



From Director's Desk...

In spite of constraints posed by the pandemic, ICAR-CIWA continued its outreach to the stakeholders through social media platforms like whatsapp, youtube, google meet, video conferencing, zoom etc. All the activities of the institute were carried out following the SOP issued by the Government. On the research front a prototype of gender friendly Integrated Vertical Nutri-Farming System (IVNFS) was developed with the objective to ensure year round availability of vegetables, mushroom, eggs and meat to landless farmers/labourers. The Institute organized two national webinars, more than 10 training



programmes for various stakeholders and one month summer in-plant training for students. Apart from these, as part of Azadi Ka Amrit Mahotsav various programmes were organised. Scientists and technical personnel of the institute took benefit of online trainings/webinars to enrich their knowledge. The other national programmes, such as Mera Gaon Mera Gaurav (MGMG) and Scheduled Castes Sub Plan (SCSP), were also put into action with a focus on the socio-economic empowerment of women in agriculture through technology dissemination, capacity building of beneficiaries, input support, and technology showcasing through exposure visits.

(Anil Kumar)
Director

A. Research achievements

1. Prototype of Integrated Vertical Nutri-Farming System (IVNFS)

A prototype of Integrated Vertical Nutri-Farming System (IVNFS) was developed for household nutrition and income. The Prototype-I was an inverted "V" shaped base frame fabricated from iron. The length of the Prototype-I is 7.0 ft (2.14 m), width is 6.5 ft (1.98 m) and height is 7.0 ft (2.13 m). Different materials were used to make the troughs in various dimensions to study the

effect of different vegetable crops. Six numbers of vertical troughs was designed for growing of vegetables at different height. Two types of materials viz. wire mesh with polythene lining and GI sheet with thermocol lining were used for fabrication of vertical troughs. The dimensions as well as fabricating material of troughs were finalized from the experiment for preparation of final IVFNS structure. The vertical troughs are

inverted trapezoidal shaped having 2.14 m in length and 0.40 m in width.

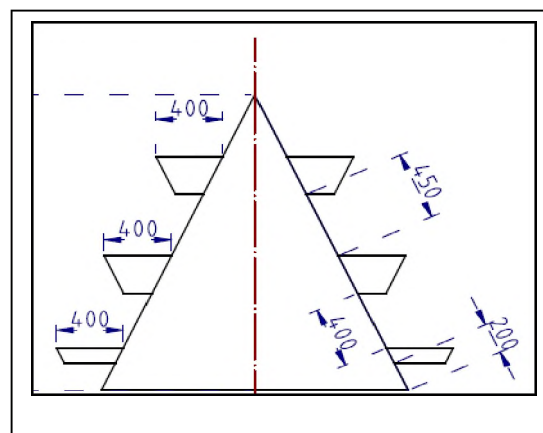
The developed Prototype-I of IVNFS structure was set up in the farm of ICAR-CIWA to study the growth and yield of vegetable crops in the vertical troughs. The effect of sunlight distribution pattern on growth of vegetable crops planted on Prototype-I of IVNFS was also studied. The vegetable crops to be grown throughout the year in the different troughs of the IVNFS were also finalized. The details are tabulated below:

Types of vegetable crops can be grown in the IVNFS structure

Troughs (from bottom)	Vegetable Crops
I	Leafy vegetables/ Salad crops/ Bulb crops
II	Leguminous vegetables/ Cruciferous vegetables
III	Solanaceous vegetables/ Colocasia/ Root crops/ Okra

Based on the performance of vegetable crops and sunlight distribution study in the Prototype-I it was concluded that the vertical troughs are more suited for fabrication using wire mesh with polythene lining as it is more economic as compared to GI

sheet with thermocol lining and the IVNFS structure needs to be kept in North-South orientation to get the morning sunlight from east and the afternoon sunlight from west. The prototype was developed by Dr. Tania Seth, Dr. Arun Kumar Panda and Er. Chaitrali S. Mhatre.



Schematic diagram of vertical troughs of Prototype-I of IVNFS

2. Entrepreneurial interventions in small scale poultry, goatery and value added fish products

The information on entrepreneurial needs and constraints faced by fisherwomen was collected from Puri and Khordha districts. Need based interventions for developing entrepreneurship model in small scale poultry, goatery and value added fish products were identified by Dr. Tanuja S., Dr. A. K. Panda, Dr. Lipi Das, Dr. B. Sahoo.

