

ICAR-CIWA NEWS

ICAR - CENTRAL INSTITUTE FOR WOMEN IN AGRICULTURE, BHUBANESWAR-751003

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This half year period witnessed several significant achievements of techno-socio-economic importance for women in agriculture and allied sector. Gender Sensitive Agri-Nutri (GSAN) Farming System Model was developed, representing a comprehensive linkage between agriculture and household nutrition, with women being the key stakeholder. The impact assessment and validation of Gender-Sensitive Extension Models indicated its significance in ensuring nutritional enrichment, entrepreneurship development and livelihood improvement. A women federation named as 'Bhargabi Women Mushroom Producer Federation' with a total membership of 631 women farmers was also formed involving 47 Women Self Help Groups (WSHGs). A business model for marketing of value-

From the Director's Desk

added fish products was worked out and an improved feeding mechanism for broiler goat rearing was validated. As a part of major events, the Institute celebrated the Rashtriya Mahila Kisan Diwas, Agri-Startup Conclave and Kisan Sammelan. The Institute celebrated its 28th Foundation Day on 17th Feb 2023 in the presence of Padma Shri Dr. Sabarmatee (Sambhav, Nayagarh, Odisha), Dr. Minati Behera, Chairperson, Odisha State Commission for Women and Dr. Bimlesh Mann, ADG (EP&HS), ICAR, New Delhi. Other events such as Special Campaign 2.0 for cleanliness, Vigilance Awareness Week, Communal Harmony Campaign Week, Women in Agriculture Day, Agricultural Education Day, World Soil Day, Hindi Karyashala, National Science Day, International Women's Day, Krishi Machinery Mohotsav were also organized during the period. A workshop-cum-exhibition on 'Empowering women through production and processing of millets' was organized by

ICAR-CIWA in collaboration with ICAR-Central Institute of Agricultural Engineering (CIAE), Bhopal during 8-9 Feb 2023 at ICAR-CIAE, Bhopal. Several activities viz., MGMG, SCSP and Swachha Bharat Abhiyan were also conducted with full enthusiasm in the rural areas too. As a part of Human Resource Development, the Institute organized RAWE Internship training programme, ICAR sponsored Short Course on 'Women friendly Nutri Smart interventions for alleviating malnutrition in rural areas' and on-line Collaborative Training Programme with MANAGE, Hyderabad on 'Participatory Gender Approaches for Agriculture Development'. Various extension activities in the form of capacity building programmes, demonstrations and field days were also conducted successfully during the period.



(Mridula Devi)

RESEARCH HIGHLIGHTS

Gender Sensitive Agri-Nutri (GSAN) Farming System Model

(Lipi Das, B. Sahoo, P. Jakhar and Tania Seth)

An innovative extension approach (sensitization, skill development and convergence) was adopted to analyze the prevailing gender gaps so that women's economic contributions are duly acknowledged to achieve the social development goals. This approach helped in identifying the Gender-sensitive indicators, to measure gender-related changes over time. Using these approaches and indicators, the gender gaps were bridged which resulted in significant economic outcomes by ensuring nutrition and livelihood security.

G-SAN Model Validation: There is an intricate linkage between agriculture and household nutrition, with women being the key stakeholder. Therefore, the G-SAN Model focuses on agriculture as tool for addressing the question of nutrition and income. A 'Gender Sensitive Agri-Nutri Farming System Model' is an approach for infusing nutrition enriched diet into the dietary pattern of the farm families by encouraging them to cultivate more vegetables, fruits, pulses in their farms/kitchen gardens with the active involvement of women farmers. The main components of this model are nutri-farming system, agri-nutri education, skill upgradation

and institutional convergence. The project was implemented in Sankilo and Tentapur villages of Cuttack district covering 80 farm families.



Plate 1. Schematic Diagram of Gender Sensitive Agri-Nutri (GSAN) Farming System Model

Impact assessment and validation of Gender-Sensitive Extension Models for Nutritional Security, Entrepreneurship Development and Livelihood Improvement

(Lipi Das, P. Jakhar and Ankita Sahu)

Impact assessment and validation of Gender Sensitive Extension Model were done with respect to the technology feasibility, awareness level, knowledge and extent of participation of rural women for nutritional security, entrepreneurship and livelihood improvement.

Under 'Livelihood Enhancement Model', demonstrations on vegetable cultivation resulted in an increase in average gross return from ₹1,16,923/- to ₹3,15,005/- and net return from ₹50,107/- to ₹1,89,955/- per annum. There was an increase in productivity by 45.5% to 68.9% and the gross income became 155% to 203%. Introduction of high yielding fruit crops resulted in yield advantages of about 47.9% to 49.5% with an incremental income of 69.7%-119.3%. The 'Nutritional

Security Model', generated a total income of ₹6,55,515/- out of which vegetables valued at ₹4,58,861/- were used for household consumption and vegetables valued at ₹1,96,655/- were sold in the open market. Introduction of high protein content bio-fortified rice varieties, CR Dhan 311 (Mukul) and CR Dhan 315 resulted in additional protein yield of 3.26 q/ha and 3.30 q/ha, respectively. These bio-fortified varieties also helped in meeting the zinc requirement of women and child because of higher zinc content (20-22 ppm). The 'Entrepreneurship Promotion Model', which focused on production of paddy straw mushroom generated a yield of 971 kg, resulting in an income of ₹1,74,798/-. The Benefit:Cost ratio increased from 2.06 to 4.21 with an increase in 55% yield advantage.

Gender-Sensitive Approach for Livelihood Improvement of Farm Women

(Sabita Mishra and Anil Kumar)

Farm women of Nimapara block in Puri district were given training on cultivation of paddy mushroom as it can be grown round the year and have ready market in the nearby towns. Forty-seven Women Self Help Groups (WSHG) from 21 villages from five Panchayats were encouraged and motivated to form 'Bhargabi Women Mushroom Producer Federation' (BWMPPF) with a total membership of 631 women farmers. Regular training and capacity building were organized for

the members of this federation to upscale production and create market linkage. They were also linked to the various government schemes. The effort resulted in establishment of 15 mushroom units with bank credit assistance (₹10 lakh per SHG). Each group is now able to earn ₹2.40 lakh in one month with a profit of ₹1.68 lakh against an investment of ₹0.72 lakh, from a unit of 75 ft x 35 ft size with 1200 beds of paddy straw in three tier system.

Business Model for Marketing of Value-added Fish Products j

(Tanuja S., A. K. Panda, Lipi Das and B. Sahoo)

A Business Model for marketing of value added fish products enterprise was prepared to facilitate the women entrepreneurs in starting their business. Standardized protocols for preparation

of fish products like prawn *papad* was also done during the period by incorporating dry prawn powder at the rate of 15%, 20% and 30% along with base material and spices.

Key Partners - Raw material suppliers - Retail sellers - Financial Institutions - Technological institutions- Incubators, Research organizations - State Government Organisations- Fisheries Department, Mission Shakti, ORMAS - Media- Print Electronic, Online	Key activities - Production - Marketing - Skill enhancement - Licensing& branding - Advertisement	Value propositions - Ready to eat/cook - Innovative - Reasonable price - Attractive packaging - Hygienic - Traceability	Customer relationships - Provide customer samples - Customer feedback and action upon it - Discounted prices - Order via Mobile Phone - WhatsApp /Message	Customer segments - Age groups from children to old age - Rural and urban - Restaurants - Bakeries/Cafes etc)
	Key resources - Human- Women Farmer Interest Groups, Master trainers, Producer Groups, SHGs - Physical-Raw material, Building, Machineries - Technological- ICAR-CIWA, ICAR-CIFA - Financial- Beneficiary capital		Channels - Distributor - Retailers - Advertisement in print online and electronic media - Online platforms (Amazon, flipkart etc) - Exhibitions, Melas	
Cost Structure - Fixed Cost - Variable cost - Loan Interest		Revenue streams - Sale through retailer - Sale through exhibitions - Sale through online platforms		

Plate 2. Business Model Canvas for Small Scale Value Added Fish Products Business

Effect of Improved feeding on growth performance of Black Bengal Goats

(Tanuja S., A. K. Panda, Lipi Das and B. Sahoo)

Broiler goat rearing, a novel technology manifested a higher growth rate of goats ($P < 0.05$) than conventional feeding system. Further, the kids having higher birth weight showed higher ($P < 0.05$) growth rate (65g/day) than goats with lower birth weight (40g/day). Feeding of bypass protein (formaldehyde treated ground nut cake) and total mixed ration (concentrate:

roughage: 30:70) in Black Bengal goats was tested and validated in growing goats. The growth rate in goats was improved by 18% in feeding bypass protein and 15% in feeding total mixed ration. Two women entrepreneurs in small scale goatery were developed at Sarat, Balipatna and Atri, Khordha.



