

ATARI Kolkata news



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From the Director's Desk

"We should look upon agriculture not just as a food-producing machine for the urban population, but as the major source of skilled and remunerative employment and a hub for global outsourcing" - Prof. M. S. Swaminathan


Skill Development Training (SKDT) for farmers and rural youth engaged in agriculture stands as a cornerstone of transformative change, weaving knowledge with practice and aspiration with action. These structured training initiatives are crucial in optimizing agricultural production and productivity while building confidence and competence among farming communities.

The core areas covered under SKDT include scientific practices in crop and horticulture production, crop diversification, integrated pest and disease management, scientific fish farming, modern livestock management, post-harvest processing, value addition, household nutrition, and agri-marketing. Such interventions have a direct impact on enhancing crop yields, increasing income, and ensuring sustainable livelihoods for small and marginal farmers.

Recognizing the transformative power of skill development in agriculture, the Government of India launched the National Skill Development Mission in 2015 under the Ministry of Skill Development and Entrepreneurship (MSDE). Aligned with this national vision, the Ministry of Agriculture and Farmers Welfare rolled out structured Skill Development Training (SKDT) courses each with a minimum duration of 200 hours through Krishi Vigyan Kendras (KVKs) under ICAR. These KVKs serve as single-window hubs for agricultural knowledge and innovation, mandated to assess, demonstrate, and disseminate technologies while building grassroots capacity. Reinforcing this agenda, the Central Government further prioritized vocational training in natural farming and crop residue management as part of its 100 Days Action Plan (July-October 2024). With strategic planning and unwavering commitment, the KVKs of Zone V successfully accomplished all assigned targets within the defined timeframe, showcasing their operational efficiency and dedication to empowering the farming community.

In addition to skill development, ATARI Kolkata and its KVK network have effectively implemented Central Government schemes and conducted a range of programmes, workshops, and consultations. Their contributions are further enriched through national and international day celebrations, diverse scientific publications and grant of Design/ Copyright—reflecting the zone's strong, knowledge-driven approach. This six-monthly chronicle highlights the zone's dynamic efforts. Appreciation is due to the dedicated scientists and staff behind its timely release. Feedback for further improvement is always welcome.




(P. Dey)

Technology applied successfully

Integrated farming system made tribal farmer an entrepreneur

Shri Biren Oram, a tribal hard-working farmer of Sundargarh, had 4 acres land (in upland- 2.8 acre and in lowland- 1.2 acre) and used to grow traditional non-descript local rice varieties in 3 acres along with round the year cultivation of vegetables, rearing of poultry and desi cows in remaining 1 acre land. As his village was adjacent to Sundargarh city, he had opportunity to sell his surplus produce from his farm which was a source of additional income. Shri Oram used to get annual profit around Rs. 1.23 lakh from his farm.

However, after seeing the demand in



the market and good market rate, he was inspired for scientific vegetable cultivation. He visited various demo units of KVK Sundargarh-I for more information and decided to start off-season vegetable cultivation and other income generating enterprises like mushroom and apiary. He was trained



with rice cultivation, mushroom cultivation, apiary, off-season vegetable cultivation, poultry and dairy farming at the KVK in due course of time. That enabled him to get a net annual income of Rs. 4.98 lakh which was substantially higher than his earlier income from the same land.



Inspired by his success in IFS, many farmers in his village and other surrounding villages have started their



farming and fetching very good profit. He has become a model farmer in the area. Not only Shri Oram has increased



his income but also gained his social recognition.

Table: Economics of farming, spread of technologies and social impact

<i>Enterprise</i>	<i>Gross cost (in Rs.)</i>	<i>Gross return (in Rs.)</i>	<i>Net return (in Rs.)</i>	<i>B:C Ratio</i>
Before intervention				
Rice (3 ac)	26300	48700	22400	1.85
Vegetables (1 ac)	57600	114000	86400	1.9
Poultry (7-10 no.)	700	1900	1200	2.28
Dairy cow (4 no.)	9800	22400	12600	1.5
Total	113800	209400	122600	
After intervention				
Rice (3 ac)	37000	80560	42560	2.17
Vegetables (1 ac)	97600	304000	206400	3.11
Mushroom (Paddy straw mushroom-800 beds) and (Oyster mushroom- 200 beds)	48000 and 10000	144000 and 30000	72000 and 20000	3.0 and 3.0
Vermicomposting - 2 tanks	2600	8000	4500	3.0
Honey production (3 boxes)	4500	9000	4500	2.0
Poultry- 20 no.	1000	3000	2000	3.0
Dairy cow- 12 no.	140300	286800	146400	2.0
Total	341000	865360	498360	

