

ICAR CIWA

NEWS

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

From the Director's Desk

The ICAR-Central Institute for Women in Agriculture is committed to fostering inclusive growth in the agricultural sector by addressing the unique needs and potential of women. The institute focuses on pioneering research, capacity-building initiatives, and enabling policy frameworks to empower women across agriculture and allied activities. As we step into another exciting phase of our journey, I take this opportunity to reflect on our recent achievements and share our vision for the future.



This quarter had been exclusively special due to the visit of Hon'ble Secretary (DARE) and Director General (ICAR), Dr. Himanshu Pathak on 13th July 2024. During his visit he had reviewed the institute progress and also inaugurated the Sabarmati Trainees' Hostel along with DDG (Agril. Edn.), DDG (Fisheries), ADG (EP&HS) and many other distinguished delegates. Over the past few months, our organization has been actively engaged in promoting gender-inclusive agricultural research and notably, our recent technology 'Rotary Goat Feeding System' obtained the design registration and was licensed to two stakeholders in the presence of the Hon'ble DG Sir. Additionally, technologies/ models such as 'Pedal operated women friendly coconut dehusker', 'Gender Sensitive Community Based Agriprenuership Model through livestock and fisheries technologies' (GCAM-Model), 'Gender-Sensitive Extension Model for Entrepreneurship development' (GEMED-Model) and 'Gender-Sensitive Extension Model for addressing livelihood, nutrition and entrepreneurship' (GSEM-Model) got certified from Indian Council of Agricultural Research, New Delhi during this quarter.

Some significant research highlights for the quarter include the rotary goat feeding system, assessment of the participation of women in soil and water conservation technologies, impact of climate resilient crop varieties and technologies, farmers' knowledge gain regarding climate resilient horticulture practices in the coastal state of Odisha and sustainable management of nitrogen fertilization in pineapple. The Institute actively participated in various Government programmes such as Ek Ped Maa ke Naam (Plant for Mother Programme) including the Scheduled Castes Sub-Plan (SCSP) and the Swachata hi Seva-2024 campaign. During this period the Institute also celebrated the *Hindi Chetna Mas* and organized the *Hindi Karyashala*.

The Institute also actively organized several training and capacity building programmes and established seven Custom hiring Centres in agri-allied sectors for socio-technological and economic empowerment of farm women. Looking ahead, we remain committed to strengthen research on gender dynamics in agriculture, fostering collaborations, and developing practical solutions to enhance productivity and inclusivity. I extend my heartfelt gratitude to our researchers, field practitioners, and farmers whose unwavering commitment continues to inspire us. Together, let us strive for a more inclusive and resilient agricultural future.



(Mridula Devi)

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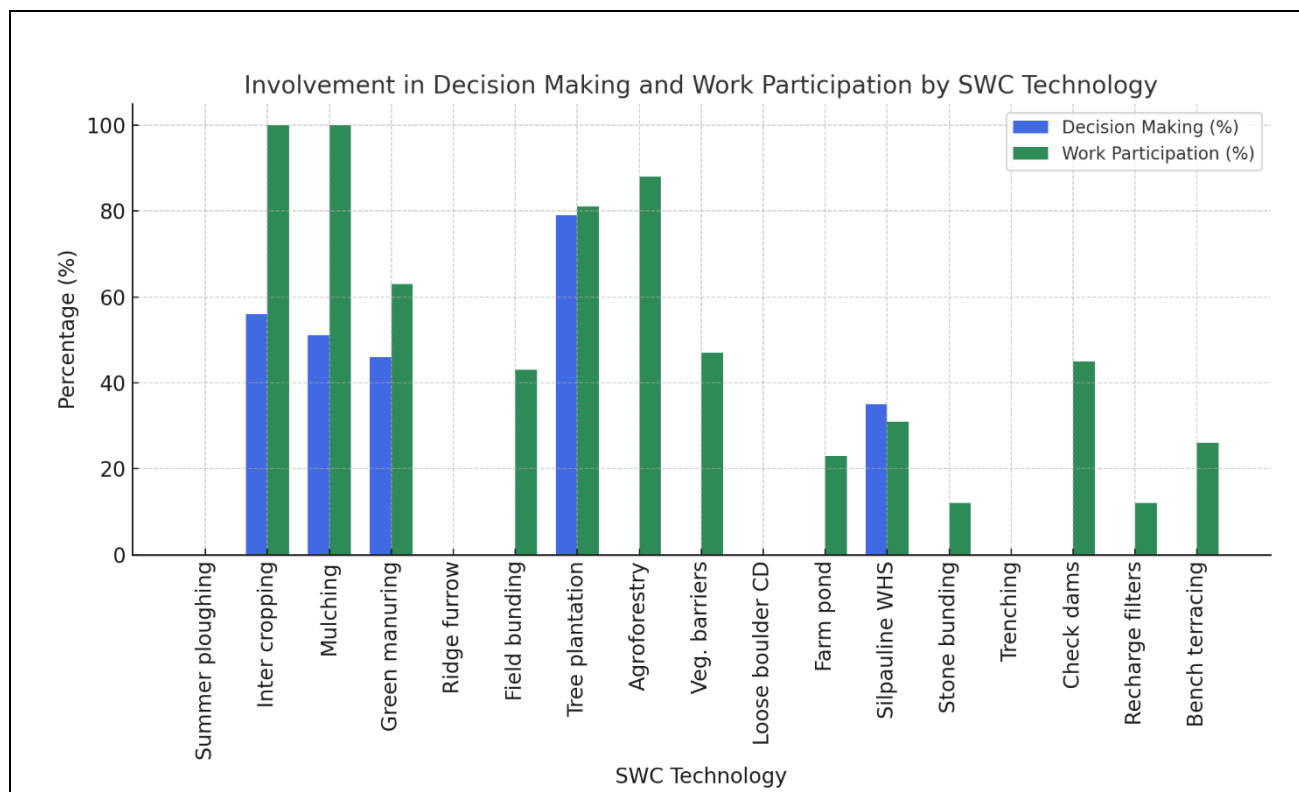
RESEARCH HIGHLIGHTS

Participation of women in Soil and Water Conservation (SWC) Technologies

A comprehensive analysis of women's participation in Soil and Water Conservation (SWC) technologies examined their role at individual, community, and government/NGO levels, focusing on decision-making and work participation. The study revealed that women primarily engage in summer ploughing, intercropping, mulching, green manuring, ridge furrow, field bunding, tree plantation, agroforestry, vegetable barriers, farm ponds, and stone bunding at the individual level. These practices are within their control, requiring low capital investment and skill levels. However, despite active involvement, decision-making power remains limited, particularly in summer ploughing, ridge furrow, field bunding, farm ponds, stone bunding, and bench terracing, often controlled