Plate 3. Improved feeding practices of Black Bengal Goats

MAJOR EVENTS

Rashtriya Mahila Kisan Diwas

Rashtriya Mahila Kisan Diwas was celebrated at ICAR-CIWA on 15 October 2022 to acknowledge the significant contribution made by farm women in agriculture. The event was graced by the Chief Guest Shri Kailash Choudhary, Hon'ble Minister of State for Agriculture & Farmers Welfare, Govt. of India. Dr Himanshu Pathak, Hon'ble Secretary, DARE & Director General, ICAR, New Delhi was present as the Special Guest.

Dr B.N. Tripathy, DDG (Animal Science), Dr J. K. Jena, DDG (Fisheries Science) and Dr R.C. Agrawal, DDG (Agricultural Education) also graced the occasion. The programme was attended by more than 300 farm women from adopted villages and more than 500 women farmers across India joined the programme through digital mode.

(Program coordinator: Dr. Lipi Das)



Plate 4. Celebration of Rashtriya Mahila Kisan Diwas

Agri-Startup Conclave and Kisan Sammelan

The webcast of Agri-Startup Conclave and Kisan Sammelan was organized on 17 October 2022. The programme offered a platform for the women farmers of Odisha to get an exposure of the latest breakthrough in agricultural innovations, agri-startup ventures, and various government schemes for farmers. About

250 farmwomen from the adopted villages participated in the event.

(Program coordinator: Dr. Jyoti Nayak)



Plate 5. Glimpse of Agri-Startup Conclave and Kisan Sammelan

Institute Foundation Day

ICAR-CIWA celebrated its 28th Foundation Day on 17 February 2023. Padma Shri Dr. Sabarmatee, Sambhav, Nayagarh, Odisha graced the occasion as the Chief Guest. Dr. Bimlesh Mann, ADG (EP & HS), ICAR, New Delhi and Dr. Minati Behera, Chairperson, Odisha State Commission for Women were the Guest of Honour. Padma Shri Dr. Sabarmatee, Sambhav, Nayagarh delivered the Foundation Day Lecture and applauded the contribution of the farming community in plant biodiversity conservation and sustainable ecosystem management. Eighteen

progressive farm women from nine different adopted villages were awarded for their significant contribution in agriculture. About 200 farmwomen from the adopted villages of different districts of Odisha and 120 B.Sc. (Agriculture) students of Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu including staff of ICAR-CIWA participated in the programme.

(Program coordinators: Dr. Sabita Mishra, Dr. Tania Seth & Dr. Arpita Mohapatra)



Plate 6. Celebration of Institute Foundation Day

OTHER EVENTS

Special Campaign 2.0 for cleanliness

Special Campaign 2.0 for cleanliness was observed during 14-30 September 2022 (Preliminary phase) and 2-31 October 2022 (Implementation phase). Under this campaign, steps were initiated for the disposal of office scrap, space management, cleaning of premises and farm and simplification of office rules.

(Program coordinators: Dr. Ankita Sahu & Dr. Arpita Mohapatra)



Plate 7. Observation of Special Campaign 2.0 for cleanliness

Vigilance Awareness Week

Vigilance Awareness Week-2022 was observed from 31 October to 6 November 2022 with a theme of 'Corruption free India for a Developed Nation'. Various programmes like *Gram Shabha* and Human Chain formation by farmwomen, seminar talk, debate and quiz competitions were organized. For public awareness,

the staff of the institute participated in the Walkathon raising slogans against corruption.

(Program coordinators: Dr. Sabita Mishra, Dr. Neetish Kumar, Mrs. Bishnupriya Moharana & Mr. B. C. Behera)



Plate 8. Celebration of Vigilance Awareness Week

Communal Harmony Campaign Week and Flag Day

Communal Harmony Campaign Week and Flag Day was organized from 19 to 25 November 2022. On this occasion, the Director of the Institute and the staff members spread the message of unity and integrity by forming a human chain. Referring to the remarkable works of “National Foundation for Communal Harmony” for the physical and psychological upliftment of destitute children, a donation box was set up at the institute, in which the employees of the organization made generous donation. The last day of this campaign was celebrated as Flag Day, in which the national flag was honoured by collectively singing the flag song.

(Program coordinators: Dr. Neetish Kumar and Er. Subrat Kumar Das)



Plate 9. Observation of Communal Harmony Campaign Week and Flag Day

Agricultural Education Day

Agricultural Education Day was celebrated by ICAR-CIWA, Bhubaneswar on 3 December 2022 with the participation of students from Government Nodal High School, CRP, Baramunda, Bhubaneswar. The celebration was organized to commemorate the birth Anniversary of Dr. Rajendra Prasad, the first President of independent India to inculcate the importance of this profession in sustaining the society. During the programme an awareness talk on the 'Importance of nutri-garden in tackling malnutrition' was delivered by Dr. Jyoti Nayak, Principal Scientist, ICAR-CIWA. About 150 students participated in the programme.

(Program coordinators: Dr. Tanuja S. & Mr. Atul C. Hemrom)



Plate 10. Celebration of Agricultural Education Day

Women in Agriculture Day

'Women in Agriculture Day' was celebrated on 4 December 2022 at Talapatna village, Sakhigopal along with the NGO Gopabandhu Daridra Narayan Sevashrama Sangha. Smt. Gayatri Mohapatra, Sarapanch of Kadua Grampanchayat was the Chief Guest of the programme. Besides, Smt. Dipa Behera,

Sarapanch of Biraramchandrapur and Sri Jagannath Barik, In-Charge Gopabandhu Sevashrama Sangha also attended the programme. More than 100 farm women from nearby villages attended the programme.

(Program coordinators: Dr. Jyoti Nayak and Mrs. Geeta Saha)



Plate 11. Celebration of Women in Agriculture Day

World Soil Day

World Soil Day was celebrated at ICAR-CIWA, Bhubaneswar on 5 December 2022 to create awareness among the farm women for maintaining soil health for sustainable agriculture production. The off-campus celebration was carried out in MGMG village Renghalo, Nimapada, Puri. In this village programme, the women farmers were sensitized about the importance of soil health, soil testing and relevance of celebrating the day. Demonstration on soil sample collection was made during the occasion. Additionally, critical inputs such as vegetable seeds (French bean var. Arka Arjun), micronutrients and drudgery

reducing tools were provided to the SC women farmers of the village for the Rabi cultivation. An on-line lecture on “Soil Health and Agriculture” was presented by Dr. Sangeeta Lenka, Senior Scientist, IISS, Bhopal. All the scientific and technical staffs of the Institute, AICRP (Women in Agriculture) staff members along with progressive women farmers from different villages joined the event.

(Program coordinators: Dr. Praveen Jakhar, Dr. Ankita Sahu and Er. Pragati Kishore Rout)



Plate 12. Demonstration on soil sample collection

हिन्दी तिमाही कार्यशाला

भा.कृ.अनु.प-केन्द्रीय कृषिरत महिला संस्थान, भुवनेश्वर में 8 दिसंबर 2022 को हिन्दी तिमाही कार्यशाला का आयोजन किया गया, जिसका विषय – ‘सरकारी कामकाज में मसौदा तैयार करना तथा हिन्दी में टिप्पणी लेखन’ था। इस आयोजन में विशेष अतिथि वक्ता के रूप में श्री रामकु शणैग, वरिष्ठ प्रशासनिक अधिकारी, भा.कृ.अनु.प.- राष्ट्रीय चावल अनुसंधान संस्थान, कटक आमंत्रित थे। अपने वक्तव्य के शुरुआत में उन्होंने प्रशासनिक कार्यों में सरलता से फाइल

में कैसे हिन्दी का प्रयोग किया जा सकता है उस पर प्रस्तुति दी। आगे उन्होंने ई-ऑफिस में भी हिन्दी के प्रयोग के बारे में समस्त कर्मचारियों का ज्ञान वर्धन किया और प्रस्तुतीकरण के माध्यम से सिखाया कि ई-ऑफिस में हिन्दी का कैसे प्रयोग किया जा सकता है।

(Program coordinator: Mrs. Geeta Saha)

Krishi Machinery Mohotsav j

ICAR-CIWA, Bhubaneswar celebrated *Krishi Machinery Mohotsav-2023* on 6 February 2023 under AICRP on ESA at Kunjar village, Pipili, Puri, Odisha. On this occasion, an awareness and demonstration programme on 'Women Friendly Tools' was organized. On this occasion a Custom Hiring Centre

of women friendly tools was established through funding from the SCSP scheme for the economic benefits and overall socio-economic upliftment of the women of the village.