Enterprise	Horizontal spread		Vertical spread		Overall impact*
	Area covered (ac or ha) /no. of livestock unit or no. of livestock	No. of farmers	Area covered (ac or ha) / no. of livestock unit or no. of livestock	No. of farmers	
Before intervention					
Rice	12 ac	20	27 ac	36	4
Vegetables	29 ac	52	42 ac	64	4
Poultry (5-10 no.)	10 units	10	25 units	21	4
Cow (1-2 no.)	5 units	6	15 units	18	4
After intervention					
Rice	170 ac	310	180 ac	231	3
Vegetables	54 ac	100	71 ac	145	3
Mushroom (paddy straw and oyster mushroom)	1500 and 600 bed	12 and 26	2300 and 900 bed	56	3
Vermicompost- 2 tanks	5	5	19 units	14	4
Honey production- 3 bee boxes	8 units	2	12 units	9	4
Poultry (5-20 no.)	25	27	28 units	31	5
Dairy cow (2-5 no.)	9 units	9	10 units	10	4

*1-5 scale; 1= Lowest and 5= Highest

Contributor: Sundargarh-I KVK, Odisha

News from KVKs

Activities under '100-day Action Plan' conducted

As a part of 100-day Action Plan of Ministry of Agriculture and Farmers Welfare (DAFW), GoI, focuses were given to strengthen agricultural sector and to reduce farmer distress with the initiatives of ensuring the availability of quality inputs, increasing agricultural production and productivity, expanding farmer benefits under existing schemes, promoting agricultural exports and utilizing AI chatbots technology to assist farmers. Under this plan, KVKs of this country under ICAR were given responsibilities for promoting agri-entrepreneurships, institutional arrangements and market linkage, skill

farming, capacity building of farmers on CRM, diversification through CFLDs, training on climate resilient agriculture for farmers, demonstrations on climate



resilient technologies, partnership extension; demonstrations on INM through drone technology etc. The plan was implemented at the KVKs w.e.f. 1st July to 15th October, 2024.

The ICAR-ATARI Kolkata successfully implemented a comprehensive 100-day action plan focused on strengthening



Indian agriculture through training, entrepreneurship, sustainability and technology integration. During this period, KVKs of this zone played a pivotal role in executing targeted activities. Fourteen KVKs actively worked on promoting agri-entrepreneurship, establishing institutional arrangements and developing market linkages. As part of this, 10 FPOs and 4 SHGs received support for branding, packaging and preparing detailed project reports for funding. All 14 KVKs established linkages with CSCs to enhance rural outreach. Skill development and vocational training programmes for farm women and rural youth formed a key component of the plan. A total of 289 training programmes with ≥ 5 days were conducted which involved 4739 women and 4668 youths. On the other hand, 39 trainings on natural farming were organized benefitting 1696 farmers, whereas, 91 trainings were on climate resilient technologies



development and vocational training of ≥ 5 days duration, awareness programme for farmers on fermented organic manure (FOM) and liquid fermented organic manure (LFOM), training under natural





benefitting 2805 farmers. Additionally, 147 demonstrations on climate-resilient technologies were carried out, covering an area of 1203 ac. Crop diversification efforts witnessed remarkable success through CFLDs, with 6453 demonstrations on pulses and 12257 on oilseeds. Drone technology was effectively utilized in 99 demonstrations on INM, covering 1085 acres, signifying ICAR's push towards precision agriculture. Flagship initiatives like PM-KUSUM and MY Bharat were also part of the plan. Four workshops for 112 farmers under PM-KUSUM were conducted. While 18 events organized under the MY Bharat initiative which engaged 540 rural youths. Further, 17 CHCs provided mechanized services to farmers which generated a total fund of ₹60240/-. Teleconsultation services were initiated through 10 CSCs to facilitate easy access to expert advice.