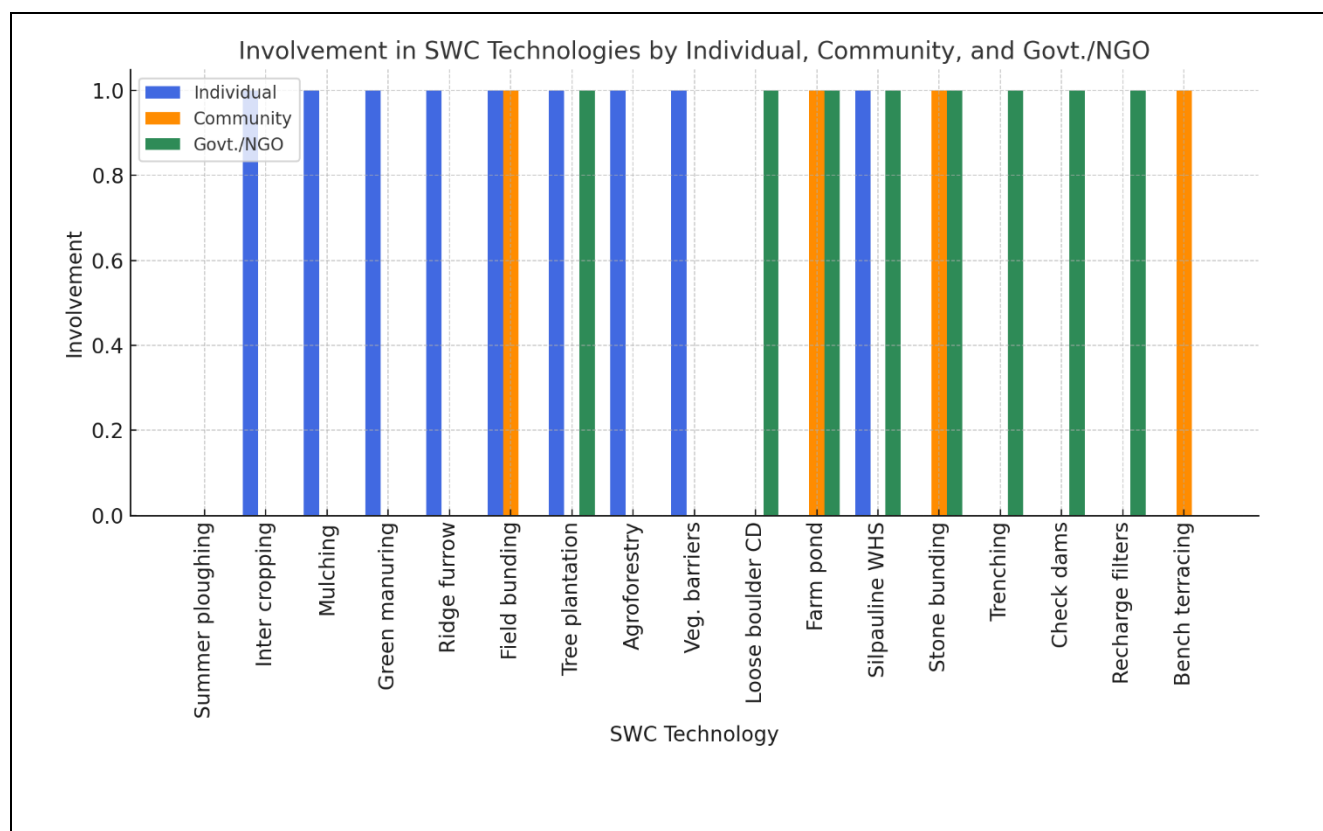
by male household members. Tree plantation, agroforestry, and silpauline water harvesting structures (WHS) involve community efforts, requiring shared resources and coordination. While 79% of women participate in decision-making for tree plantation, their involvement in other community-based initiatives remains minimal. This suggests gender disparities in community decision-making, where men often hold greater authority due to cultural norms.

Decision-Making Involvement: Women's highest decision-making participation is observed in tree plantation (79%), followed by intercropping (56%) and mulching (51%). These practices are less technically demanding and directly relate to crop production, traditionally managed by women.



Work Participation: Women's work participation is 100% in intercropping and mulching, followed by agroforestry (88%) and tree plantation (81%). This indicates their active role in physical labour, even when decision-making power is low. Despite significant contributions to SWC technology

implementation, women remain marginalized in decision-making, especially in resource-intensive and government-driven initiatives. A gender-sensitive approach is crucial to empower women as both labourers and decision-makers in sustainable agriculture.



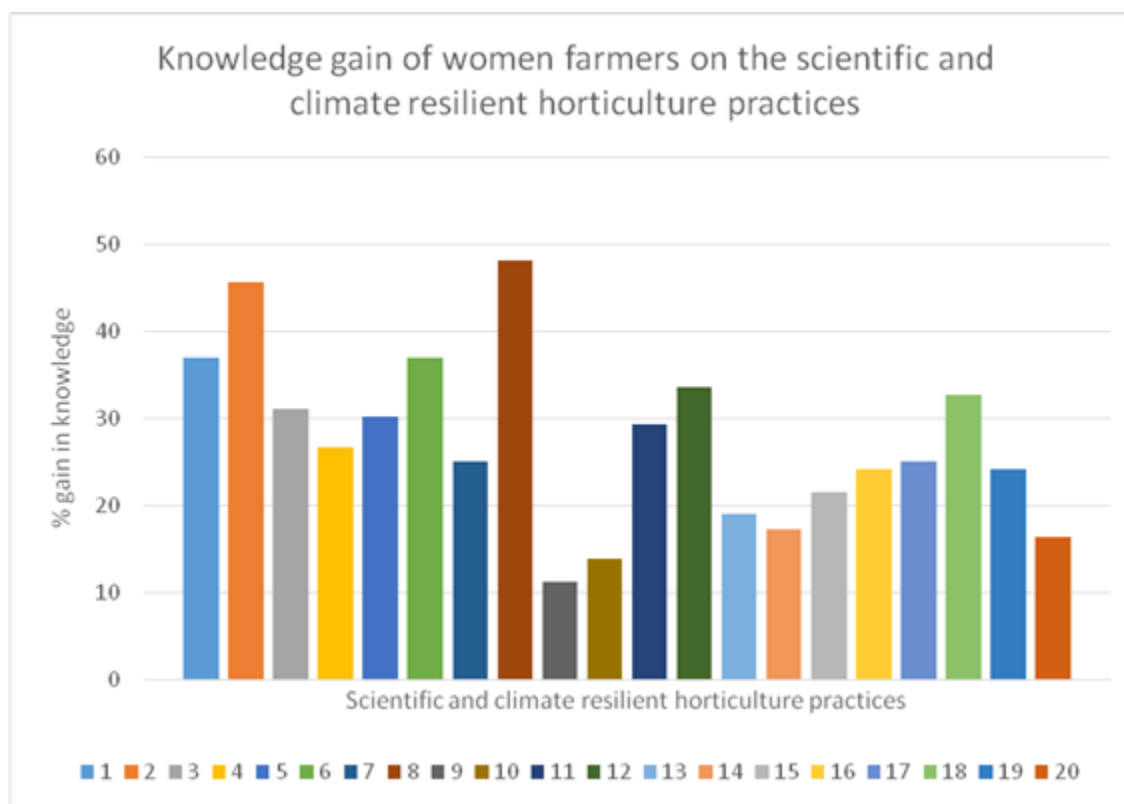
Farmers' knowledge gain regarding Climate Resilient Horticulture Practices in the coastal state of Odisha

Horticulture plays an important role in subsistence farming, and women contribute immensely in horticultural activities in India. However, this sector is very sensitive and considerably impacted by climate change because of less adoption of climate resilient practices. Knowledge accrual on climate resilient practices through awareness and capacity building is crucial for women farmers to adapt to climate change. Hence a study was carried out in two flood prone coastal districts,

Bhadrak and Puri of Odisha, India with the objective to assess women farmers' knowledge gain on the popularized climate resilient horticulture practices. The data was collected pre and post the interventions to assess the knowledge gain. The climate resilient practices popularized for adoption by the farmers were selected based on literature review and expert elicitations. The data was collected from 58 women farmers who were the beneficiaries of the project. The respondents were interviewed

with the help of semi-structured interview schedule. In order to measure the knowledge level of farmers on the recommended practices, scores were allotted for each question: 0 to no knowledge, 1 to knowledge to some extent, and

2 to knowledge to a great extent. Hence each question carried a maximum of 2 marks. The sum of score obtained on all the knowledge items in the knowledge test was considered as the knowledge score of the respondents.