(Program coordinators: Er. Chaitrali Mhatre, Dr. Jyoti Nayak and Mrs. Geeta Saha)



Plate 13. Celebration of Krishi Machinery Mohotsav

Workshop-cum-exhibition on 'Empowering women through production and processing of millets' in collaboration with ICAR-Central Institute of Agricultural Engineering (CIAE), Bhopal

A two days workshop-cum-exhibition on 'Empowering women through production and processing of millets' was organized by ICAR-Central Institute for Women in Agriculture, Bhubaneswar in collaboration with ICAR-Central Institute of agricultural Engineering, Bhopal during 8-9 February 2023 at ICAR-CIAE, Bhopal. About 300 participants consisting of farm women, SHGs, NGOs, progressive farmers, industry partners from different corners of Madhya Pradesh attended the programme. Er. Rajiv Chaudhary, Director, Agricultural Engineering, Government of Madhya Pradesh was the Chief Guest of the function. The Chief Guest discussed the ongoing schemes in agricultural engineering technologies for millets processing

and shared his experience on role of process engineers to cope with the public demand and Govt. initiative with respect to the development of millet based products and millet machineries. During second day, a Farmers-Industry interface meeting was organized where five industrial partners of ICAR-CIAE along with progressive farmers participated in the programme. A discussion on the use of women-friendly tools and funding opportunities for women farmers was also organized. Many women-led FPO's, entrepreneurs, NGO's working in the area of millets shared their experiences.

(Program coordinators: Dr. Sabita Mishra, Dr. Sachidananda Swain, Mr. Atul C. Hemrom and Mrs. Tapaswini Sahoo)



Plate 14. Glimpse of Workshop-cum-exhibition on millets at CIAE, Bhopal

National Science Day

ICAR-CIWA, Bhubaneswar celebrated National Science Day on 28 February 2023 at Government High School, Rental Colony, C.R.P., Baramunda, Bhubaneswar. The programme was attended by 50 students, teachers and other staff from the School. The focal theme of this year for NSD was 'Global

Science for Global Wellbeing'. A slogan writing competition was organized in the school on the topic 'Women in Agriculture in a Global Paradigm'.

(Program coordinators: Er. Chaitrali Mhatre, Dr. Arpita Mohapatra and Mrs. Geeta Saha)



Plate 15. Celebration of National Science Day

International Women's Day

International Women's Day-2023 was celebrated at ICAR-CIWA, Bhubaneswar during 1- 8 March 2023 with the theme 'DigitALL: Innovation and technology for gender equality'. Different programmes like tree plantation, group discussion on the theme 'Gender balance is not solely a women's issue, but also an economic issue', rangoli making, creative writings like

poems, slogans, quotes etc were also organized. A motivational talk was delivered by Brahma Kumari Durgesh Nandini and her team as a part of celebration of International Women's Day.

(Program coordinators: Dr. Laxmi Priya Sahoo, Dr. Tania Seth and Dr. Arpita Mohapatra)



Plate 16. Celebration of International Women's Day

हिंदी कार्यशाला

दिनांक 24 मार्च 2023 को भा. कृ.अनु.प. - केन्द्रीय कृषिरत महिला संस्थान, भुवनेश्वर में हिंदी कार्यशाला का आयोजन किया गया। संस्थान के सभी वैज्ञानिकों, अधिकारियों एवं कर्मचारियों ने इसमें हिस्सा लिया। इस कार्यशाला में मुख्य वक्ता के रूप में श्री हजारि लाल मीना, मुख्य प्रशासनिक अधिकारी, भा.कृ.अनु.प. - केन्द्रीय मीठाजल जीवपालन अनुसंधान संस्थान, भुवनेश्वर आमंत्रित थे। इस कार्यशाला का मुख्य विषय 'कार्यालयी हिन्दी का महत्व' एवं 'ई-ऑफिस की मिसिलों में हिंदी नोटिंग एवं ड्राफ्टिंग' था।

(Program coordinator: Dr Neetish Kumar)



Plate 17. Hindi Timahi Karyashala

MAJOR PROGRAMMES

Mera Gaon Mera Gaurav

From the districts of Puri, Khordha and Cuttack of Odisha, 20 villages have been adopted under flagship program of *Mera Gaon Mera Gaurav* (MGMG). From the period of 1 October 2022 to 31 March 2023, various activities have been carried out in the adopted villages by the four scientific team constituted under the MGMG programme of the Institute. The various activities included training, demonstration, field

visit, interaction with women farmers, and distribution of small tools, implements, improved crop varieties and poultry birds as technical backstopping. The programme enabled in increasing knowledge level of more than 230 beneficiaries from the adopted villages.

(Nodal Officer: Dr. Lipi Das)

SCSP

Under the SCSP, the Institute focuses on SC farmwomen for technology dissemination, capacity building, input support and entrepreneurship development for their socio-economic empowerment. In this programme, inputs like seeds of improved varieties, farm tools and processing equipments were distributed to the SC women beneficiaries from the project areas and adopted villages. During the period several women friendly tools, equipments and agri-inputs viz., hand weeder, sprayers, improved sickles, seed treatment drum, Mandwa weeder, cono

weeder, rice transplanters, improved Sickle, pedal operated thresher, hand winnower (fan model), battery operated sprayer, axe, rose can, bill hook, liner/garden hoe, iron bucket, spade, crowbar, milk strainer, mineral mixture, poultry equipments, improved seeds varieties were distributed among the women farmers. More than 435 beneficiaries from adopted villages have been benefitted under the SCSP scheme.

(Nodal Officer: Dr. P. Jakhar)

Swachha Bharat

Swachhata Pakhwada was organized during 16-31 December 2022. Various activities such as tree plantation, stock taking on digitization of office records/e-office implementation, cleaning of offices, corridors and premises, collection of agro-waste from residential quarters, farm premises, canteen kitchen, goat-poultry farm was undertaken followed by segregation of biodegradable and non degradable waste. With an objective to convert waste to wealth, vermicompost was prepared from agro waste. Awareness programmes were organized in mass scale in village Sankilo, Tentulpur, Cuttack to sensitize farm families about the importance of cleanliness and safe waste disposal. To foster interest among rural youth, several competition programmes concerning to *swachhata* activities were popularized among school students and youth mass in the village viz., Haladiapada, Kanas, Puri on “*Swachha Bharat*”. *Swachhata* programme was also organized at village Athantara, Balipatna, Khorda and Dubuduba, Puri. About 450 participants actively participated during *swachhata* programme.

(Nodal Officer: Dr. B. Sahoo)



Plate 18. Swachhta activities in adopted village



Plate 19. Swachhta Pakhwada Celebration

HUMAN RESOURCE DEVELOPMENT

RAWE Internship training programme j

The RAWI Internship training programme was organized at ICAR-Central Institute for Women in Agriculture for 4th year B.Sc. Agriculture students from Siksha 'O' Anusandhan, Bhubaneswar during 5 September to 5 November 2022. The training comprised of several theory and practical sessions with an aim to update the students with latest technologies in agriculture and allied fields. The students were sensitized with basic concepts of gender in agriculture, gender roles, issues and importance of mainstreaming women farmers in agriculture, Govt. schemes & policies in agriculture and allied

sectors, application of ICT in agriculture, promotion of FPOs for orienting the farming community towards commercial agriculture. During the field visit, they got an exposure to the livestock, poultry & fishery units, SAS model, fodder unit, horticulture-cropping models, medicinal plant unit, protected structures, RKVY workshop, Institute's laboratories and other infrastructures.

(Programme Coordinators: Dr. A. K. Panda, Dr. Tania Seth and Dr. Ankita Sahu)



Plate 20. RAWI Internship Training Programme

ICAR sponsored Short Course on 'Women friendly Nutri Smart interventions for alleviating malnutrition in rural areas'

ICAR-CIWA organized ICAR sponsored Short Course on 'Women friendly Nutri Smart interventions for alleviating malnutrition in rural areas' during 3-12 January 2023. The training comprised of several off-line and on-line lectures from Guest Experts from ICAR-CIWA, other ICAR-Institutes and MANAGE with an aim to update the Academicians, Extension scientists and Professionals in agriculture development with women friendly nutri-smart interventions. The course highlighted issues and interventions like nutritional problems and possible solutions, designing effective nutrition sensitive

agricultural interventions, collaboration and linkages for promoting Nutri-Smart Agriculture, effective management of family resources, creating conducive environment through capacity building in nutri-smart farming practices for livelihood and value chain for nutri-foods. The training comprised of 13 female and 6 male participants from 5 states.

(Programme Coordinators: Dr. Laxmi Priya Sahoo, Dr. Jyoti Nayak and Dr. Tania Seth)



Plate 21. ICAR-Sponsored Short Course

ICAR-CIWA and MANAGE, Hyderabad On-line Collaborative Training Programme

ICAR-CIWA and MANAGE, Hyderabad organized an on-line collaborative Training Programme on 'Participatory Gender Approaches for Agriculture Development' during 23-28 January 2023. The training comprised of several on-line lectures from Guest Experts from CIWA, MANAGE and other ICAR-Institutes with an aim to update the extension scientists, academicians, students and professionals in agriculture development with the latest gender-sensitive approaches in agriculture development. The participants were appraised with basic concepts of Gender, contribution of ICAR-CIWA towards gender mainstreaming

and women empowerment and enhancing gender economic equity. The effective way of participatory communication for gendered approach and digitization in agriculture through artificial intelligence, ICT approaches were also covered as a part of the course programme. The training programme comprised of 66 registered participants from 17 states, 2 union territories and 2 International participation.