Interventions for developing entrepreneurship model in small scale poultry, goatery and value added fish products

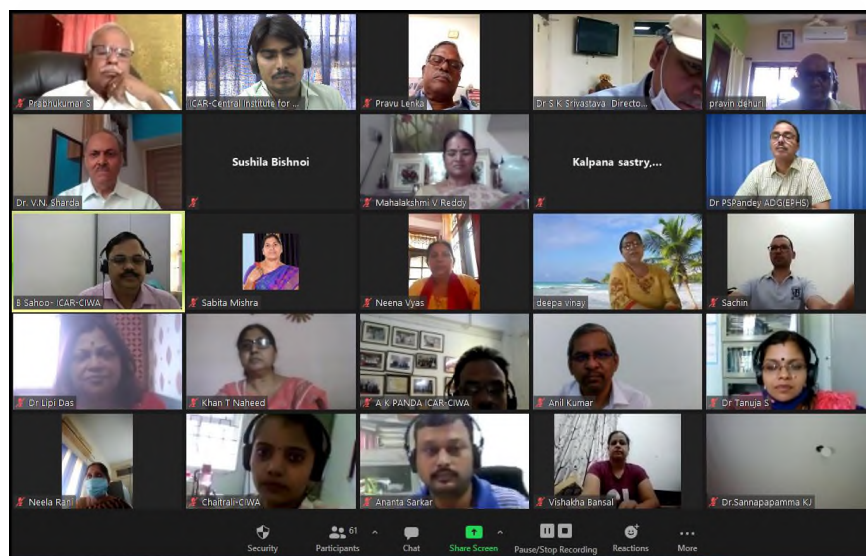
Poultry	Goatery	Value added fish products
Improved chicken varieties like Vanaraja, RIR and Kadaknath	Improved goat breed Black Bengal	Product standardisation, nutritional profiling, shelf life analysis and skill training on prawn pickle, Fish pickle, Prawn sev, prawn papad. Consumer Survey of the products
Low cost feed using locally available feed ingredients	Broiler goat rearing	Facilitation for availing Govt Schemes (One District One Product, National SCST hub, ASIM, MKUY (Odisha), UDYAM registration Business model and Business plan development
Semi intensive/intensive rearing practices	Formation of women goat keepers association	Formation of producer groups/commodity interest groups
Linking with livestock mission/ OPOLFED for sustainability of the enterprises		Drying using Solar Cabinet dryers, modern packaging methods Branding through trade licensing, Market linkage through private retail chains, Mission Shakti, NGO's

B. Major events

Research Advisory Committee Meeting

The 21st Meeting of Research Advisory Committee (RAC) of ICAR-Central Institute for Women in Agriculture was held during 28-29 April, 2021 in virtual mode. Dr. V. N. Sharda, Ex-Member, ASRB, New Delhi chaired the meeting. Besides the RAC Members, 14 Scientists of ICAR-CIWA and 82 scientists under AICRP on Women in Agriculture also participated in the meeting. The

Action Taken Report (ATR) on the recommendations of 20th RAC Meeting was presented by Dr. B. Sahoo, Member-Secretary, RAC. Dr. S. K. Srivastava, Director, ICAR-CIWA presented the salient achievements in the past and the future perspectives of ICAR-CIWA. The modified new project proposals of ICAR-CIWA and AICRP(WIA) under programme mode were also presented.



Research Advisory Committee Meeting



Performing Yoga during International Day of Yoga 2021

International Day of Yoga 2021

The International Day of Yoga (IDY) was celebrated on 21st June 2021 by the staff members of ICAR-Central Institute for Women in Agriculture, Bhubaneswar with the theme “Yoga

for Wellbeing” individually or with family within the confines of their homes. The common yoga protocol to be followed was circulated to all the staff. All the staff members actively followed the common yoga protocol either individually or with

family within the confines of their homes. The programme was coordinated by Dr. A. K. Panda, Nodal Officer.

Tree Plantation Campaign

On the occasion of foundation day of ICAR on 16th July 2021, a massive tree plantation campaign was organized in the ICAR-CIWA campus with the theme 'Har Med Par Ped' as part of Celebration of India@75-Azadi ka Amrut Mahotsav. The tree plantation campaign was inaugurated by Dr. Anil Kumar, Director, ICAR-CIWA. During this tree plantation drive about 600 plants of various species of mango, pesta, jackfruit, jamun, custard apple, sapeta, etc were planted in and around the campus. This programme was attended by 80 participants including scientific, technical, administrative, supporting staff and RA, SRF, students and the

farm workers by strictly observing the COVID protocols. The programme was coordinated by Dr. B. Sahoo, Nodal officer and Mr M. Prusty, In charge, Farm.