1. Different kharif and rabi vegetable crops;
2. Protray cultivation of vegetable seedlings;
3. Cropping calendar;
4. Seed rate of vegetables;
5. Spacing
6. Rotation of crops;
7. Advantages of integrating fish farming with vegetable farming;
8. Preservation of vegetable seeds;
9. Dosage of organic manure;
10. Dosage of inorganic fertilizers;

11. Advantages of ecofriendly pest control measures;
12. Application of ecofriendly pest control measures;
13. Advantages of biofertilisers;
14. Dosage and method of application of biofertilisers;
15. Growing vegetables in trellis;
16. Mulching and its advantages;
17. Advantages of vermicompost application;
18. Scientific preparation of vermicompost;
19. Scientific paddy straw mushroom farming;
20. Scientific oyster mushroom farming.

The highest knowledge gain was observed for the practice of seed preservation of vegetables followed by protray cultivation of vegetable seedlings and rotation of vegetable crops in the nutrigarden. The women were least perceptive to the knowledge of dosage of organic and inorganic fertilizers and biofertilisers and also on the scientific farming of oyster mushrooms. Hence regular capacity building and updation on knowledge on climate scientific and climate resilient practices is required for sustainable adoption of these practices by women farmers.

Sustainable management of nitrogen fertilization in pineapple: A women friendly approach

Pineapple (*Ananas comosus* L.) is an economically important tropical fruit, highly valued for its nutritional and medicinal properties. Enhancing fruit yield and quality while maintaining soil health has become a key focus in sustainable agriculture. Nitrogen, an essential nutrient, plays a significant role in improving crop productivity, while bio-fertilizers like *Azotobacter* offer a sustainable approach to promote plant growth. The integrated use of chemical and biological fertilizers may offer a balanced approach to optimizing crop performance and soil sustainability. With this background, the present investigation entitled “Comparative influence of *Azotobacter* and nitrogen on fruit yield and quality attributes of pineapple (*Ananas comosus* L.)” was conducted at ICAR – Central Institute for Women in Agriculture, Bhubaneswar, Odisha. The experiment was carried out in a Randomized Block Design (RBD) with six treatments replicated five times. The details of treatments are T1: Control, T2: 100% *Azotobacter* (A), T3: 100% Nitrogen (N), T4: 75% A+25% N, T5: 50% A+ 50% N, T6: 25% A + 75% N. The results revealed that application of 100% N and 25% A+ 75% N gave similar results and were most effective in increasing the fruit weight

(825.13g and 805.62 g respectively) and yield (14.63 t/ha and 14.54 t/ha respectively). The same treatments also resulted in higher chlorophyll content (2.07 mg g⁻¹ and 2.02 mg g⁻¹), leaf N (1.74% and 1.59%), Ca (0.36% and 0.34%) and Mg (0.28% and 0.26%), respectively. While application of 75% A+ 25% N improved fruit quality in terms of TSS (16.8 °B), reducing sugar (4.84%), sucrose (7.78%), vitamin C (50.06 mg/100g), carotenoid content (1224.34 µg/100g), total phenol (75.67 mg GAE/100g) total flavonoid (34.67 mg QE/100g) and FRAP activity (22.45 mM Fe⁺²/100g). The same treatment also resulted in maximal contents of P (0.38%), K (3.43%) and micronutrients in pineapple leaves. 100% N and 25% A+ 75% N applications increased available N (86.57 and 85.29mg kg⁻¹) and urease activity in soil, while 75% A+ 25% N application increased OC (4.86 g kg⁻¹), available P (39.12 mg kg⁻¹), K (79.51mg kg⁻¹), MBC (1066.5 mg C/Kg soil), dehydrogenase and FDA activity of soil. B:C ratio was found highest in case of 100% N (1.74) followed by 25% A+ 75% N (1.68). Therefore, combined applications of *Azotobacter* and nitrogen may potentially increase farmer's profits in the long run.

Influence of *Azotobacter* and nitrogen on bio-chemical properties of pineapple

Treatments		Total phenol (mgGAE/100g FW)	Total flavonoid (mg QE/100g FW)	FRAP activity(mM Fe (II)/100g of FW)
T ₁	Control	34.12	16.79	14.32
T ₂	100% <i>Azotobacter</i>	67.62	27.26	18.76
T ₃	100% Nitrogen	38.41	17.89	14.56
T ₄	75% <i>Azotobacter</i> + 25% Nitrogen	75.67	34.67	22.45
T ₅	50% <i>Azotobacter</i> + 50% Nitrogen	55.34	22.34	16.72
T ₆	25% <i>Azotobacter</i> + 75% Nitrogen	43.21	18.75	14.89
SE (m) ±		1.554	0.659	0.523
CD (0.05)		6.375	2.705	2.147

Hon'ble Secretary DARE and Director General, ICAR visited ICAR-CIWA, Bhubaneswar and inaugurated Sabarmati Trainees' hostel

Hon'ble Secretary, DARE & Director General, ICAR, Dr. Himanshu Pathak, visited ICAR-CIWA on 13 July 2024 and inaugurated the Sabarmati Trainees' Hostel, dedicating it to the benefit of mankind. The inaugural ceremony witnessed the presence of Hon'ble DDG (Agril. Edn.) Dr. R. C. Agarwal, Hon'ble DDG (Fisheries) Dr. J. K. Jena, Padmasree Sabarmati Tiki, ADG (EP&HS) Dr. Bimlesh Mann, Director, ICAR-CIWA Dr. Mridula Devi, and Directors of various ICAR institutes. The hostel features 5 VVIP, 5 VIP, and 19 air-conditioned rooms with modern amenities to cater to trainees' needs. Dr. Mridula Devi welcomed the dignitaries and highlighted ICAR-CIWA's contributions to women empowerment. The visitors toured the Women Empowerment Museum/Technology Hub and the extrusion processing facility, appreciating the institute's progress. An interaction meeting with staff and members of women-led FPCs was conducted under the chairmanship of Dr. Pathak. Hon'ble DDG (Agril. Edn.) emphasized research on enhancing women's efficiency in agriculture, proposing specialized training for women scientists and a Global Conference in partnership with CGIAR institutes. He suggested establishing a model village under the Poshan Abhiyan Programme to improve the nutritional security of women farmers. Hon'ble DDG (Fisheries) recommended strengthening collaboration with other ICAR institutes and focusing on ornamental

fisheries and aquaculture for women farmers. ADG (EP&HS) encouraged more high-impact research publications and praised the institute's unique contributions. Padmasree Dr. Sabarmati Tiki lauded ICAR-CIWA's role and urged documentation of women farmers' traditional agricultural knowledge. Farmwomen and women entrepreneurs shared their experiences of receiving support from the institute. Key publications, including the Annual Report 2023 and Sashakti-Rajbhasha Patrika 2023, were released. Additionally, a women-friendly technology, the 'Rotary Goat Feeding System,' was transferred to Manikstu Agro Pvt. Ltd, Kalahandi, and 'Maheera' FPO, Balipatna, Khordha. Dr. Pathak emphasized the increasing participation of women in agricultural education and their vital contribution to farming. He acknowledged ICAR-CIWA's global significance and advocated for collaborations with other ICAR institutes to enhance technology implementation. He stressed the need for future upgradation of the institute to play a more prominent role in sustainable agri-food systems. The visit was highly motivational, inspiring the ICAR-CIWA team to enhance the institute's impact on women's livelihoods and income. The Director, ICAR-CIWA, expressed gratitude to Dr. Pathak and all dignitaries for their presence, culminating in a formal vote of thanks