(Programme Coordinators: Dr. A. K. Panda, Dr. Veenita Kumari, Dr. B. Sahoo and Dr. Ankita Sahu)



Plate 22. ICAR-CIWA and MANAGE, Hyderabad On-line Collaborative Training Programme

Capacity building programme on 'Value addition and drudgery reduction: A promising way for creating sustainable livelihood for rural women'

A three days capacity building programme on 'Value addition and drudgery reduction: A promising way for creating sustainable livelihood for rural women' was organized at ICAR-CIWA during 21-23 November 2022. The programme was sponsored by ATMA in collaboration with Farm Information

Advisory Centre (FIAC) Kujanga Block, Jagatsinghpur District. Twenty five farm women from five SHGs and one farmers' producer group participated in the programme.

(Programme Coordinators: Dr. Sachidananda Swain and Dr. Jyoti Nayak)

Internship of students

Internship training to three final Year B.F.Sc students of CUTM, Parlekumdi was imparted in two batches from 16 August 2022 to 7 November 2022 and from 8 December 2022 to 7 March 2023. The students were given hands on training on preparation of value added products from fish. They were also trained on the proximate and quality analysis of fish and value added

fish products. Exposure to farmer's field was given along with guidance to conduct water quality analysis of the pond water. The students undertook consumer survey of the value added fish products, as well as survey on the food consumption pattern of the rural women.

(Programme Coordinator: Dr. Tanuja S.)

Capacity Building Programme for Farm Women on 'Mushroom cultivation and Vermi-compost'

One day training programme was organized at ICAR-CIWA, Bhubaneswar on 1 March 2023 to create awareness and skill development of farmwomen on 'Mushroom cultivation and Vermi-compost'. This training program was conducted in collaboration with the NGO - Tanager International. Demonstrations on straw mushroom cultivation and vermicomposting were also conducted during this programme.

A total of 10 Women FPO members from Balipatna (District-Khordha) and Nimapara (District-Puri) participated in the programme.

(Programme Coordinators: Dr. Sabita Mishra, Dr. Tania Seth, Mr. B. C. Behera and Mrs. Tapaswini Sahoo)



Plate 23. Glimpse of Capacity Building Programme

Training / Seminar / Symposium / Workshop / Meeting attended

- Dr. Jyoti Nayak attended Workshop on Policy Round table on transforming Odisha's Agri food system, organized by DA & FE, Govt. of Odisha on 20-21 October 2022
- Dr. A. K. Panda attended IPSACON-2022 and National Symposium on Recent Advances in Sustainable poultry production for livelihood and nutrition security organized by DUVASU, Mathura on 04-06 November 2022
- Dr. Ananta Sarkar attended Workshop on 'Interaction Meet: Officer In charge Data Management' organized by ICAR-IASRI, New Delhi on 10 November 2022
- Dr. Jyoti Nayak attended Celebration of *Mandia Diwas* organized by DA&FE, Govt. of Odisha on 10 November 2022
- Dr. Ananta Sarkar attended 73rd Annual Conference of Indian Society of Agricultural Statistics (ISAS), organized by SKUAST, J&K on 14-16 November 2022
- Dr. B. Sahoo Participated in 19th Biennial International Conference of Animal Nutrition Society of India held at Guru Angad dev Veterinary & Animal Sciences University, Ludhiana, Punjab, India during 16-18 November 2022
- Dr. Tanuja S. attended 8th Global Conference on Gender in Aquaculture and Fisheries (GAF8), organized by GAF Section of Asian Fisheries Society and ICAR-CIFT at Kochi Kerala on 21-23 November 2022
- Dr. A. K. Panda attended Review meeting on Research and Development in Basic and Applied Science of Department of Science and Technology, organized by Odisha Bigyan Academy Bhubaneswar on 22-23 November 2022
- Dr. B. Sahoo and Dr. Arpita Mohapatra participated in 31st National Congress of Veterinary Parasitology and National Symposium on "Green Management of Animal Parasites to Enhance Livestock Production, Livelihood and One Health" held at OUAT, Bhubaneswar, during 6-8 December 2022
- Dr. Lipi Das attended Gopinath Sahu Memorial Lecture organized by ARRW at ICAR-NRRI, Cuttack as Vice-President, ARRW, Cuttack on 8 December 2022.
- Dr. Tania Seth attended 17th Executive Committee Meeting of MIDH (NHM) at Krushi Bhawan, Bhubaneswar, Odisha as a Panel Member on 10 January 2023.
- Dr S. Swain and Dr. Tanuja S. attended NABL Assessor Training Course at ICAR-CIFRI, Barrackpore during 17- 21 January 2023
- Dr. Arpita Mohapatra attended National conference on 'Futuristic Approach to Viable Animal Production vis-a-vis Climate and Calamity Challenges' at OUAT, Bhubaneswar organized during 18-20 January 2023
- Dr. Tania Seth and Dr. Ankita Sahu attended the International Conference on 'New Generation Horticulture for Prosperity', organized by Orissa Horticultural Society, Bhubaneswar, during 20-21 January 2023
- Dr. L.P. Sahoo attended International Conference on Pulses: Smart crops for agricultural sustainability and nutritional security (ICPulses2023) at NASC, New Delhi during 10-12 February 2023
- Dr. Lipi Das attended the 2nd Indian Rice Congress-2023 on 'Transforming Rice Research: Recent Scientific Developments and Global Food Crisis' at ICAR-NRRI, Cuttack, during 11-14 February 2023
- Dr. Lipi Das attended the High Level Committee for review of NASF Project on 21 February 2023
- Dr. Sabita Mishra attended Workshop on "Development of Gender Sensitization Module" at MANAGE, Hyderabad on 10 March 2023
- Dr. L. P. Sahoo, Dr. P. Jakhar and Dr. Ankita Sahu attended a meeting with ICARDA personnel on an interaction on their study on 'Scaling Equitable access to quality seed-Reaching the Unreached with quality pulse seed and traits in Odisha' on 14 March 2023
- Dr. Tanuja S. attended International Conference (IAAHAS-2023) on "Innovative Approaches in Agriculture, Horticulture & Allied Sciences" organized by Just Agriculture, SGT University, Gurugram and ISAHRD, Chandigarh during 29-31 March 2023