'Technology Day 2024' celebrated

On the occasion of 96th Foundation Day of ICAR, 52 KVKs (29 from Odisha KVKs, 21 from West Bengal KVKs, 2 from A & N Islands) of this Zone celebrated 'Technology Day 2024' on 15-16.07.2024. About 1745 farmers, 1307 farm woman,



25 public representatives and other officials participated in the programme. In this auspicious event, the addresses of Hon'ble Minister of Ag. & F.W., GoI and Secretary, DARE & DG, ICAR were observed by participants through livestreaming from ICAR headquarters, New Delhi. A total of 65 awareness generation cum training programmes with 41 exhibitions of different technologies in the field of agriculture, horticulture, plant protection, mushroom cultivation, vermi composting, fisheries and animal husbandry were organized on this occasion by the KVKs of ATARI Kolkata. The rural youth and farmers were encouraged to retain themselves in agriculture for their sustainable livelihood. The importance of NF, climate-resilient agriculture, formation of FPO, crop diversification, IFS etc. was explained before the farmers to motivate them and make them self-sustain.



'Parthenium Awareness Week 2024' observed

The nineteenth 'Parthenium Awareness Week 2024' was observed by all 59 KVKs under ATARI Kolkata w.e.f. 16th to 22nd August, 2024 marking a significant step



towards the comprehensive management of *Parthenium hysterophorus* in this zone. A total of 1183 persons which included 652 farmers, 327 farmwomen and 204 officials participated in this awareness programme. One of the key achievements of the programme was the effective dissemination of information about the history and genesis of parthenium in India which helped participants to understand the magnitude of the problem. The detailed discussions on the adverse effects of parthenium on human health and livestock underscored the urgent need for its control, fostering a sense of responsibility among the participants to take proactive measures. The mechanical, chemical, biological, and cultural control methods discussed were well-received by the participants, who appreciated the practical demonstrations and the hands-on approach taken by the experts. The event not only brought light on devastating impact of this invasive weed on agriculture, human health, and livestock, but also provided practical knowledge to the local community for tackling its spread enhancing agricultural productivity and safeguarding public health.



Events

'ICAR Foundation Day 2024' celebrated

The 96th foundation day of ICAR was organized by ICAR at New Delhi on 16.07.2024. The ICAR Institutes pan India celebrated this day from their institute. The scientists, research



fellows, administrative staffs and other have joined the program in virtual mode. Along with many delegates, in this program Hon'ble Union Agriculture Minister and DG, ICAR emphasized on the need of climate smart agriculture. They explained how

the drone and natural farming might revolutionize the future farming in India. Many scientists and progressive farmers were awarded during this ceremony.



'Independence Day 2024' celebrated

The 78th Independence Day of India was celebrated with great enthusiasm and a spirit of patriotism at the office of ICAR-ATARI Kolkata on 15.08.2024. The day began with the unfurling of the national flag by the Director Dr. Pradip Dey, followed by the singing of the national anthem. Scientists, research scholars and other staffs were gathered in the office premises to witness the ceremony, and the atmosphere was filled with pride and unity. A short speech was delivered by Dr. Dey, who highlighted the significance of Independence Day and the sacrifices made by freedom fighters to achieve India's independence. The speech emphasized the importance of unity, progress, and collective responsibility towards nation-building.

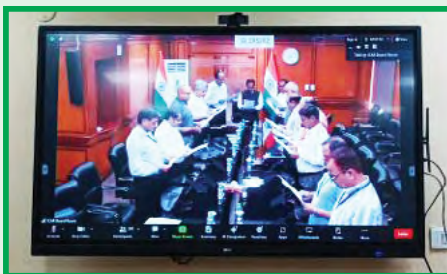


'Swachhata Pledge' taken

The 'Swachhata Pledge' was a commitment which was inspired by the Swachh Bharat Abhiyan (Clean India Mission) and was launched by the GoI to promote cleanliness and hygiene. The staffs of this office including the scientists, research fellows and the administrative staffs participated in



the pledge at the conference hall on 17.09.2024. The pledge encouraged individuals to take responsibility for the cleanliness of their surroundings,



to adopt a proactive role in maintaining a clean environment and emphasized the personal accountability, where each person vowed to avoid littering, segregate waste and support initiatives aimed at waste management, recycling, and promoting sanitation. By taking the 'Swachhata Action Pledge', individuals not only promised to contribute to cleanliness at a local level but also to inspire others to follow suit, creating a ripple effect of positive change in communities across the country.