Inauguration of Sabarmati Trainees' hostel by Hon'ble Secretary DARE and Director General, ICAR



हिन्दी चेतना मास - 2024

दिनांक 30 सितंबर 2024 को भा. कृ. अनु. प. - केन्द्रीय कृषिरत महिला संस्थान, भुवनेश्वर में हिन्दी चेतना मास, 2024 का समापन समारोह आयोजित किया गया। कार्यक्रम का शुभारंभ निदेशक महोदया डॉ. मृदुला देवी, राजभाषा प्रभारी श्री हरीश के एम् तथा विभिन्न पीएम श्री केंद्रीय विद्यालयों से आये शिक्षकों और अभिभावकों के अभिनन्दन से किया गया। सर्वप्रथम अर्पिता महापात्रा, सदस्य सचिव हिंदी चेतना मास, 2024 ने हिंदी चेतना माह समापन समारोह के शुभ अवसर पर सभी का अभिनन्दन किया और इस माह के दौरान हुए गतिविधियों का टिप्पणी प्रस्तुत की। इस माह के दौरान हिंदी के प्रचार प्रसार के लिए संस्थान में कुल 8 प्रतियोगिताओं का आयोजन किया गया एवं विभिन्न विद्यालयों में भी स्वरचित कविता लेखन प्रतियोगिता का आयोजित हुआ, जिसमें चार पीएम श्री केंद्रीय विद्यालय के लगभग 150 प्रतिभागी भाग लिए। इसके उपरान्त, प्रभारी राजभाषा ने संस्थान में हिंदी के प्रचार-प्रसार के लिए हो रही गतिविधियों पर एक टिप्पणी प्रस्तुत की। तत्पश्चात केंद्रीय विद्यालयों से आये शिक्षकों, अभिभावकों और विद्यार्थियों ने प्रतियोगिताओं को लेकर उनकी अनुभूति और विचार प्रस्तुत किये।

इसके उपरान्त निदेशक महोदया द्वारा समस्त विजेताओं को उत्तम प्रदर्शन के लिए प्रशस्ति पत्र एवं पुरस्कार प्रदान किया गया। मुख्य अतिथि निदेशक महोदया द्वारा अपने संवाद में हिन्दी की महत्वपूर्णता, क्षमता एवं राजभाषा होने का उद्देश्य को प्रस्तुत कर बताया गया कि किस प्रकार से विविधताओं से बटें हुए अपने देश को हिन्दी एक जुट रखे हुए है। इस कार्यक्रम को सफल बनाने में पीएम श्री केंद्रीय विद्यालयों के योगदान को भी उन्होंने सराहा। निदेशक महोदया ने सारे कर्मचारियों को हिन्दी चेतना मास, 2024 के दौरान आयोजित कार्यक्रमों (कम्प्यूटर पर यूनिकोड में हिंदी टंकण, निबंध लेखन, वाद-विवाद, स्वरचित कविता पाठ, हिंदी पहेली, शोध आधारित पोस्टर, शोध पत्र प्रस्तुतीकरण एवं आशुभाषण प्रतियोगिता) में बढ़ चढ़ के हिस्सा लेने पर धन्यवाद दिए तथा कार्यालय में हिंदी भाषा में ज्यादा से ज्यादा कार्य करने के लिए प्रेरित किये। अंत में डॉ. तनिया सेठ द्वारा धन्यवाद प्रस्ताव प्रस्तुत किया गया। हिंदी चेतना मास, 2024 का सफल संचालन डॉ. सबिता मिश्रा की अध्यक्षता में की गयी जिसमें डॉ. तनिया सेठ, ई चैत्राली म्हात्रे, डॉ. अर्पिता महापात्रा, गीता साहा, देवेंद्र कुमार सडांगी एवं संजय कुमार बेहेरा जैसे सदस्यों का समन्वय शामिल था।



हिन्दी चेतना मास - 2024

एक पेड़ मां के नाम- Plant for Mother Programme

एक पेड़ मां के नाम (Plant for Mother Programme) a unique initiative that blends environmental conservation with emotional tribute by encouraging individuals to plant a tree was organized in the premises of ICAR-CIWA, Bhubaneswar. During this programme, Hon'ble DDG (Agril. Edn.) Dr. R. C. Agarwal, visited ICAR-CIWA on 24 August 2024 and inaugurated the plantation drive 'एक पेड़ मां के नाम'. Dr Mridula Devi, Director, ICAR-CIWA briefed about the objectives of the programme and encouraged all staff of the Institute to promote plantation work and nurture the plants with due care in Institute and farmer's field. The importance of different medicinal plants in human health and planting of different medicinal plants in nutritional garden of farmer's field was emphasized by DDG

(Agri. Edn). In this programme more than 200 trees were planted at the Institute and adopted villages with an aims to enhance biodiversity, combat climate change, and foster community participation in afforestation efforts. By involving individuals, schools, and organizations, the initiative strengthened the emotional connection between people and nature while supporting sustainable agriculture and livelihoods, particularly for women farmers. The program also contributes to carbon sequestration, reducing pollution, and promoting eco-friendly practices. Through awareness campaigns, sapling distribution, and technical support, 'एक पेड़ मां के नाम' served as a lasting tribute to mothers while ensuring a sustainable future for generations to come.



एक पेड़ माँ के नाम

MAJOR PROGRAMMES

SCSP

Scheduled Castes Sub Plan (SCSP) is a central scheme under which Scheduled Castes persons living below the Poverty line are the target groups. The main objective of the scheme is to give a thrust to family and women-oriented schemes of economic development of SC families below the poverty line, by providing resources for filling the critical gaps. Under this programme, ICAR-CIWA focuses on technology dissemination, capacity building, livelihood support, skill, and entrepreneurship development of farm women for their techno

socio-economic empowerment. During this quarter a total of 12 nos. of capacity building programmes were organised at different districts and institute campus. A total of 632 nos. SC farm women and men were participated during this quarter under various capacity and skill building programmes. On different occasions, multidisciplinary team of scientists interacted with different women FPOs, Industries and other stakeholders for development of SC women entrepreneurship and enhancing the business and marketing opportunities.