EXTENSION ACTIVITIES

- Dr. Lipi Das, Dr. B. Sahoo and Dr. Ankita Sahu organized a workshop on 'Strengthening Women Farmer Producer Organizations (WFPOs) for Promoting Agri-preneurship in Convergence Mode' for 'Ananaya Farmer Producer Company Limited' under NASF project in Tentapur village under Nischintakoili block, Cuttack district of Odisha on 21 October 2022
- Dr. Tanuja S. and Mr. Manoranjan Prusty organized demonstration programme on establishment of homestead nutrition garden under NICRA project at Thaila Village, Bhandaripokhri, Bhadrak on 27 October 2022
- Dr. Sabita Mishra organized Gram Sabha with farm women/farmers in Jaguleipadar, Kanas, Puri on 01 November 2022
- Dr. Tanuja S. and Dr. Tania Seth organized Demonstration programme on establishment of homestead nutrition garden under NICRA project at Sriramchandrapur, Puri on 11 November 2022
- Dr. Tania Seth and Mr. Manoranjan Prusty organized Awareness Programme and Farmer-Scientist Interaction on Integrated Vertical Nutri-farming System (IVNFS) at Mendhasala, Khordha on 16 November 2022
- Dr. Tania Seth, Dr. A. K. Panda and Mr. Manoranjan Prusty organized Demonstration cum Training Programme on Gender Sensitive Integrated Vertical Nutri-farming System (IVNFS) at Sagada village, Nimapada Block, Puri District of Odisha on 18 November 2022
- Dr. B. Sahoo organized a skill based Capacity Building Programme on Women entrepreneurship through Goat farming at Sarat, Balipatna on 29 November 2022
- Dr. Sabita Mishra organized training on "Safe storage of food grains for farm women" in Taraboi, Nimapada, Puri on 2 December 2022
- Dr. A. K. Panda, Dr. B. Sahoo, Dr. Arpita Mohapatra, Mr. B.C. Behera, Mr. Manoranjan Prusty and Mrs. Tapaswini Sahoo had put up an Exhibition stall to showcase the technologies of ICAR-CIWA during 31st National Congress of Veterinary Parasitology and National Symposium on "Green Management of Animal Parasites to Enhance Livestock Production, Livelihood and One Health" at OUAT, Bhubaneswar during 6-8 December 2022
- Dr. Tanuja S. and Dr. Jyoti Nayak organized Field day on Composite Carp Farming at Dubuduba, Puri District on 8 December 2022
- Dr. Sabita Mishra organized training on "Nursery raising of vegetables for farm women" in Jaguleipadar, Kanas, Puri on 14 December 2022.
- Dr. Tania Seth, Dr. A. K. Panda, Er. Chaitrali S. Mhatre and Mr. Manoranjan Prusty organized Workshop-cum-Training Programme on Gender Sensitive Integrated Vertical Nutri-farming System for Household Nutrition and Income Enhancement under IVNFS project at ICAR-CIWA, Bhubaneswar on 14 December 2022
- Dr. Sabita Mishra organized Scientists-Farmers Interface in Balipatna, Khordha on 16 December 2022.
- Dr. Tanuja S., Dr. A. K. Panda, Dr. Lipi Das and Dr. B. Sahoo organized capacity building Programme on Women Agripreneurship through Livestock and Fisheries Technologies at ICAR-CIWA on 27 December 2022
- Dr. Jyoti Nayak organized Training cum Skill development in Dubuduba Village on 30 December 2022
- Dr. B. Sahoo, and Dr. Lipi Das organized Scientist-Stakeholder Interface on Women Entrepreneurship in Livestock and Fisheries Sector under the project "Development of women entrepreneurship in Livestock and fisheries sector for promoting gender equity and strengthening livelihood at Amanakuda, Balipatna on 06 January 2023
- Dr. Sabita Mishra organized capacity building-cum-demonstration program on "Oilseed and pulses production" in Rabanpalaspal village of Harichandanpur of Keonjhar on 13 January 2023
- Dr. Ankita Sahu organized an In-house Brainstorming Meeting for development of Technology Hub and Gender Sensitization Micro-Lab at Institute along with a Guest Expert on 03 February 2023
- Dr. S. Swain and Dr. Sabita Mishra organized Workshop-cum-Exhibition on 'Empowering women through production and processing of millets' at ICAR-CIAE, Bhopal during 8-9 February 2023
- Dr. Tania Seth and Mr. Manoranjan Prusty organized Exposure visit of B.Sc. (Agriculture) students of Nagaland University at ICAR-CIWA on 10 February 2023
- Dr. Lipi Das, Dr. Jyoti Nayak, Dr. Tania Seth and Dr. Ankita Sahu along with technical assistance of Geeta Saha, Subrat Das and Tapaswini Sahoo displayed CIWA technologies and put up exhibition stall at the 2nd Indian Rice Congress-2023 on 'Transforming Rice Research: Recent Scientific Developments and Global Food Crisis' at ICAR-NRRI, Cuttack, during 11-14 February 2023
- Dr. Tania Seth, , Er. Chaitrali S. Mhatre along with technical assistance of Mr. S.K. Behera and Mr. B.C. Behera displayed CIWA technologies and put up exhibition stall at the Krushi Odisha-2023, during 16-18 February 2023

- Dr. Sabita Mishra, Dr. Tania Seth, Mr. B.C. Behera and Mrs. Tapaswini Sahoo organized one day training programme for women FPO members of Odisha on “Mushroom cultivation and Vermi-compost” sponsored by NGO-Tanager International at ICAR-CIWA on 01 March 2023
- Dr. Jyoti Nayak and Mrs. Geeta Saha, organized a Cooperative Awareness Programme in collaboration with National Cooperative Union of India Cooperative Education, Puri at Kadua village on 22 March 2023
- Dr. Tanuja S., Dr. Lipi Das, Dr. A. Sarkar and Dr. Tania Seth organized training cum demonstration programmes on farm made fish feed preparation and mushroom cultivation under NICRA project at ICAR-CIWA on 24 and 26 March, 2023
- Dr. Neetish Kumar organized Capacity building cum Drone Technology Demonstration programme at 6 villages of Puri district viz., Chitra, Sagada, Naruda, Balanga, Sahadapada, Nuasahi during 30-31 March 2023

EXTENSION ACTIVITIES UNDER SCSP

- Dr. A. Sarkar, Dr. A. Mohapatra, Dr. D. N Sarangi and Mr. B.C. Behera organized Training on post flood management of animals, poultry and duck and follow up MGMG and SCSP activities at Jagulaipadar, Kanas, Puri on 24 November 2022.
- Dr. A. K. Panda, Er, Neetish Kumar and Er. P.K. Rout organized training programme on improved management of poultry in backyard farming and distribution of inputs at Pataligaon, Nimapada, Puri on 29 November 2022
- Dr. S. Mishra, Dr. A. Sarkar, Dr. A. Mahapatra, Dr. D. N Sarangi and Mr. B.C. Behera organized training program on winter vegetable cultivation at Badagadaput, Kanash, puri on 30 November 2022
- Dr. Lipi Das, Dr. Tania Seth and Mr. Atul Chetan Hemrom organized a Workshop-cum-Capacity Building Programme on ‘Farm Mechanization for Farm Women through WFPOs’ in MGMG adopted villages of Nischintakoili block of Cuttack district on 30 November 2022
- Dr. P. Jakhar, Dr. Ankita Sahu and Er. P.K. Rout celebrated World Soil Day, demonstrated soil sample collection and distributed vegetable seeds (French bean var. Arka Arjun) to the SC women farmers of Renghalo village for the Rabi cultivation on 5 December 2022
- Dr. Sachidananda Swain and Dr. Neetish Kumar organized training-cum-demonstration programme on ‘Livelihood improvement through value addition and product diversification of local produce’ under SCSP programme on 16 December 2022
- Dr. Lipi Das organized a Workshop-cum-Training Programme on Entrepreneurship Development through Value Addition under SCSP plan on 20 December 2022
- Dr. D.N. Sarangi and Mr. B.C. Behera distributed seed kit and conducted *swatchhata* programme at Guapur, Balipatanam on 22 December 2022
- Dr. Jyoti Nayak, Dr. S. Swain and Dr. Neetish Kumar organized inauguration of Custom Hiring Centre (CHC) on Grain Processing and value addition for SC Women in Kujang Block on 23 December 2022
- Dr. A. K. Panda and Er. Pragati Rout organized training cum Demonstration Programme on ‘Improved Management Practices in Family Poultry Farming for Higher Income and Nutrition and distributed inputs to SC farm women at Olikana, Niampada, Odisha on 30 December 2022
- Dr. A. K. Panda, Dr. Lipi Das, Dr. B. Sahoo, Dr. Tanuja S. and Mrs. Tapaswini Sahoo organized Scientist-Stakeholder meeting on Women entrepreneurship and distribution of small farm tools and mineral mixture to animal owners at Amanakuda, Balipatana, Khorda on 06 January 2023
- Dr. A. K. Panda, Er. Pragati Rout and Mrs. Tapaswini Sahoo organized the training Programme on ‘Scientific Management Practices in Family Poultry Farming for Higher Income and Nutrition’ for Women SC Farmers at Mallick Sahi, GOP, Odisha on 11 January 2023
- Dr. Lipi Das, Dr. B Sahoo and Mr. S.K. Behera organized skill-based capacity building programme on ‘Improved Goat Farming and Animal health camp’ at Sribantapur, Jagatsinghpur on 15 January 2023
- Dr. Arpita Mohapatra, Mr. B.C. Behera and Dr. D.N. Sarangi organized one day training on ‘Safe Storage of food grains’ at village Lokapal, Kanas, Puri’ on 06 February 2023
- Er. Chaitrali Mhatre, Dr. Jyoti Nayak, Mrs. Geeta Saha established Custom Hiring Centre in Kunjar, Puri, Odisha on 06 February 2023
- Dr. A.K. Panda, Dr. Praveen Jakhar and Er. P.K. Rout facilitated two Women-led Agri-machines Custom Hiring Centres in Olikana and Gwarligoda Villages for technologies popularisation in Puri district of Odisha on 10 February 2023
- Dr. S. Swain, Dr. N. Kumar and Er. P.K. Rout organized ‘Capacity building programme on millets: An approach for sustainable agriculture and healthy society’ and distributed inputs at Kujanga, Jagatsinghpur on 24 February 2023
- Dr. Lipi Das, Dr. B. Sahoo and Mr. Sanjay Behera organized Skill-based Capacity Building Programme cum Animal Health camp under the project “Development of women

entrepreneurship in Livestock and fisheries sector for promoting gender equity and strengthening livelihood” & strengthening POSHAN Abhiyan through Nutri-Smart Village programme at Sribantapur, Jagatsinghpur on 15 March 2023

- Er. C.S. Mhatre and Mrs. Geeta Saha established CHC for empowering women through sustainable mechanization at Biula, Pipili, Algum, Satyabadi on 20 March 2023
- Dr. Arpita Mohapatra and Er. C.S. Mhatre organized One day training cum demonstration on Improved Feeding Practices for Higher Milk Production for women dairy farmers for 30 women dairy farmers from Cuttack and Puri District on 22 March 2023