Parthenium Awareness Week

Parthenium awareness week was celebrated at ICAR-Central Institute for Women in Agriculture from 16 to 22 August, 2021. A wide range of activities were organized to spread awareness among staff members, farm workers as well as farm women in different project villages. To spread the awareness in adopted villages a mass awareness programme was organised in Erada village in Jagatsinghpur on 21 August 2021 involving school children and farm women. The programme was coordinated by Dr. Praveen Jakhar, Nodal officer.



Mass awareness programme on Parthenium

Fit India Freedom Run 2.0

Fit India Freedom Run 2.0 was launched by Honourable Prime Minister with a view to make fitness an integral part of our daily lives. The staff of ICAR-CIWA were introduced to the Freedom run and made aware of the importance of the fitness in their day to day life. Following the mantra given by Honourable Prime Minister

“Fitness ki dose adha ghanta roj”, the Staff of ICAR-CIWA participated in the campaign through virtual mode (keeping in mind the restrictions due to COVID-19 pandemic) by exercise, yoga, walk and run. ICAR-CIWA also promoted the event through its official website and other social media platforms.

C. Training/ Extension activities/ outreach activities/ Technology Transfer organised by ICAR-CIWA

National Webinar on “Sensitization on Intellectual Property Rights in Agricultural Research and Education”

An online National Webinar on “Sensitization on Intellectual Property Rights in Agricultural Research and Education” was organized by ICAR-CIWA, Bhubaneswar in connection with Bharat ki Azadi ka Amrut Mahotsav on 4th August 2021. The objective of the webinar revolved around sensitization of scientists/ innovators on IP regime, its management and benefits so that they can reorient their research endeavours and engage in knowledge creation. The webinar was attended by around 90 participants comprising of scientists and staff of ICAR-CIWA, AICRP on Women in Agriculture and also scientists from other Govt. organizations. The invited speakers of the Webinar were Dr. Puneeta Arora and Ms Sukriti Goyal, Founding Partners Avid Invent, Hyderabad and Regd Indian Patent Agents. Dr. Puneeta Arora spoke on “Overview of Different types of IP with focus on patents and their roles in protecting Agri-IP”. Ms. Sukriti Goyal spoke on “Overview of Patent search, analytics in agricultural research and development, strategy development, along with industrial designs, copy right and trademark”. The

legal aspects were also explained during her presentation. The deliberations were followed by the question answer session wherein all the participants actively participated. The organisers of the National Webinar were Dr. Lipi Das, Principal Scientist (Agricultural Extension), Dr. Tanuja S, Scientist (Fish Processing Technology) and Shri Atul C. Hemrom, Sr. Technical Assistant.

One month summer in- plant training

A one month summer in- plant training was imparted to students of B Tech. Agricultural Engineering from College of Agricultural Engineering & Technology, Odisha University of Agriculture & Technology, Bhubaneswar, Odisha in Farm Machinery and Power from 17th May to 16th June, 2021. The trainee students attended lectures and undertook practicals in the field of agricultural engineering, machine design & ergonomics. One project titled "Performance Evaluation of Groundnut Decorticator cum Stripper and Designing of Cleaning Screen" was designed and completed by the students. The students who completed summer in- plant training in Farm Machinery and Power were guided by Er. Chaitrali S. Mhatre, Scientist (FMP).