'Swachhata Hi Seva 2024' programme organized

A human chain was formed at ATARI Kolkata, under the 'Swachhata Pakhwada' campaign, with every hand holding the torch of cleanliness for sending a powerful message to the society. The main objective of this event was to raise awareness among the institute's members and the surrounding community about the importance of cleanliness and its mental and physical benefits. All scientists, officials including project staff of the institute enthusiastically participated in this



event on 20.09.2024. The Director, Dr. Pradip Dey, emphasized that cleanliness, an integral part of life, was not only protected us from diseases but also purified us both internally and externally. He called for the abandonment of single-use plastics and urged everyone to take steps toward a cleaner and greener future.



'Safai Mitra Camp' organized

The 'Safai Mitra Camp' was organized by ATARI Kolkata on 26.09.2024 under the theme 'Swabhav Swachhata, Sanskar Swachhata,' was not just a symbol of social responsibility but also a sensitive and artistic initiative that highlighted the deep connection between



cleanliness and respect. The camp was a beautiful example of the institute's gratitude towards sanitation workers and its commitment to their welfare. In his thought-provoking speech, Director of the institute presented the role of sanitation workers as the foundation of nation-building. Dr. Dey emphasized



the concept of 'One Health' programme for improving quality of life.



At the camp, sanitation workers were provided with fruit baskets and personal safety kits like gloves, masks soap etc. which was not only a measure to protect their physical health but also a vibrant appreciation of their contribution. The message 'Cleanliness: The first step towards a better society' was conveyed through that campaign. The event was attended by all the staff of the institute. Dr. S. K. Mondal, Pr. Scientist conducted the program and Dr. P. P. Pal, Pr. Scientist expressed gratitude at the end.



'Hindi Pakhwada 2024' observed

The 'Hindi Pakhwada 2024' (14.09.2024 to 28.09.2024), dedicated to the institute's commitment and dedication towards the official language Hindi, concluded with great enthusiasm at the ICAR-ATARI Kolkata in the evening of 27.09.2024. The event was organized with the aim of promoting the use of Hindi and adhering to the official language policy. The Chief Guest, Dr. D. B. Shakyawar, Director, ICAR-NINFET, Kolkata, emphasized the provisions of the official language policy and the extensive use of Hindi in government work. He urged all personnel to adopt Hindi in their daily lives and workplaces without hesitation. In his presidential



address, Dr. Pradip Dey, Director of the institute, highlighted that as a prestigious government institution, we should contribute significantly to the implementation of the official language policy. He encouraged everyone to use Hindi more in official communication



and daily tasks. Dr. Dey also shed light on the historical and cultural heritage of the Hindi language, stating that Hindi, symbolizing the amalgamation of Persian and Indian cultures, is gradually becoming the language of unity, connecting societies and nations. The event was attended by all the scientists, officials, and project staff of the institute. The program was efficiently conducted by Dr. S. K. Mandal, Pr. Scientist and Hindi Nodal Officer, and the vote of thanks was given by Dr. K. S. Das, Pr. Scientist.