- Dr. B. Sahoo, Dr. A. K. Panda and Mr. Sanjay Behera organized skill-based capacity building programme cum Animal Health camp along with distribution of goats & small tools at Sarat, Balipatna and Chitra, Sagada, Nimapara on 23 March 2023
- Er. C.S. Mhatre and Er. P.K. Rout established CHC for empowering women through sustainable mechanization at Chitra and Ranchesason, Puri on 24 March 2023
- Dr. A. K. Panda, Dr. P. Jakhar and Er. P.K. Rout empowered farm women of Gada Amarprasad, Nimapara, Puri through sustainable management practices 28 March 2023

RADIO TALK/ TV TALK

- Mr. Manoranjan Prusty delivered a talk on ‘How to make Nutritional Garden’(Poshan bagicha kariba kipari) in AIR, Cuttack on 4 November 2022
- Dr. Arpita Mohapatra delivered a talk on ‘Role of Animal Husbandry on Climate Change Scenario in AIR Odisha on 17 November 2022
- Dr. Sabita Mishra delivered a talk on ‘Role of Self-Help Group’ in Live Telecast programme of DDK, Bhubaneswar on 16 March 2023

PUBLICATIONS

A. Research Papers

- Acharya, K.K., Malhotra, R., Sendhil, R., Mohanty, T.K. and Sahoo, B. 2022. y Management Practices among Peri-urban Dairy Farmers in Odisha. *Indian Journal of Extension Education*, 58(3): 120-125.
- Das, Lipi and Panda, R.S. 2022. Livelihood Enhancement & Promoting Gender Equity through Agri-Horti Cropping System Model. *Journal of Community Mobilization & Sustainable Development*, 17(3): 1019-1025.
- Das, Lipi, Moharana, G. and Panda, R.S. 2022. Mitigating Drudgery for Gender Equity and Livelihood Security in Agri-Horti Cropping System Model. *Journal of Community Mobilization and Sustainable Development*, 17(4): 1065-1071.
- Das, Lipi, Sahu, A. and Panda, R.S. 2023. Gender Sensitive Agri-nutri model: A Participatory Approach for Enhancement of Family Nutrition and Income. *Scientist, USA*, 2(1): 86-95.
- Devi, I., Mallick, P.K., Mohapatra, A., Shinde, A. K. and Tomar, A. 2022. Effect of udder morphology on milk yield and suckling behaviour of patanwadi lambs. *The Indian Journal of Small Ruminants*, 28 (1): 91-100.
- Dohiya, J., Panigrahy, S.R., Nayak, A. and Mohapatra, A. 2022. Socio Economic Impact of Skill Development

Training Program on Employment Status of Rural Youth: A Case of RSETI, Gujarat. *Journal of Experimental Agriculture International*, 44(9): 144-151.

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- Kishore, K., Kanupriya, C., Samant, D., Acharya, G.C., Singh, H.S. and Sahu, A. 2022. Phenological description and thermal time requirement of tamarind (*Tamarindus indica*) in tropical conditions. *Annals of Applied Biology*, 181(3): 309-320.
- Kumar, A., Sarkar, A., Kumar, N., Tanuja, S. and Pandey, P.S. 2022. Measuring participation and contribution of rural men and women in Indian agriculture. *Economic and Political Weekly*, LVII (26 & 27): 20-24.
- Maity, A., Marathe, R.A., Sarkar, A. and Basak, B.B. 2022. Phosphorus and potassium supplementing bio-mineral fertilizer augments soil fertility and improves fruit yield and quality of pomegranate. *Scientia Horticulturae*, 303: 111234.
- Maity, A., Sharma, J., Sarkar, A. and Basak, B.B. 2022. Zinc nutrition improves fruit yield, quality, and reduces bacterial blight disease severity in pomegranate (*Punica granatum L.*). *Journal of Plant Nutrition*, 46(9): 2060-2076.

- Mohapatra, A., De, K. and Mukherjee, J. 2022. Role of micronutrients in managing bovine udder health in changing climatic scenario of Indian subtropical region. *Indian Journal of Animal Health*, 61(2): 164-172.
- Mohapatra, A., De, K., Kumar, V., Kumar, D. and Singh, R. 2022. Adaptability of fat-tailed, avishaan and malpura sheep to summer stress in semi-arid region. *The Indian Journal of Small Ruminants*, 28(1): 101-105.
- Mohapatra, S., Barik, S.R., Dash, P.K., Lenka, D., Pradhan, K.C., Raj, K.R., Mohanty, S.P., Mohanty, M.R., Sahoo, A., Jena, B.K. and Panda, A. K., Panigrahi, D., Dash, S.K., Meher, J., Sahoo, C.R., Mukherjee, A., Das, Lipi, Behera, L. and Pradhan, S. K. 2023. Molecular Breeding for Incorporation of Submergence Tolerance and Durable Bacterial Blight Resistance into the Popular Rice Variety 'Ranidhan'. *Biomolecules*, 13(2): 98.
- Moharana, G and Gupta, R. 2022. Assessment of Occupational Stress of Teaching Professionals during Covid-19 Pandemic. *Journal of Krishi Vigyan*, 10(2): 12-17.
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- Ragasa, C., Kyle, J., Kristjanson, P., Eissler, S., ..., Sarkar, A. and Seymour, G. 2022. Conceptualizing women's empowerment in agrifood systems governance: A new framework. IFPRI Discussion Paper 2153. Washington, DC: International Food Policy Research Institute (IFPRI). 1-48.
- Roy, S.S., Sarkar, A., Singh, H.N., Sharma, S.K., Ansari, M.A., Singh, K.H.R., Kadirvel, G., Punitha, P., Kshetri, P., Singh, T.H.S., Tamreihao, K., Rajiv, C., Devi, A. K., Langhu, T., Langamba, P. and Datt, S. 2022. Performance of micro and small foodpreneurs in Manipur during COVID-19 pandemic. *Indian Journal of Agricultural Sciences*, 92(4): 469-473.
- Sabat, G.P., Panigrahi, B., Sahoo, B., Panda, N., Babu, L.K. and Acharya, A.P. 2023. Effect of Protein and Mineral Supplementation on Growth Performance and Nutrient Utilization in Black Bengal Goats. *Animal Nutrition and Feed Technology*, 23: 97-105.
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- Sahu, A., Kishore, K., Nayak, R.K., Dash, S.N., Sahoo, S.C. and Nayak, S. 2022. Influence of potassium on mineral content, yield and quality attributes of dragon fruit (*Selenicereus monacanthus*) in acidic soil of Eastern tropical region of India. *Journal of Plant Nutrition*, 46(11): 1-16.
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- Tanuja, S., Jeeva, J.C. and Rout, E. 2022. Comparative storage stability of shrimp (*Metapenaeus* spp.) pickle at room temperature and refrigerated temperature. *Indian Journal of Fisheries*, 69(4): 88-94.
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- Vishwakarma, R.K. and Mridula, D. 2023. Physico-chemical Standards of Pigeon Pea Dal of India. *Agricultural Engineering Today*, 47(1): 67-69.

B. Technical Bulletins

- Das, Lipi, Jakhar, P., Moharana, G., Sahu, A., Panda, R.S. and Pradhan, S.R. 2022. Institutional Mechanism and Technological Backstopping to Promote Women Entrepreneurship in Agriculture. Technical Bulletin No.48. ICAR-CIWA, Bhubaneswar. pp. 1-38.
- Tanuja, S., Sarkar, A., Moharana, G. and Mhatre, C.S. 2022. Improving nutrition and income through gender inclusive homestead aquaculture. Technical Bulletin No. 45. ICAR-CIWA, Bhubaneswar. pp. 1-36

C. Books/Compendiums/ Training Manuals/ Proceedings

- Panda, A. K., Jakhar, P., Sarkar, A. and Kumar, A. 2022. Women in Agriculture: Challenges and Opportunities. ICAR-CIWA, Bhubaneswar. pp. 1-187.
- Panda, A. K., Kumar, A. and Pattanaik, S. 2022. Success Stories of Progressive Farm Women. ICAR-CIWA, Bhubaneswar. pp. 1-35.
- Panda, A. K., Kumari, V., Sahoo, B. and Sahu, A. 2023.

Participatory Gender Approaches for Agriculture Development [E-book]. ICAR-CIWA, Bhubaneswar. pp. 1-146.

- Sahoo, L.P., Nayak, J., Seth, T., Kumar, N., Prusty, M., Rout, P.K. and Das, S. 2023. Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas [E-book]. ICAR-CIWA, Bhubaneswar. pp. 1-170.