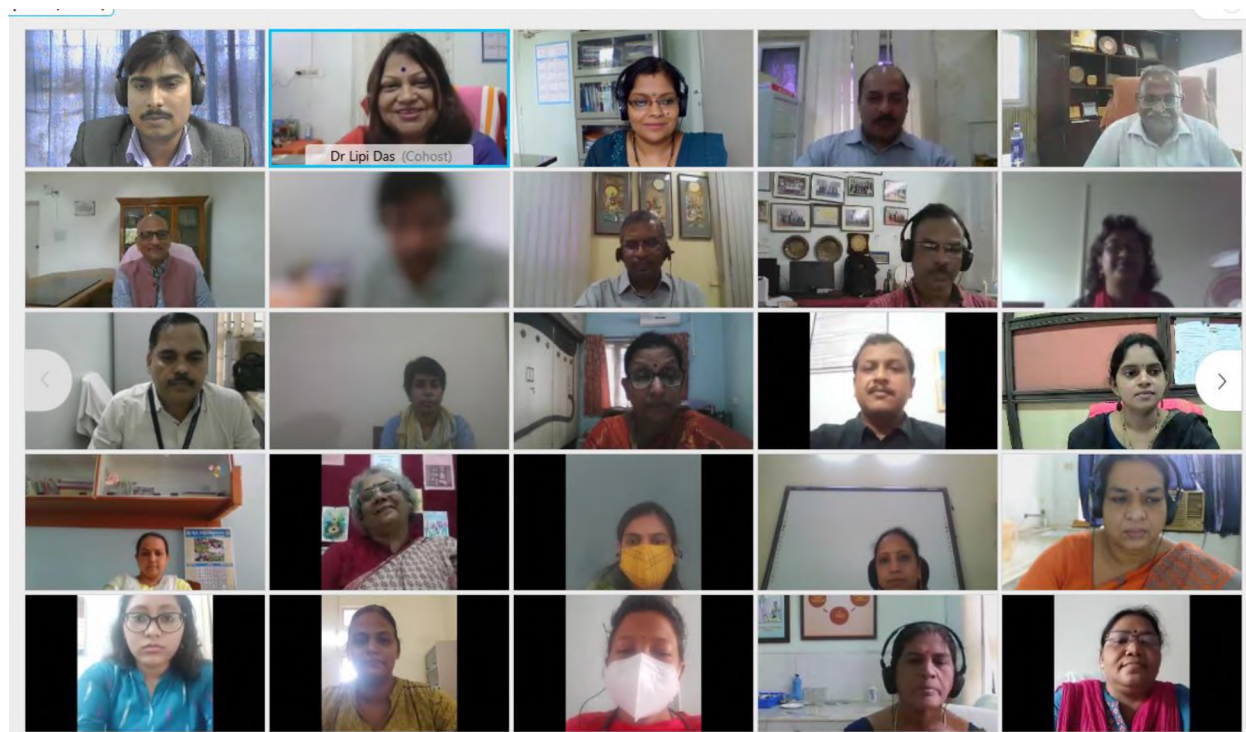


Summer in-plant training

Training Programme on “Promoting Women Agripreneurship through Crop - Livestock - Fisheries Technologies”

A collaborative online training programme of ICAR-CIWA, Bhubaneswar and MANAGE, Hyderabad on “Promoting Women Agripreneurship through Crop-Livestock-Fisheries Technologies” was organised during 14 to 18 September 2021. The programme was organized with the objectives to enhance the skill and knowledge of extension functionaries on gender sensitive approaches and technologies in agriculture and allied sectors for promoting agripreneurship among rural women and to build confidence of extension functionaries to be the change makers in the livelihood of rural women through adoption of agripreneurship. Dr. R. C. Srivastava, Hon'ble Vice Chancellor of Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, was the Chief Guest of the inaugural function. A total of 183 participants

registered from 22 states attended the training programme. The participants included faculties from SAU's, ICAR Scientists, KVK scientists, Students and Entrepreneurs. The training course covered the topics of entrepreneurial avenues existing in agriculture and allied sectors, gender sensitive farming system models, importance of digitization of technologies in agriculture, business plan development and the incubation process, importance of marketing linkages and FPOs etc. Dr. Himanshu Pathak, Director, ICAR-NIASM, Baramati was the Chief Guest of the valedictory programme. Dr. Shahaji Phand, Centre Head (EAAS) & Principal Coordinator (AC&ABC), was the Course Director MANAGE, Hyderabad and Dr. Lipi Das, Principal Scientist (Ag. Extension) was the Course Director from ICAR-CIWA. Dr. Tanuja S, Scientist, ICAR-CIWA and Mr Neetish Kumar, Scientist, ICAR-CIWA were the Course Co-ordinators.