'Vigilance Awareness Week 2024' observed

The 'Vigilance Awareness Week 2024', as a prelude to the three-month campaign on preventive vigilance, was inaugurated on 28.10.2024 at ICAR-ATARI Kolkata with the objective to raise awareness about the importance of vigilance in driving both organizational and



national progress. The theme during 2024 was 'Culture of Integrity for Nation's prosperity'. The programme was initiated

by administering an integrity pledge to all Staff by Dr. P. Dey, Director of this office. The Chief Guest and Keynote Speaker- Dr. S. S. Singh, DEE, RLB CAU, Jhansi, UP and Former Director, ATARI Kolkata dealt with various aspects of vigilance and preventive. He thanked the office for orchestrating such meaningful event, a beacon of vigilance awareness illuminating every corner of the Institute. Dr. P. Dey, Director, in his presidential address, told that preventive vigilance was the cornerstone of good governance. He simplified this year's



theme as building a culture of integrity for national strength and prosperity, highlighting the Public Interest Disclosure and Protection of Informers (PIDPI) resolution in protecting complainants' identities through confidentiality. During the campaign period of 'Vigilance Awareness Week 2024', various activities were planned at the Institute and its KVKs. In 20 KVKs of Odisha, 785 persons participated in the discussion on various vigilance awareness whereas in West Bengal, 17 KVKs involved 614 farmers to discuss



on develop corruption free country, panel discussion, debate and drawing competition about the importance of vigilance. In A & N Islands, different programmes were also organized in 3 KVKs with 35 participants.

Awareness programme organized

On 19.12.2024, an awareness programme-cum-first-hand survey was organized for implementing network project 'Mainstreaming non-productive cattle: Inclusive development and sustainable integration into rural economies' at Garal village, Pratapnagar Gram Panchayat,



Sonarpur Block, South 24 Pgs district under coastal saline agro-climatic zone of West Bengal. The primary objective was to understand the current status of cattle population, identify issues related

to non-productive cattle and assess the farmer's awareness and readiness to participate in scientific interventions aimed at reducing non-productivity in cattle. The total cattle population in the village was around 250 belonging mostly to non-descriptive cattle yielding 1 to 2 lt milk per day, with average cattle holding of 2 to 3 cattle per farm family. The preliminary survey findings indicated that approximately 40% of the total cattle were non-productive having different issues like pubertal anoestrus, post-partum anoestrus,

repeat breeding and other health issues. The farmers expressed their willingness to participate in efforts to treat non-productive cattle for reducing the economic burden.



Meetings/ workshops/ training programmes organized/ conducted

MoU signed

On 2nd July, 2024, a MoU was signed among ICAR-ATARI Kolkata; ICAR-CRRI, Cuttack; Purva Baleswar 4S4R Farmer Producer Co-operative Society Ltd., Raghunath Rukmani Kuteera, Karanjia, Bhoisahi, Sadar, Remuna, Balasore, Odisha and Upakula Balasore 4S4R Farmer Producer Co-operative Society Ltd., Kuanrpur, Rasalpur, Balasore, Odisha for a period of 3 years. The MoU aimed to work collaboratively for organizing training, frontline demonstration, exposure visit, awareness camp on agriculture and allied vocations for knowledge and skill development of the farmers on scientific agricultural practices including up-scaling promising technologies on

areas. Dr. P. Dey, Director, ICAR-ATARI, Kolkata and Shri S. Pandit, Chairman, BENJHARC, signed the MoU on behalf of their organisations. ICAR-ATARI and BENJHARC are partnering to catalyze initiatives like improved fish farming techniques, scientific shrimp culture practices, and aquaculture-based livelihoods, paving the way for self-reliant rural communities. The signing and exchange of MoU were witnessed by Shri A. K. Mondal, Shri P. Pramanick, Director, BENJHARC, Sandip Mitra and Shri Anup Nath also from BENJHARC, Dr. A. Halder and Dr. S. K. Mondal, Pr. Scientists, ICAR-ATARI Kolkata.

Field visit of natural farming activities conducted

Dr. A. Halder, PS & Nodal Officer, Natural Farming project, ICAR-ATARI Kolkata visited fields of different farmers of village Gendamali, Satyabadi block, Puri district, Odisha along with Dr. A. Khuntia, JDE, OUAT, other scientists and staffs of KVK, Puri on 04.07.2024. Dr. Halder interacted with farmers and discussed different components and practices of natural farming implemented in that village. Sh. P. K. Biswal cultivated different vegetables like spine gourd, cucumber and brinjal under natural farming practices using *Jeevamrut* and *Breejamrut*. Sh. A. Biswal also cultivated

cucumber using *Jeevamrut*, *Bijamrut* and mulching technology. Dr. Halder addressed 50 farmers of that village on natural farming practices and requested



to expand the area of natural farming. After that, Dr. A. Halder visited different demonstration units of Puri KVK.