E. Chapters in Book/ Compendium/ Training Manual/ Souvenir/ Proceedings

- Das, Lipi 2023. Bringing Gender Economic Equity (GEE) through Development of Rural Women Agripreneurship. In: *Participatory Gender Approaches for Agriculture Development* (eds.) A. K. Panda, V. Kumari, B. Sahoo and Ankita Sahu, ICAR- CIWA, Bhubaneswar: 49-59.
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- Das, Lipi. 2022. Augmenting Agricultural Extension and Capacity Building Activities for Promoting Women Entrepreneurship in Nutri-Smart Agriculture. In: *Souvenir of SOA, Siksha 'O' Anusandhan*, Bhubaneswar: 12-24.
- Das, Lipi. 2023. Exploring Gender-Neutral Extension to Improve Nutritional Security. In: *ICAR sponsored Short Course on Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas* (eds.) Sahoo et al. ICAR - CIWA, Bhubaneswar: 20-28.
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- Khandi, S.K., Mishra, V., Mishra, A., Kar, I., Sahu, A. and Patel, M. 2022. Post-harvest management in rice: Approaches and agri-preneur prospects. In: *Economic upliftment of rural women* (eds.) A.S. Kandpal and N.K. Kandpal. Jaya Publishing House, New Delhi: 1-13.
- Kishore, K., Ding, P. and Sahu, A. 2023. Flowering, Fruit Set and Fruit Development. In: *Jackfruit-Botany, Production and Use*, (ed.). S. Mitra. CAB International: 195-209.
- Mhatre C.S., Jyoti, N., Moharana, G., Pati, M., Rout, P.K. 2023. Managing drudgery and occupational health hazards and women friendly farm tools and implements with emphasis on NSA. In: *ICAR sponsored Short Course on*

Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas (eds.) Sahoo et al. ICAR - CIWA, Bhubaneswar: 71-78.

- Mhatre C.S., Jyoti, N., Moharana, G., Pati, M., Rout, P.K. 2023. Strengthening nutrition security and enhancing family income through innovations in livestock sector. In: *Participatory Gender Approaches for Agriculture Development* (eds.) A. K. Panda, V. Kumari, B. Sahoo and Ankita Sahu, ICAR- CIWA, Bhubaneswar: 113-116.
- Mishra, S. 2023. Gender issues in agriculture and allied sectors: strategies for mainstreaming. In: *Participatory Gender Approaches for Agriculture Development* (eds.) A. K. Panda, V. Kumari, B. Sahoo and Ankita Sahu, ICAR- CIWA, Bhubaneswar: 12-17.
- Mohapatra, A. 2023. Potential role of dairy sector in improving household nutrition and livelihood. In: *ICAR sponsored Short Course on Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas* (eds.) Sahoo et al. ICAR - CIWA, Bhubaneswar: 126-130.
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- Nayak, J. and Rout, P.K. 2023. Strengthening Farmwomen perspectives in Nutri Smart Village Development: A Case Study. In: *ICAR sponsored Short Course on Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas* (eds.) Sahoo et al. ICAR - CIWA, Bhubaneswar: 12 -19.
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- Panda, A. K. 2023. Gender Perspectives in Agricultural Research and Development. Compendium on Participatory Gender Approaches for Agriculture Development. In: *Participatory Gender Approaches for Agriculture Development* (eds.) A. K. Panda, V. Kumari, B. Sahoo and Ankita Sahu, ICAR- CIWA, Bhubaneswar: 7-11.
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I. Folders/ Leaflets

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- Tanuja, S., Panda, A. K., Das, Lipi and Sahoo, B. 2022. Preparation and packaging of fish pickle. ICAR-CIWA, Bhubaneswar Odisha. pp. 1-2

AWARDS/ ACHIEVEMENTS/ RECOGNITIONS

- Dr. Tanuja S. received 'Certificate of Excellence' in reviewing research article in Asian Journal of Fisheries and Aquatic Research on 4 November 2022
- Dr. Sabita Mishra served as a Chairman in Technical Session II (Ruminant Nutrition) in 19th Biennial International Conference of Animal Nutrition Society of India held at Guru Angad dev Veterinary & Animal Sciences University, Ludhiana, Punjab, during 16-18 November 2022
- Dr. B. Sahoo served as a Chairman in Technical Session-I (Cattle and Buffalo nutrition) in 19th Biennial International Conference of Animal Nutrition Society of India held at Guru Angad dev Veterinary & Animal Sciences University, Ludhiana, Punjab, during 16-18 November 2022
- Dr. Tanuja S. served as a Rapporteur for the Thematic Session of the 8th Global Conference on Gender in Aquaculture & Fisheries held at Kochi, Kerala, India on 21-23 November 2022
- Dr. Tanuja S. received 'Most innovative article' of the month Award for November 2022 by Vigyan Varta on 30 November 2022
- Dr. Sabita Mishra served as a member in IQA (Internal Quality Assessment) Cell of Saila Bala Women's Autonomous College, Cuttack on 19 December 2022
- Dr. Ankita Sahu received 'Young Scientist Award' by the Orissa Horticultural Society, College of Agriculture, OUAT, Bhubaneswar on 21 January 2023
- Dr. Sabita Mishra served as a Convenor during Paper Session on the occasion of IEEC-23 at BHU, Varanasi on 27 January 2023
- Dr. Tanuja S. received 'Young Woman Fisheries Scientist-2022' Award by Vigyan Varta on 31 January 2023
- Dr. Tanuja S. received 'Eminent Scientist Award' by SGT University, Chandigarh, ISAHRD and Just Agriculture during 29-31 March 2023



Invited Lectures

- Dr. Tania Seth delivered a lecture on 'Multi-storied Cropping: A Promising Technology' in 2 days Online Training Programme organized by MAMETI, Meghalaya on 6 December 2022
- Dr. Lipi Das delivered a lecture on WFPOs- A pathway for linking farm women to value chain during the Capacity Building Programme on Women Agripreneurship through Livestock and Fisheries Technologies on 27 December 2022
- Dr. Lipi Das delivered a lecture on 'Women Friendly Nutri-Smart Interventions for Alleviating Malnutrition in Rural Areas' for ICAR sponsored Short Course on 'Exploring Gender-Neutral Extension to improve Nutritional Security' on 5 January 2023
- Dr. Ankita Sahu delivered a lecture on 'Sustainable Horticulture Livelihood Prospects for Women farm' for the 'Conservation Agriculture' Skill Development Training Course in College of Agriculture, OUAT, Chiplima under IDP-NAHEP on 6 January 2023
- Dr. B. Sahoo delivered a lecture on 'Enhancing nutrition and income of rural women through improved goat rearing' in ICAR sponsored Short Course on 'Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas' at ICAR-CIWA, Bhubaneswar on 7 January 2023
- Dr. Neetish Kumar delivered a lecture on 'Implementation of digitization in Nutri-smart Agriculture' in ICAR Sponsored short course on 'Women friendly Nutri-smart

interventions for alleviating malnutrition in rural areas' on 8 January 2023

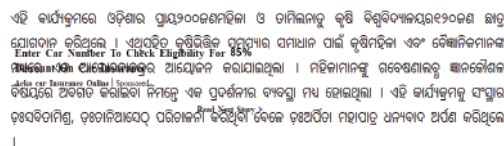
- Dr Tanuja S. delivered a lecture on 'Strengthening farmwomen perspectives in Nutri smart village development through homestead aquaculture' in ICAR sponsored Short Course on 'Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas' at ICAR-CIWA, Bhubaneswar on 9 January 2023
- Dr. Ankita Sahu delivered a lecture on "Locally available Fruit crops: An important component of family food security' for ICAR sponsored Short Course on "Women Friendly Nutri Smart Interventions for Alleviating Malnutrition in Rural Areas' on 10 January 2023
- Dr. Tania Seth delivered a lecture on 'Promotion of locally grown vegetable crops for nutritional security' in ICAR Sponsored Short Course on 'Women friendly Nutri Smart interventions for alleviating malnutrition in rural areas' organized by ICAR-CIWA, Bhubaneswar on 12 January 2023
- Dr. Arpita Mohapatra delivered a lecture on 'Potential role of dairy sector in improving household nutrition and livelihood' in ICAR Sponsored short course on 'Women friendly Nutri-smart interventions for alleviating malnutrition in rural areas' on 12 January 2023
- Dr. Lipi Das delivered a lecture on 'Strategic Approach for Gender Mainstreaming in Agriculture through Equity, Entrepreneurship & Empowerment (3E'S) for the Refresher Course on 'Entrepreneurial Prospects in Agriculture & Allied Sectors' organized by CCSHAU, Hisar on 17 January 2023
- Dr. Lipi Das delivered a lecture on 'Bringing Gender Economic Equity (GEE) through Development of Rural Women Agripreneurship' for ICAR-CIWA & MANAGE, Hyderabad collaborative online training programme on 'Participatory Gender Approaches for Agriculture Development' on 25 January 2023
- Dr Tanuja S. delivered a lecture on Rural Women Entrepreneurship Development: A Case Study for ICAR-CIWA & MANAGE, Hyderabad collaborative online training programme on 'Participatory Gender Approaches for Agriculture Development' on 25 January 2023
- Dr. Tania Seth delivered a lecture on 'Nutrition and Livelihood security of farm families through Multi-tier Cropping System' in Online Training Programme on 'Participatory Gender