Sl.No.	Programme details (Field day/ FLD/ Farmers day/ Interaction/ meeting)	Coordinators	Venue	Date	No of beneficiaries		
					Women	Men	Total
1.	Training cum Capacity Building Programme on Mushroom Production Technology	J. Nayak, S. Swain, Tania Seth, Geeta Saha, Tapaswini Sahoo	ICAR-CIWA, Bhubaneswar	02-04 July 2024	15	--	15
2.	Inception workshop on the establishment of custom hiring centre on processing and value addition of fish	Tanuja S	Kirtaniajalpahi, Bhograi, Balasore	02 July 2024	30	--	30
3.	Training and demonstration of small tools on animal husbandry	B. Sahoo	Srirampur, Balipatna, Khordha	18 July 2024	40	--	40
4.	Capacity Building programme on techniques of nutrient management in kharif crops	Praveen Jakhar	Guarligoda, Satyabadi, Puri	19 July 2024	30	--	30
5.	Field Day	Arpita Mohapatra	Kumbhiragadi of, Danagadi block Bada Pingala village of Sukinda block, Jajpur	24 July 2024	45	--	45
6.	3-days training programme on 'Women-led community entrepreneurship on bio-resource production for sustainable agriculture' (SCSP funded)	Ankita Sahu S.K. Sarangi Lipi Das L.P. Sahoo	Sodhua, Balipatna, Khordha	24-26 July 2024	50	--	50
7.	Capacity Building programme on Fish Processing and Value Addition	Tanuja S	ICAR-CIWA, Bhubaneswar	25-27 July 2024	15	--	15
8.	Improved management practices in backyard poultry farming	A.K. Panda	Dubuduba, Puri, Satyabadi	27 July 2024	30	--	30
9.	Women Entrepreneurship through Custom Hiring Centre' under SCSP Programme	Lipi Das	Antara, Bishnupur, Khaira, Balasore	07-09 Aug 2024	250	--	250

10.	Entrepreneurship Development Programme on Paper/Leaf Plate Making for income generation by women	Sachidananda Swain	Badagada Brit Colony, Bhubaneswar	23-25 Aug 2024	20	--	20
11.	Homestead nutritional garden and promotion of drudgery reducing tools	Jyoti Nayak Gita Saha	Dubuduba, Puri	27-29 Aug 2024	50	--	50
12.	Livelihood enhancement of farm women through CHC	Sabita Mishra B. C. Behera	Taraboi, Mandiakud, Guapur, Puri	28-30 Aug 2024	50	--	50
13.	Use of Drudgery reduction tools for higher farm productivity.	Sachidananda Swain	Raibidhar, Brahmagiri	25 Sept 2024	32	--	32



Training cum exposure visit of field functionaries

Custom Hiring Centres (CHC) established

- CHC for Economic Empowerment of Farm Women established at Badagada Brit Colony, Plot no:1436, Bhubaneswar, Khordha, Odisha on 24 August 2024.
- CHC on Fish Processing and Value Addition managed by Maa Tareni SHG at Kirtaniajalpahi Village, Bhograi Block, Balasore District on 27 July 2024.
- CHC for Scheduled Caste farm women under SCSP programme in Kantabania, Kanas, Puri with sewing machines on 27 August 2024.
- 2 CHCs with Nabin SHG, Dhaudidiha, Ghasipura and Badapahad SHG, Kathakata, Anandapur in Keonjhar district of Odisha on 29 August 2024.

- CHC for Farm machine & Primary Processing of Agri Produce established at Village- Dhaudidiha, GP- Khaliamenta, Block-Ghasipura, Dist- Kendujhar, Odisha on 29 August 2024.
- CHC for Farm machine & Primary Processing of Agri Produce established at Village- Kathakata, GP- Kathakata, Block- Anandapur, Dist. Kendujhar, Odisha on 29 August 2024.

Swachha Bharat Abhiyan

Initiatives promoting cleanliness both within and outside the campus were organized as a part of Swachha Bharat Abhiyan. Several cleanliness and sanitation drives were organized by ICAR-CIWA during this period. Demonstration of

agricultural technologies for conversion of waste to wealth like vermi-composting was made for farmers in field for resourceful agricultural waste disposal and conversion of waste to wealth.

Swachata hi Seva – 2024 campaign

Sl No	Programme	Duration	Venue	Participants	Coordinators
1	“Swachata hi Seva – 2024 campaign” Awareness generation at tourist places.	23 Sep 2024	Jaydev Vatika, Bhubaneswar	14	Chaitrali S. Mhatre D.N.Sarangi S. K. Behera
2	Access to Health Facilities and Services to ensure better quality of life for Safai Mitras	27 Sep 2024	Khandagiri, Bhubaneswar	9	Arpita Mophapatra
3	Swachhta hi Seva campaign-2024-Engagement with school children, carry out poetry, painting, essay competition among school children, educational sessions among students about swachhta, cleanliness, sanitation, etc	18 Sep 2024	Govt. Girls' High School, Unit-8	50	Ankita Sahu Bishnupriya Moharana B.C. Behera
4	Swachh Bharat Mission activities at village with farmwomen on “Creative initiatives : transforming waste into art and promoting community pride, SWM assets beautified with wall paintings and promoting community engagement”	20 Sep 2024	Raipur village, Cuttack	31	L. P. Sahoo Tania Seth P. K. Rout
5	Cleaniness Drive at Bara Devi Pitha, Bhubaneswar	30 Sep 2024	Bara Devi Pitha, Bhubaneswar	35	A. K. Panda B. Moharana D.N. Sadangi P.K. Mallick
6	Co-ordinated a Swachhata Programme as a part of of Swachata hi Seva – 2024 campaign and <i>Safai Mitra Suraksha Shiviras</i> .	28 Sep 2024	ICAR-CIWA Premises, Bhubaneswar	30	Lipi Das
7	Plantation drive near Kasturaba Hostel under “Ek ped maa ke naam” plantation drive.	17 Sep 2024	ICAR-CIWA Campus	25	Jyoti Nayak

8	Under The Swabhav swachhata – Sanskaar Swachhata 2024 campaign “Ek Ped Maa Ke Naam” plantation drive involving three Self Help Group’s (Basudeva SHG, Om Sai SHG and Nageswari SHG) participate in the door-to-door Campaign	18 Sep 2024	Kunjar	30	Jyoti Nayak
9	Preventive health check up organised.	26 Sep 2024	Gopinath Hospital, Sakhigopal	20	Jyoti Nayak
10	Access to health facilities and services to ensure better quality of life for safai mitras/ sanitation workers and their dependents	27 Sep 2024	Garima Griha, Ghatikia, Bhubaneswar	4	Jyoti Nayak
11	Training at village with farmwomen on-Creative initiatives, transforming waste into art and promoting community pride, SWM assets beautified with wall paintings and promoting community engagement	20 Sep 2024	Village Raipur Niali Block, Cuttack	31	Dr L.P Sahoo Dr Tania Seth Er P K Rout
12	Mega cleanliness drive with citizen participation and partner mobilization	22 Sep 24	Khandagiri	50	Dr. Swain, Dr. G. Moharana, Dr. Neetish Kumar, Er. Subrat K Das
13	Sensitization SHG on Swachhta	25 Sep 24	Mendhasal village	12	Dr. Neetish Kumar, Mr. Shaji A., Mr. Sanjay Behera
14	Programmes and Schemes for "Sanitary Workers"	29 Sep 24	Ghatikia	30	Dr. Swain, Dr. Neetish Kumar, Mr. Jyoti Ranjan Das

