands held at JNRM, Port Blair.
Dr. Pooja Bohra	Attended a webinar on 'Mango Processing and Value Addition'	1st March, 2022; National Institute of Food Technology, Entrepreneurship and Management– Thanjavur
Dr. Pooja Bohra	Oral presentation during 'International Conference on Sustainable Utilization of Bioresources'	10th to 15th January, 2022 organized by University of Kerala, Trivandrum
Dr. Pooja Bohra	Attended National Webinar on 'Microencapsulation of Nutraceuticals'	3rd February, 2022 by ICAR-CIPHET
Dr. R. R Alyethodi	One day National Seminar on "Role of Agri-Entrepreneurship, FPO and Fisheries in Atmaribhar Bharat: Issues and Challenges with special reference to Andaman and Nicobar Islands	25th March 2022 Organized by Department of Home Science, JNRM in collaboration with NABARD, Port Blair. Full paper on "Evaluation of low-cost incubator prototype suitable for quail agribusiness in Andaman & Nicobar Islands"
Dr. Sirisha Adamala	Indo-US online workshop on"***Advanced SWAT Model***"	15th to 18th February, 2022 by Department of Civil Engineering, National Institute of Technology Warangal (Sponsored under MHRD-SPARC Programme)
Dr. T.P.Swarnam	Annual Review Meeting of MPRNL project	18th February, 2022 (Virtual)
Dr. T.Subramani	National Seminar on "Role of agri-entrepreneurship, FPO & fisheries in Atmanirbhar Bharat	25th March, 2022 by JNRM, Port Blair
Dr. V. Baskaran	AICRP group meeting on Floriculture	12th to 14th January, 2022
Dr. V. Baskaran	Presented an oral paper on "Horticulture based roof top production model: a self-sustainable technology in Island ecosystem in the National conference on Role of Agri-entrepreneurship, FPO and fisheries in AtmaNirBhar Bharat: Issues and Challenges with special reference to Andaman and Nicobar Islands	25th March, 2022 at JNRM college, Port Blair

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Abstract

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Book Chapter

De, A.K., Sujatha, T., Sunder, J., Bala, P.A., Perumal, P., Bhattacharya, D. &Chakurkar, E.B. (2022). Eg95: A Vaccine against Cystic Echinococcosis. DOI: 10.5772/intechopen.101695. Vaccine Development. Edited by YuliaDesheva.

Radio talks/ TV programme broadcast

- Dr. K. Saravanan delivered a Doordarshan Programme on "Fish feed production unit" on 25thMarch,2022.

- Dr. K. Saravanan delivered a Doordarshan Programme on "Mud crab fattening unit" on 25thMarch, 2022.

Awards/ Honours

- Appreciation letter received from Chairman, Tribal council, Car Nicobar for the training and input distributed to the Car Nicobar tribal farmers by ICAR-CIARI, Port Blair scientists.
- Dr. V. Baskaran – Received Hon'ble LG commendation certificate during the 73rd Republic Day for contribution in Horticulture in the Island
- Dr. K. Abirami- Received best presentation award in 9th AICRP group meeting on fruits held during 8-11 March in the session on "Crop Improvement"
- Dr. K. Abirami - Received best oral paper award for the paper on Dragon fruit (*Hylocereussp*): A crop for diversification in Island ecosystem in the National seminar on "Fruit production on Eastern Tropical region of India: Challenges and Opportunities" held during 24-26 March, 2022 and organized by CHES and SPH.
- Dr. Ajit Arun Waman received Young Scientist Award- 2021 in the field of Horticulture during International Conference on "Recent Advances for Managing Sustainable Soil Health and Crop Production" held during February 18-20, 2022.
- Dr. AjitArunWaman delivered an invited talk entitled "Scientific Management Practices in Coconut for improving its productivity" during Seminar cum Workshop on Promotion of Coconut and Coir Based Industries in Andaman and Nicobar Islands on 29.03.2022.
- Dr. Pooja Bohra delivered an invited lecture on 'Women in science and science for women' at Science Centre, Port Blair on 23.03.2022.

New projects/ initiatives

- A new project titled Augmenting livelihood, resilience, and knowledge generation through coastal fisheries information hub for Nicobar tribes of Car Nicobar was sanctioned for 158 Lakhs funded by Department of Science and Technology, New Delhi.

Appointments/Promotion/Transfer / Superannuation /Obituary:-

Transfer

➢ Dr. Gladston Y and Mrs. Ajina S.M transferred to ICAR-CIARI Regional Station, Minicoy on 11th March, 2022

Superannuation

➢ Smti. Monica, Skilled Supporting Staff on 31st January, 2022.

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