Approaches for Agriculture Development' organized by ICAR-CIWA, Bhubaneswar in Collaboration with MANAGE, Hyderabad during 27 January 2023

- Dr. B. Sahoo delivered a lecture on "Govt. Programme and Policies for Mainstreaming Women in Agriculture in the online collaborative Training Programme of ICAR-CIWA with MANAGE, Hyderabad on 28 January 2023
- Dr. Ankita Sahu delivered a lecture on 'Gender-Inclusive Dimensions for Empowering Women farmers in Horticulture Sector' for ICAR-CIWA & MANAGE, Hyderabad collaborative online training programme on 'Participatory Gender Approaches for Agriculture Development' on 28 January 2023
- Dr. Neetish Kumar delivered a lecture on 'Enhancing Efficiency of Farm women through ICT Applications' in ICAR-CIWA & MANAGE, Hyderabad collaborative online training programme on 'Participatory Gender Approaches for Agriculture Development' on 28 January 2023
- Dr. Lipi Das delivered a lecture on 'Promoting Gender equity through accessing Agri-innovations for ensuring Livelihood and Nutrition in Rice -based Cropping System' in the 2nd Indian Rice Congress-2023 on 'Transforming Rice Research: Recent Scientific Developments and Global Food Crisis' at ICAR-NRRI, Cuttack, during 11-14 February 2023
- Dr. L.P. Sahoo delivered an Invited lecture on 'Women friendly technologies' during Krushi Odisha on 16 February 2023
- Dr. Ankita Sahu delivered a lecture on 'Growth Promoters' for the National Coalition for Natural Farming in a capacity building session for farmers and field-level functionaries on the production and marketing of bio-inputs at Sambhav Odogaon, District-Nayagarh on 23 February 2023
- Dr. Arpita Mohapatra delivered a lecture on 'Strengthening nutrition security and enhancing family income through innovations in livestock sector' in ICAR-CIWA & MANAGE, Hyderabad collaborative online training programme on 'Participatory Gender Approaches for Agriculture Development' on 28 January 2023
- Dr. Neetish Kumar delivered a lecture on 'Office Hindi vs. Literary Hindi' at the Regional Centre for Organic Farming, Bhubaneswar on 20 March 2023

JOINING/ TRANSFER/ PROMOTION

- Dr. Mridula Devi has taken over the charge of Director, ICAR-CIWA, Bhubaneswar on 14 November 2022
- Shri S. K. Jena, Administrative Officer, ICAR-IIWM, Bhubaneswar has assumed the additional charge of Administrative Officer, ICAR-CIWA, Bhubaneswar on 17 February 2023
- Dr. Sachidananda Swain was promoted from PB-III to PB-IV on 27 October 2022
- Dr. Laxmipriya Sahoo was promoted from PB-III to PB-IV on 6 January 2023
- The meeting of Committee for probation clearance of Dr. Neetish Kumar was held 14 November, 2022.

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ମହିଳା ଚାଷୀଙ୍କ ନେଇ ଦକ୍ଷତା ବିକାଶ କାର୍ଯ୍ୟକ୍ରମ ଓ ପଶୁ ସ୍ବାସ୍ଥ୍ୟ ଶିବିର

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ନିରାକରଣ ଓ ଉତ୍ତର କିମ୍ବା ହେବି ବଂଶୀ। ବୃଦ୍ଧି ନିମନ୍ତେ ସେହି ପ୍ରକଳ୍ପ ଓ କଣ ହେବି ବାହାରି ବୋବା ବଂଶନ କରିଥିଲେ। ପୂର୍ବରୁ ସିଆଡ଼ଲର ଡରହାମ୍ ବଂଶନ କରାଯାଉଥିବା ଫଳ ଶୁଣି ହେବି ବାହାରି ବିକିନ୍ ହେବି ଔଷଧ ଓ ବିଜାଗିନ ବଂଶନ କରାଯାଉଥିବା। ତଥା ହେବି ବାହା ସହ ଘାସ ବାଣ ଓ ପ୍ରତିପତ୍ତି ବାଣ ଉପରେ ମଧ୍ୟ ଚାଲିମ ପ୍ରଧାନ କରିଥିଲେ। ପ୍ରଧାନ ବୈଜ୍ଞାନିକ ତଥା ପରୁଷ କୁମାର ପଣ୍ଡା ସିଆଡ଼ଲରୁ ମଧ୍ୟ ଉଦ୍‌ବେଶ ଓ ଇନ୍ଦ୍ର କ୍ଷୟସ୍ଥ

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ମାନବ ଶକ୍ତି କାମ କରୁଥିବା
ଅବଗତ କରାଇଥିଲେ । ହେଲି
ବନ୍ଧନ ସହିତ ପ୍ରତିବା ଗଞ୍ଜାମାନ୍ତର
ତରଫରୁ ପ୍ରକଟ ମହିଳା ମାନବ ସାମା
ଜାଗା, ବ୍ୟାବେସା, ମାଲୁଆଇ
ସ୍ତେସର, ଡୋରୀ, କାଜ, ସାଗ
କାମାଦ ଇତ୍ୟାଦି ବନ୍ଧନ
କରାଯାଉଥିଲା । ସର୍ବ ବେଶେକେ
ବ୍ୟାସ ଡିଞ୍ଚୋନିକ ମାନେ ମାଗର
ଏପପିଏ ସହିତ ସର୍ବବ
କାର୍ଯ୍ୟକରିବାକୁ ପ୍ରତିଷ୍ଠିତି
ଦେଉଥିଲେ ।



केन्द्रीय कृषि अभियांत्रिकी संस्थान, भोपाल में मिलेट्स के उत्पादन एवं प्रसंस्करण से महिला सशक्तिकरण पर दो दिवसीय कार्यशाला का आयोजन



महिला किसान और कृषि यंत्र विकसित करने वाली उद्यमी आज भोपाल में

भोपाल। केन्द्रीय कृषि संस्थान भुवनेश्वर एवं केन्द्रीय कृषि अभियांत्रिकी संस्थान भोपाल के सहयोग से पोषक अनाज के उत्पादन एवं प्रसंस्करण के माध्यम से महिला सशक्तिकरण पर दो दिनी कार्यशाला बुधवार से केन्द्रीय कृषि अभियांत्रिकी संस्थान में होगी। प्रचार प्रसार समिति के अध्यक्ष डॉ मनोज कुमार त्रिपाठी ने बताया कि संयुक्त राष्ट्र द्वारा वर्ष 2023 को अंतरराष्ट्रीय पोषक अनाज (मिल्लेट्स) वर्ष घोषित किया है। जी-20 देशों के सम्मेलन में भारतवर्ष की अग्रणी भूमिका को ध्यान में रखते हुए पूरे मंत्र में पोषक अनाज महिलाओं के योगदान पर केंद्रित जी-20 समूह देशों पर आधारित कई कार्यक्रम होंगे। इसमें 250 महिला कृषकों और उद्यमियों के शामिल होंगे। पहले दिन पोषक अनाज पर एक टेक्निकल वर्क शॉप होगी।

एवम्‌रु फहिला कृषि फेगीनारि मशेहसुव

केन्द्रिय कृषि रत फहिला वसुधानर कृषि फेगीनारि मशेहसुव (Central Agriculture University Bhopal Women's Empowerment Workshop) का शुभारंभ हुआ। इस कार्यक्रम में महिला कृषकों और उद्यमियों को पोषक अनाज के उत्पादन और प्रसंस्करण के बारे में जानकारी दी गई। कार्यक्रम में महिला कृषकों और उद्यमियों को पोषक अनाज के उत्पादन और प्रसंस्करण के बारे में जानकारी दी गई। कार्यक्रम में महिला कृषकों और उद्यमियों को पोषक अनाज के उत्पादन और प्रसंस्करण के बारे में जानकारी दी गई।



कार्यक्रम के दौरान महिला कृषकों और उद्यमियों की बैठक।



कार्यक्रम के दौरान महिला कृषकों और उद्यमियों की बैठक।

Mr. Sami Sami and Mrs. Samia Mohamady. These appellations also carried all the fluster of the passionate women's chorus. The occasion also featured a traditionalhibition of several poems manuscripted by these light-hearted FPCs. The occasion concluded with a vote of appreciation and the distribution of a sumptuous meal and memento to all attendees and dignitaries. All dignitaries, visitors, and other participants praised the celebrations.



OBJECTIVE

Emerge as a leading centre for gender research and serve as a catalyst for gender mainstreaming and women empowerment in agriculture to realize enhanced productivity and sustainability of agriculture



MISSION

Generate and disseminate knowledge to promote gender sensitive decision making for enhancing efficiency and effectiveness of women in agriculture



MANDATE

Research on gender issues in agriculture and allied fields. Gender-equitable agricultural policies/ programmes and gender-sensitive agricultural-sector responses. Co-ordinate research on Home Science



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Published by

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ICAR - Central Institute for Women in Agriculture

ISO 9001:2015 Certified

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