HUMAN RESOURCE DEVELOPMENT

Training/ Seminar/Symposium/Workshop attended

Sl No	Programme title	Venue and organisers	Date	Attended by
1	Training programme on “Fostering Collaborative Ecosystem for Promoting Agri-Startups”	ICAR-NAARM, Hyderabad	18-20 Sept, 2024	Dr. S. Swain
2	International Conference on Building small holder climate resilience for achieving sustainable food systems	Odisha University of Agriculture and Technology, Bhubaneswar	17-19, September, 2024	Dr. L P Sahoo
3	हिंदी दिवस एवं अखिल भारतीय चतुर्थ राजभाषा सम्मेलन	भारत मंडपम, नई दिल्ली, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार	14-15 सितंबर	डॉ. नीतीश कुमार
4	Ten days training program on ‘Entrepreneurship Orientation Program in Medicinal and Aromatic Plants-IX’ during	ICAR-DMAPR, Anand, Gujarat	1-12 August, 2024	Dr. Tania Seth
5	Online training programme on “Extension for Horticultural Technologies”	MANAGE, Hyderabad and IIHR, Bengaluru during	10-12 July, 2024.	Dr. Tania Seth
6	International Conference on Sustainable Agricultural Development with Climate Smart Systems	SoA University, Bhubaneswar	July 18-20, 2024	Dr P. Jakhar

EXTENSION ACTIVITIES

A. Training, Workshops, Demonstrations, Field Day & Awareness Programmes

S. No.	Programme	Location	Duration	No. of participants	Coordinator/Team
1.	Awareness and gender sensitization programme on Govt. schemes in Animal husbandry sector for empowering farm women	Kalapathar	20 September 2024	55	Dr. B Sahoo
2.	Three days capacity building programme on “Operation and maintenance of primary and secondary processing machineries”	Harichandanpur OIIPCRA	9-11 September 2024	54	Dr. S.C. Swain Dr. P. Jakhar
3.	Focus group discussion	Mamdapur and Kathkota of Kujanga block Jagatsinghpur	18-19 September 2024	40	Dr. A.K. Panda Dr. Arpita Mohapatra
4.	Field visit for coordination and monitoring of the field trial during transplanting of the Ragi variety VL-376	Balipatna, Khordha.	13 September 2024	40	Dr Lipi Das
5.	3 Days training programme on “Paddy+ vegetable cultivation: a climate resilient technology”	Village: Muninda, GP: Muninda, Block: Delanga, Dist. Puri	28, 30 and 31 August 2024	30	Dr. S. K. Sarangi
6.	Demonstration cum field trials on Vermicomposting & Input distribution	Champapedi, Nayagarh	12-08-24	32	Dr. Ankita Sahu
7.	Distribution of IMC fry for stocking in community nursery and training on post stocking management of fishes.	Solagaon Bhadrak	12/08/24	15	Dr. Tanuja S

8.	Drone Technology Demonstration	Dhaudidiha Village of Keonjhar District	28-29 August 2024	52	Dr. Neetish Kumar
9.	Three-day Capacity Building Programme on "Gender Responsive Climate Smart Feeding Practices in Livestock" during	Kajipatna village of Nimapara Block of Puri D	28-30 August 2024	50	Dr. A.K. Panda
10.	Establishment of Women-led community bio-resource production unit	Sodhua, Balipatna, Khordha	26 July 2024	28	Dr. Ankita Sahu
11.	Formation of Women FIG 'Katedikia Organics' and Input Distribution Programme	5 July 2024	Kambaguda, Raikia, Kandhamal	50	Dr. Ankita Sahu Dr. Lipi Das Dr. L.P. Sahoo
12.	Training program on "WELI Survey training" was coordinated at for enumerators from Bihar, Rajasthan, Odisha and Andra Pradesh from	ICAR-CIWA	24 June- 4 July 2024	19	Dr. A.K. Panda Dr. Arpita Mohapatra
13.	Inception workshop on the establishment of custom hiring centre on processing and value addition of fish	Kirtaniajalpahi, Bhograi, Balasore	02 July 2024	30	Dr Tanuja S
14.	Capacity Building programme on Fish Processing and Value Addition	ICAR-CIWA	25-27 July 2024	15	Dr Tanuja S
15.	Demonstration cum distribution of small tools among SC farm women	Srirampur village, Balipatna, Khordha	18 July 2024	40	Dr B Sahoo
16.	Training on Improved Management practices in Backyard Poultry Farming	Dubuduba Satyabadi, Puri	27 July 2024	30	Dr. A.K. Panda
17.	Conducted training on 'Mushroom Cultivation: A Profitable Enterprise for Farm Women'	Dubuduba (Model Village), Satyabadi, Puri	5 July 2024	32	Dr. S. Mishra



Drone Technology Demonstration

B. Exhibitions

- ICAR-CIWA showcased the Institute's technologies in the Exhibition held during International Conference on "Building small holder climate resilience for achieving sustainable food systems" at OUAT, Bhubaneswar during 17-19 September, 2024
- ICAR-CIWA showcased the Institute's technologies during Fish farmers Day celebration at ICAR-CIFA on 13 July 2024 at ICAR-CIFA
- ICAR-CIWA showcased the Institute's technologies in in 96th ICAR Foundation and Technology Day-2024, during 15-16 July, 2024 at NASC complex, New Delhi

C. Exposure Visits

S. No.	Programme	Duration	No. of participants	Coordinator/Team
1	Exposure visit of 5th year M.Sc. (Ag) students from Siksha 'O' Anusandhan (Deemed to be university)	31 July 2024	10	Dr. Sabita Mishra
2	Exposure visit of 150 students of OUAT, Bhubaneswar	13 September 2024	150	Dr. A. K. Panda Dr.L P Sahoo Dr.Gayatri Moharana Mr. B.C. Behera



Exposure visit of students at ICAR-CIWA

RADIO TALKS /TV TALKS

Sl No	Title/ Theme	Radio/ TV talks	Date	Delivered by
1	Care of Newborn Calves in Rainy Season	Radio Talk	16 August 2024	Dr. Arpita Mohapatra

DESIGN REGISTRATION

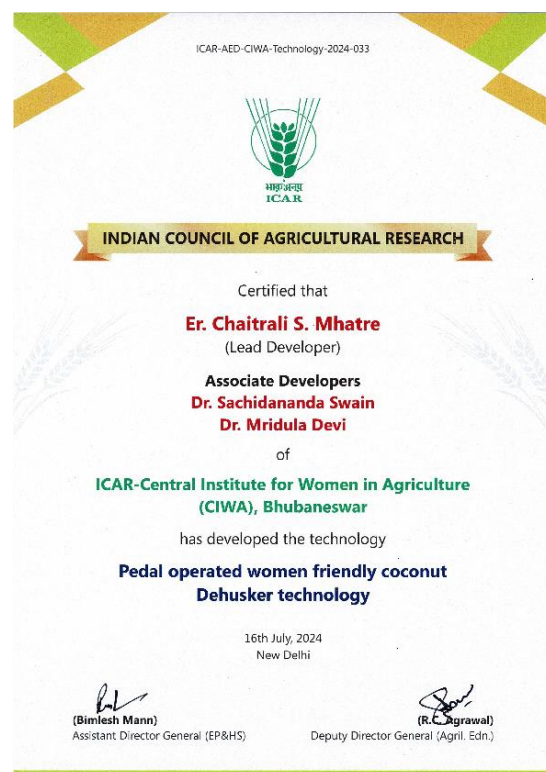
S. No.	Title	Design No.	Institute
1	Design Registration of “Rotary Goat Feeding System”, design application number 422770-001 has been granted on 21-08-2024.	422770-001	ICAR-Central Institute for Women in Agriculture, Bhubaneswar