Training programme on promoting women agripreneurship

National webinar on “Digital Media: A powerful tool to empower rural women in agriculture”

A National Webinar on “Digital Media: A powerful Tool to Empower Rural Women in Agriculture” was organized by ICAR-CIWA on 7 September, 2021. The webinar was organized with the objective to understand how rural women utilize digital and communication technologies in the Indian context and equip participants with the mindset and skill set to help them develop appropriate marketing strategies for products and services. The key note speech on the topic was delivered by Dr. Pragati Gokhale, Chief Mentor, Mission Mera Mobile Mera Marketing, Advisor, Rajiv Gandhi Science & Technology Commission (Govt. of Maharashtra) & DST SEED Program,

National Resource Person, Ministry of Rural Development Govt. of India. Dr. In her keynote address she highlighted the different aspects of marketing of mirchi.com and advised all the stakeholders to take utmost opportunities to use the portal. She emphasized that there has been worldwide recognition of the importance of ICTs as tools to promote women’s empowerment. The webinar was attended by more than 100 participants including staffs of ICAR-CIWA, AICRP on Home Science, academicians, NGO Personnel, Farmers. Dr. Jyoti Nayak, Principal Scientist, ICAR-CIWA was the convener of the webinar, Er. Mhatre Chaitrali Shashank, Scientist, ICAR-CIWA and Mrs Geeta Saha, Technical Officer, ICAR-CIWA were the co-conveners of the webinar.

Training/ Extension activities/ outreach activities/ Technology Transfer organised by ICAR-CIWA

Sl. No.	Name of the programme	Venue and Date	No of women beneficiaries	Input distributed/ skill imparted	Organizing team
1.	Awareness programme for farm women on various livelihood opportunities in agriculture in the post Covid scenario	29 July 2021 Chitra Village, Nimapada Block, Puri	40	Demonstration on the use of easy harvest bags, hand weeder, sprayers and improved sickles	A. K. Panda Chaitrali Mhatre Pragati Rout
2.	Awareness generation programme and on-farm demonstration of women friendly tools	2 August 2021 ICAR-CIWA	34	Awareness generation on use of women friendly tools to reduce the drudgery of farm women	A. K. Panda Chaitrali Mhatre Pragati Rout
3.	Capacity Building Programme on Post-harvest Management and Value Addition of Fruits and Vegetables for Women Farmers	5 August, 2021 Sankilo Village, Nischintakoili Block, Cuttack	70	Demonstration of transplanting of high yielding rice varieties and distribution of women friendly farm tools and equipment	Lipi Das B. Sahoo S. Swain

Sl. No.	Name of the programme	Venue and Date	No of women beneficiaries	Input distributed/ skill imparted	Organizing team
4.	Awareness programme for farm women was organized on “Prevention of nutrients loss during food preparation”	13 August 2021 Majhihara village Balipatna block, Khordha	60	Awareness on nutrient loss during food preparation	Sabita Mishra B. C. Behera
5.	Training-cum-demonstration programme on “Drudgery reduction and value addition through post harvest processing of food crops”	21 August, 2021 Naugaon block, Jagatsinghpur	52	Distribution of small post harvest/field preparation tools and vegetable seeds	Praveen Jakhar S. Swain Pragati Rout
6.	National level Campaign on “Food and Nutrition for Farmers”	26 August 2021 Guapur village Balipatna block, Khordha	60	Vegetable seeds and seedlings	L. P. Sahoo B. C. Behera
7.	Training cum demonstration programme on “Improved package of practices for higher yield and value addition in field crops”	4 September 2021 Ichchupur and Bidhyadharpur gram panchayat, Nimapara block, Puri	51	Demonstration on improved package of practices	Praveen Jakhar S. Swain
8.	Awareness and capacity building programme and distribution of Agricultural inputs to women SC farmers	22 September 2021 Khalgaon and Aniang villages, Balikuda block, Jagatsinghpur	81	Awareness on scientific poultry farming and goat farming and distribution of tools and implements	A. K. Panda B. Sahoo M. Prusty
9.	Training programme on “Homestead Gardening for Enhancement of Nutritional Security among Farm Women	23 September 2021 Majhihara village Balipatna block, Khordha	70	Vegetable seeds, tools and implements	Sabita Mishra L. P. Sahoo D. N. Sarangi B. C. Behera
10.	Farm Mechanization for Women Empowerment	30 September 2021, Sankilo Village Nischintakoili Block, Cuttack	100	Farm tools and implements	Lipi Das B. Sahoo Tanuja S Atul C. Hemrom