'Annual Zonal Workshop of Zone V' organized

The Annual Zonal Workshop of KVKs under ICAR-ATARI Kolkata was organized by ICAR-ATARI Kolkata in collaboration with OUAT-KVK Puri at Toshali Sands, Puri, Odisha on 27-29.08.2024. In this program, 59 KVKs from the A & N Islands (3), Odisha (33) and West Bengal (23) participated and presented their progress reports for 2023-24 and action plans for 2024-25. Dr. T. Mohapatra, Chairperson, PPVFRA, Former DG, ICAR and Chief Guest of the inaugural ceremony, highlighted the immense possibilities in safeguarding farmers' varieties, particularly in integrating them into value chains and unlocking their potential for commercialization. He expressed hope that the discussions during the workshop would shed light on solutions to the challenges facing agriculture and its allied sectors. Dr. U. S. Gautam, DDG (AE), ICAR and Chief Guest of the Valedictory Programme, commended the pivotal



agriculture and allied sectors, natural resource management and inculcating entrepreneurial development among the farming community for enhanced economic return under the jurisdiction of Farmer Producer Co-operative Society Ltd.

Another MoU was signed on 12.12.2024 between ICAR-ATARI Kolkata and Bengal-Jharkhand Development Cooperative Ltd. (BENJHARC) for successful dissemination of technologies for enhancing production and productivity of Fish / Shrimps / Fisheries / Aquaculture sector in rural





role of KVKs on a national scale. He envisioned these Farm Science centers as the quintessential 'Single Window Delivery System' or 'One Stop Solution'. He spoke about the harmonious convergence between KVKs and various Ministries and Departments, suggesting the emergence of unique and transformative initiatives. With foresight, he assured that ICAR was



poised to take steps dedicated to the welfare of KVK staff nationwide. In a more intimate breakout session, he emphasized the necessity for ATARIs to engage in in-house research projects, fostering innovation from within.

Prof. P. K. Roul, Hon'ble Vice Chancellor, OUAT, Bhubaneswar commended the KVKs for effectively promoting natural farming technology at the district level and applauded ATARI for its comprehensive achievements, both in physical and financial aspects, across all their projects. Dr. G. Saha, Hon'ble Vice Chancellor, BCKV praised the distinctive review system of KVKs and acknowledged their significant contributions to the nation's food and nutritional security. Dr. R. R. Burman, ADG (AE), ICAR urged the KVKs in this zone to focus on the transfer of climate-resilient technology, natural farming, capacity building, and providing forward linkage support to FPOs. Dr. P. Dey, Director, ICAR-ATARI Kolkata, presented results of flagship projects being implemented through KVKs, each a testament to the dedication and innovation of this ATARI. He highlighted the path ahead, emphasizing the transformative potential of KVKs during the Amrit Kal, envisioning them as catalysts and convergence hubs that will propel Indian agriculture towards the nation's dreams

for 2047. Dr. A. K. Nayak, Director, ICAR-CRRI, Cuttack suggested that newly developed rice varieties should be included in trials and demonstrations. Dr. P. K. Sahoo, Director, ICAR-



CIFA, Bhubaneswar suggested that aquaculture offers the best opportunity to boost farmers' incomes. Earlier in his welcome address, Prof. P. J. Mishra, Dean, Extension Education, OUAT, Bhubaneswar highlighted the contributions of Odisha KVKs and the role of the host organization. A Wisdom Session was arranged,



during which Dr. R. K. Samanta and Dr. M. M. Adhikary, former Hon'ble Vice Chancellors of BCKV, Dr. P. K. Chakrabarty, former Member, ASRB and ADG (PP), ICAR and Dr. H. K. Senapati, Chairman, ZMC, NICRA for Zone-V deliberated on future extension requirements. Dr. B. Das, Director, ICAR-NRC on Litchi, Muzaffarpur, Bihar discussed the challenges and opportunities for litchi cultivation in the region.