TECHNOLOGY CERTIFICATION AND COMMERCIALIZATION

Technology Certified

- Technology entitled ‘Pedal operated women friendly coconut dehusker’ (developed by Er. C.S. Mhatre, Dr. S. Swain and Dr. Mridula Devi) was certified by ICAR on 16 July 2024.
- Technology entitled ‘Gender Sensitive Community Based Agriprenuership Model through livestock and fisheries technologies’ (GCAM-Model) (developed by Dr. Tanuja S., Dr. Lipi Das, Dr. A. K. Panda, Dr. B. Sahoo) was certified by ICAR on 16 July 2024.
- Technology entitled ‘Gender-Sensitive Extension Model for Entrepreneurship development’ (GEMED-Model) (developed by Dr. Lipi Das, Dr. B. Sahoo, Dr. Gayatri Moharana and Dr. Ankita Sahu) was certified by ICAR on 16 July 2024.
- Technology entitled ‘Gender-Sensitive Extension Model for addressing livelihood, nutrition and entrepreneurship’ (GSEM-Model) (developed by Dr. Lipi Das, Dr. P. Jakhar, Dr. Gayatri Moharana and Dr. Ankita Sahu) was certified by ICAR on 16 July 2024.





Technologies certification by ICAR

ICAR-CIWA licensed the Technology of Gender Friendly Rotary Goat Feeding System to 'Manikstu Agro Pvt. Ltd', Kalahandi, Odisha & Maheera FPC Ltd., Balipatna, Odisha

Feeding contributes 60-70% of cost of production in goat farming. Keeping in view the feed deficiency (about 50%), wastage of feed and fodder during feeding of goats, chance of contamination of feed materials, drudgery and injuries, faced by farm women in goat feeding/rearing, a gender friendly 'Rotary Goat Feeding System' is designed and developed at ICAR-CIWA by the team of scientists Dr Biswanath Sahoo, Dr Mridula Devi, Dr Gayatri Moharana. The developed goat feeding system is women friendly and a woman can easily operate it with convenience and without spending much physical effort. The technology was licensed with Manikstu Agro Pvt. Ltd., Kalahandi, Odisha and

'Maheera' FPC, Balipatna, Khordha at ICAR-CIWA in the presence of Hon'ble Secretary DARE and Director General, ICAR Dr. Himanshu Pathak, Dr. R.C. Agrawal, DDG (Agril. Edn.), Dr. J.K. Jena, DDG (Fisheries), Dr Bimlesh Mann, ADG (EP&HS) along with other dignitaries from various ICAR institutes on 13th July 2024. Mrs Jayanti Mohapatra, Director, Manikstu Agro Pvt. Ltd. and Mrs Kumudini Swain, Chairperson, Maheera FPC conveyed their gratitude towards the institute for entrusting the technology to them and expressed their sincere efforts to be made for implementation of the technology for the benefit of the farm women/ women entrepreneurs involved in goat farming. Complete technology document and

hands on training on fabrication and methods of feeding and rearing goats with complete package of practices was imparted to the license holders. During this event, Dr. Mridula Devi, Director,

ICAR-CIWA assured that all possible technical support will be extended to licensees for the popularization of Rotary Goat Feeding System



Commercialization of Technology

PUBLICATIONS

A. Research Papers

1. Mohapatra A., Kerketta S., Kumar V., De K., Dangi S.S. Singh R. (2024). Welfare evaluation of fat-rumped lambs under stall feeding condition with different feeder design. *Indian Journal of Animal Sciences* 94 (8): 696–699
2. Mahapatra S., Saha A. and Das Lipi. (2024). Occupational Stress of Tribal Women engaged in Agricultural Activities in Kandhamal District of Odisha. *Journal of Community Mobilization and Sustainable Development* 19(2): 294-300.
3. Jakhar P., Swain, S., Mishra S., Kumar N., Sarangi S. and Mridula D. (2024). Socio-economic and technological impact of climate resilient technologies on farm women *International Journal of Research in Agronomy*. SP-7(9): 341-346 DOI: <https://doi.org/10.33545/2618060X.2024.v7.i9S.e.1502>
4. Behera S.D., Garnayak L.M., Behera B., Behera B., Sarangi S.K., Jena J., Behera S.D. and Dwibedi, S.K. (2024). Assessment of management practices for improving productivity, profitability and energy-carbon-water use efficiency of intensive rice-toria-sweet corn system in Eastern India. *Journal of Soil Science and Plant Nutrition*. <https://doi.org/10.1007/s42729-024-01993-6>.

5. Panda A.K., Sahoo B. and Kumar A. (2024). Effect of variation in nutrient density on production performance and serum biochemical parameters of Rhode Island Red laying hens. *Indian Journal of Poultry Science*, 59(1):11-1
6. Sarangi S.K., Mainuddin M., Raut S., Mandal U.K. and Mahanta K.K. (2024). Coastal salinity management and cropping system intensification through conservation agriculture in the Ganges Delta. *Soil Systems* 8(3), 80. <https://doi.org/10.3390/soilsystems8030080>.
7. Swain S., Bal Lalit M., Mridula D., Kavita G., Sinha R. (2024). Bio-accessibility of phenols, flavonoid and antioxidant capacity of tropical leafy vegetables through in-vitro gastro-intestinal digestion. *Food Bioscience*, <https://doi.org/10.1016/j.fbio.2024.104491>
8. Bala M., Shivani, Awasthi A., Kalsi B.S., Goswami D., Mridula D., Vishwakarma R.K., Kumar A. (2024). An innovative approach to biomass utilization through concurrent hesperidin and pectin extraction from immature dropped kinnow (*Citrus reticulata*) fruits. *Journal of Food Measurement and Characterization*. <https://doi.org/10.1007/s11694-024-02777-3>
9. Rani R. Neela, Spandana B., Mridula D., Kamalaja T., Rajini D., Reddy K. Indudhar, Shirin E. Himabindu and Sushma N. (2024). Enhancing Farm Family Nutrition: the influence of Nutri-garden implementation on Knowledge and Dietary Habits. *Agriculture Association of Textile Chemical and Critical Reviews Journal*, 12(2): 205-209. DOI: <https://doi.org/10.58321/AATCCReview.2024.12.02.205>.

B. Book Chapters

1. Das Lipi, Mishra, S. K. and Sahu, A. (2024). Role of Women in Agriculture and Strategies for Gender Mainstreaming. In: *Agriculture Policy and Development in eastern India* (2nd edition). Odisha University of Agriculture & Technology, Bhubaneswar.

C. Technical Folder

1. Sahu A., Das Lipi, Sahoo L.P. Mridula D., Sarangi S.K., Prusty M. (2024). Vermicomposting: A profitable 'waste to wealth' venture for farm women. ICAR-Central Institute for Women in Agriculture, Bhubaneswar, pp 1-8. (Folder).