D. Training/Seminars/Symposia/Meetings etc. attended

Sl. No.	Programme (Conference/ Workshop/ Training/ Meeting)	Venue/ Organized by	Date	Attended by
1	National Webinar on Resilience and cope-up Strategies in Pandemic through Agricultural Engineering Interventions: Women's Perspective	ICAR-CIAE-RC, Coimbatore and SEED Division, DST, N. Delhi	9 June 2021	Lipi Das
2	Seminar on CII- Farm to Fork	CII, Odisha	11 June 2021	Lipi Das
3	Webinar on Gender Friendly Technologies for Empowerment of Farm Women	Vigyan Prasar, New Delhi	24 June 2021	A. K. Panda Ananta Sarkar
4	Webinar on Breeding For Sustainable Growth of Poultry Industry	Venkateshwar Hatchery Pvt. Ltd. Pune	28 June 2021	A. K. Panda
5	Webinar on How to overcome stress by Gurudev Sri Sri Ravi Sankar	ICAR-CIWA organized by ICAR, New Delhi	28 June 2021	Sabita Mishra
6	Brain storming session on Gender and Nutrition based Extension in Agriculture	ICAR-CIWA organized by NAAS, New Delhi	28 June 2021	Sabita Mishra
7	Training programme on Entrepreneurship Development & Start-Up Ecosystem	Virtual, ICAR-NAARM	5-9 July 2021	Tanuja S
8	Webinar on Sustainable development goals for transforming society : An Indian Perspective	ICAR-CIWA Bhubaneswar	8 July 2021	All Staff
9	Webinar on Maize & Soybeans - Market Driving Factors & Price Outlook	CLAFMA of India	10 July 2021	A. K. Panda
10	Training programme on Gender, Poverty and Employment (online)	V. V. Giri National Labour Institute, Noida	12-16 July 2021	Anil Kumar Ananta Sarkar Neetish Kumar
11	Training on Research Confront and Document Preparation Using Latex (online)	National Institute of Technology Kurukshetra	2-6 August 2021	Neetish Kumar
12	Webinar on Sensitization on Intellectual Property Rights in Agricultural Research and Education	ICAR-CIWA Bhubaneswar	4 August 2021	All Staff
13	International conference on Advances in Agriculture, Environmental and Biosciences for Sustainable Development (AAEBSSD-2021)	AEDS, Rampur, UP	5-7 August 2021	Tania Seth
14	Seminar on Opportunities in Agriculture Entrepreneurship	DBT, ILS, Bhubaneswar	11 August 2021	B. Sahoo
15	National Webinar on IFS for sustainable livelihood and nutrition	ICAR-IIFSR Modipuram	12 August 2021	A. K. Panda
16	Training programme on Preventive Vigilance and Departmental Enquiry: A Practical Approach	ICAR-CIWA organized by NAARM, Hyderabad	23-24 August 2021	Sabita Mishra
17	Training on IoT Framework Development for Agriculture Sector virtual mode	Lal Bahadur Shastri College of Engineering, Kasaragod, Kerala	6-10 September 2021	Neetish Kumar

Sl. No.	Programme (Conference/ Workshop/ Training/ Meeting)	Venue/ Organized by	Date	Attended by
18	National Webinar on Agriculture Online Marketing through Mobile	ICAR-CIWA Bhubaneswar	7 September 2021	All Staff
19	Webinar on Digital Media: A powerful Tool to Empower Rural Women in Agriculture	ICAR-CIWA Bhubaneswar	7 September 2021	All Staff
20	National Webinar on Women FPOs: An effective Approach for boosting Entrepreneurship, Empowerment and Self-reliance	Virtual, ICAR-CIWA and AICRP Centre, MPUAT, Udaipur	10 September 2021	Lipi Das Jyoti Nayak
21	Training on Promoting Agri-preneurship through crop livestock-fisheries technologies	MANAGE-CIWA	14-18 September 2021	B. Sahoo
22	Training programme on Market Research and Value Chain Management of Agricultural Commodities	ICAR-NAARM	21-25 September 2021	Jyoti Nayak
23	Mid-term Review of AICRP on ESA	ICAR-CIAE	22 September 2021	Jyoti Nayak
24	Meeting on Prime Minister's release of ICAR Technologies	ICAR-CIWA organized by ICAR, New Delhi	28 September 2021	All Staff
25	International Webinar on Alternate Cropping Systems for Climate Change and Resource Conservation	ICAR-IIFSR, Modipuram	29 September to 1 October 2021	Praveen Jakhar

E. Awards/Achievements

- Dr. A. K. Panda received Innovative Article Award by Vigyan Varta: An International E-Magazine for the month of September 2021.
- Tania Seth received “Young Scientist Award in Vegetable Science 2021” by Agro Environmental Development Society in 5th International Conference on 'Advances in Agriculture, Environmental and Biosciences for Sustainable Development (AAEBSD-2021)' held during 5-7 August, 2021.

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