D. राजभाषा पत्रिका

1. मृदुला देवी, प्रवीण जाखड़, अर्पिता महापात्रा एवं नीतीश कुमार (2023). सशक्ति (अर्धवार्षिक राजभाषा पत्रिका), वर्ष 1, अंक 2 (जुलाई-दिसम्बर), भा.कृ.अनु.प.- सीवा, भुवनेश्वर, कुल पृष्ठ 108 |

E. Popular Articles/ E-publications

1. मृदुला डी. (2023). श्रेष्ठता का पर्याय बनाते श्री अन्न. सशक्ति (अर्धवार्षिक राजभाषा पत्रिका, भा.कृ.अनु.प.- सीवा, भुवनेश्वर), अंक 2 (जुलाई-दिसम्बर), पृष्ठ 7-15।
2. गायत्री महाराणा, ज्योति नायक, चैत्राली म्हात्रे एवं मृदुला देवी (2023). कृषि और संबद्ध क्षेत्रों में शामिल महिलाओं के श्रमसाध्य कार्यों का समाधान. सशक्ति (अर्धवार्षिक राजभाषा पत्रिका, भा.कृ.अनु.प.- सीवा, भुवनेश्वर), अंक 2 (जुलाई-दिसम्बर), पृष्ठ 79-83।
3. Behera BC, Mishra Sabita and Prusti M. R. (2024). MrutikaUrbarta O'Utpadakata Brudhire DalijatiyaSabuj Sara Ra Byabahar, *Palli Tharu Delhi*, 04-10 August 2024. 10(06): p.6.
4. Behera BC, Mishra Sabita and Sarkar A, (2024). (Pustikar Khadyasara Purti Nimante Pakasala Bagicha), *Palli Tharu Delhi*, 30 June-06 July 2024. 10(01): p.5.
5. Jakhar P., Swain S., Kumar N., Sarkar A. and Majhi M K. 2024. Precision Agronomy Techniques and Artificial Intelligence. *Vigyan Varta: An International E-Magazine for Science Enthusiasts*, 5(8): 146-151.
6. Mishra Sabita, Kumar N, Jakhar P, Swain S and Behera BC (2024). Women and Socio-Cultural Context in Plant Bio-Diversity Conservation, *Bhokila Peta*, 02-08 July 2024. 11(22):p.2.
7. Mishra Sabita, Panda A. K, NayakJyoti, Devi Mridula, Sahoo L P and Tanuja S, (2024). Mixed Farming in Empowerment of Farm Women. *Bhokila Peta*, 6-12 August 2024. 11(27):p.2.
8. Mishra Sabita, Swain S, Kumar N, Behera BC and Sarangi DN (2024). Land Ownership: A Crucial Step for Empowering Farm Women. *Bhokila Peta*, 16-22 July 2024. 11(24): p.2.
9. Mohapatra, A., Mohapatra, S. and Panigrahi, S.R. (2023). Cattle husbandry in a changing climate. vol. 10 (3). 14-20 July. page 6. (In Odia Newspaper in odia language).
10. Mohapatra, A., Mohapatra, S., Parida, G. (2024). Hydroponic fodder: A source of green fodder for sustainable livestock farming. Farmer News (In Odia Newspaper in odia language).
11. Nayak. J, Mohanty Lopamudra, Saha Geeta, Panda A.K 2024. Leadership Roles: Importance of Women Empowerment in India. *Sabujeema- An International Multidisciplinary e-Magazine*. 4(8): 25-29
12. Panda, A. K. 2024. Optimizing Performance through Precision Feeding in Poultry. *Vigyan Varta* 5(9):21-25
13. Sabita Mishra, A K Panda, JyotiNayak, Ananta Sarkar, Mridula Devi, L P Sahoo and Tanuja S. 2024. Success story on Livelihood of Farm Women through Integrated Farming System (IFS). *Bhokila Peta*. 27 August- 02 September 2024, page 2

F. Abstract/ Presentation in conferences/ Seminars/ Workshops

1. Laxmi Priya Sahoo, Ankita Sahu & Mhatre Chaitrali Shashank (2024) Gender responsive Rural Seed Network for sustainable Agri-food system. Extended Summaries. Resilience. International Conference on Building small holder climate resilience for achieving sustainable food systems (17-19 September, 2024). Published by Odisha University of Agriculture and Technology, Bhubaneswar: 31-32.
2. Jakhar P, Mishra Sabita, Swain S, Kumar N and Devi Mridula (2024). 'Fostering Farm women adaptive climate resilient technologies in Baitarini Basin of Odisha' during International Conference on *Sustainable Agricultural Development with Climate Smart Systems* organized at Siksha 'O' Anusandhan University, Bhubaneswar, Odisha (18 -20 July, 2024). p. 135

AWARDS/ ACHIEVEMENTS/ RECOGNITIONS

- Dr Mridula Devi, Director ICAR-CIWA Chaired a session on “Mainstreaming Gender Equality under Climate Change Scenario” during the International Conference on "Building Small Holder Climate Resilience for Achieving Sustainable Food Systems", 17- 19 September 2024 at OUAT, Bhubaneswar, Odisha.
- Dr. Lipi Das attended the State Level Agri Conclave, 2024 Programme as Panelist, organized by Shyamala Subarna Agro Pvt. Ltd, Bhubaneswar on 29 September 2024
- Dr. A. K. Panda received Fellow of National Academy of Veterinary Sciences by the society NAVS, Delhi
- Dr. Ananta Sarkar served as Member for Assessment Committee of Technical Personnel at ICAR-NRRI, Cuttack
- Dr. A.K. Panda participated in the round table discussion and speak on Gender and Agriculture & the Role of Women in Farming hosted by Corteva Agriscience in New Delhi on 24th September 2024 (Dr A K Panda)
- Dr. S. K. Sarangi served as member, IMC of ICAR-IIWM

Invited Lectures

- Dr. B. Sahoo delivered a lecture on Empowering farm women in Livestock during Scientist-stake holder Interface organized by Tata Steel Foundation-CSR at Sukinda, Odisha on 26 September 2024
- Dr. Lipi Das delivered a invited lecture on “Women and Agriculture” as a Resource Person scheduled on during the State Level Capacity Building Programme on “Gender and Development” organized by National Alliance of Women (NAWO), National Academy of Broadcasting and Multimedia (NABM), Prasar Bharati, Bhubaneswar on 11 September 2024
- Dr. B. Sahoo delivered a lecture on ‘Empowering farm women through Improved Goat farming’ during Scientist-stake holder Interface & celebration of World Goat Day at Hotel Ginger, Bhubaneswar on 21 August 2024
- Dr. Tania Seth acted as External Examiner for evaluation of dissertation and conducting the Viva-Voce Examination of M.SC. (Hort.) Degree in Vegetable Science at BCKV, Nadia, WB on 21 August 2024.
- Dr. Tanuja S attended the viva-voce examination (online) of MFSc student of College of Fisheries, OUAT, Rangailunda as Major Guide
- Dr. Arpita Mohapatra acted as Chairman of Certificate Verification Committee for Walk-in-Interview scheduled on 22 August 2024 under SCSP scheme
- Dr. Sabita Mishra Delivered a talk on 'Gender Mainstreaming for Agriculture Development' for 1st Semester PGDAEM course, 17th Batch (2023-24) at IMAGE, Bhubaneswar on 4 July 2024.



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