Thirty-four publications including books, booklets/bulletins, folders and four CDs from ATARI Kolkata including various KVKs were released during the occasion. The KVKs presented their achievements for 2023-24 and action plans for 2024-25 in three concurrent technical sessions, and the reports from all technical sessions were presented in the Valedictory Session. Special sessions were arranged on plant protection and the KVK portal. A cultural programme was also organized which showcased the Gurukul tradition of performing arts and Odisha culture. More than 100 people which included distinct dignitaries from ICAR, SAUs,

ATARIs, KVKs and other organizations attended the workshop. The workshop concluded with the formal vote of thanks.

Seminar on artificial intelligence and machine learning

ICAR-ATARI Kolkata organized a seminar under a series initiated to bring transformative changes in the Agricultural extension system on 08.11.2024. The seminar, titled 'From data to decisions: Artificial intelligence and machine learning for effective agricultural advisory tools' was held in a hybrid



mode. Scientists from KVKs in Odisha, West Bengal and A & N Islands along with scientists from ATARI Kolkata participated in the event. In his presidential address, Dr. P. Dey, Director of the institute and coordinator of the seminar series, stated that artificial intelligence and machine learning had the potential to bring a revolution in the agricultural sector. He mentioned that by leveraging this technological advancement, farmers can adopt better



measures for water conservation, fertilizer management, and pest and disease control. The keynote speaker, Dr. Jajati Mandal, School of Science, Engineering, and Environment, University of Salford, Manchester, UK, painted a global picture of artificial intelligence and machine learning in agriculture. He delivered a lecture on



the potential of these technologies in guiding farmers toward a brighter future. Dr. Mandal stated that those modern technologies help in making accurate and timely decisions, allowing farmers to adopt more profitable and sustainable agricultural practices. He also stressed the importance of increasing knowledge and awareness about these technologies.

Management development programme (MDP) conducted

ICAR-ATARI Kolkata Hosted 3rd and final Phase of MDP for five newly recruited SSHs of KVKs from A & N Islands, Odisha and West Bengal of Zone-V on 27-31.12.2024. The entire program, consisted of three phases



was jointly planned and implemented by the Agricultural Extension Division of ICAR, ICAR-NAARM, and



ICAR-ATARIs exclusively for the newly recruited SSHs of KVKs. The trainees explored key topics including the organization and management of ATARI, five-year targets for KVKs, information and knowledge management, and the administration of Central Sector Schemes. They undertook assignments focused on advancing the ODOP initiative for their respective districts and leveraging their disciplinary expertise for local development. Additionally, they collaborated to design a joint project addressing malnutrition through

agricultural systems for potential external funding. As part of the project development process, they visited South 24 Pgs KVK, Narendrapur. Reflecting on their experiences from the previous two phases, the trainees shared how those insights had served as a source of inspiration and motivation. In the valedictory session, Dr. P. Dey, Director, ATARI Kolkata emphasized



the need for KVKs to serve as district agri-tech epicenters, promoting nature-friendly technologies to achieve national aspirations by 2047. Dr. A. Halder, Pr. Scientist coordinated the programme and Dr. S. K. Mondal from this office delivered vote of thanks.

Some important meetings/workshops/symposia etc. attended by scientists/ staff

Sl. No.	Name of the programme(s)	No. of scientist(s)/ staff attended
1	Offline and online research advisory committee (RAC) meeting of network projects at NAARM, Hyderabad organized by AE Division, ICAR in collaboration with ATARI Hyderabad	4
2	Regional Committee Meeting (RCM-II) organized by ICAR-CRRI, Cuttack	1
3	Offline and online meetings with PIs/CC-PIs/SSHs of ATARIs/KVKs of different network projects	5
4	Zonal review workshop of KVKs under Zone V organized by ATARI Kolkata in collaboration with Puri KVK, OUAT, Odisha at Puri	8
5	Online and offline zonal review meetings/workshops of various schemes/projects of ICAR-ATARI Kolkata	10
6	Meetings as an expert of committee member organized by various other institutes/KVKs for promotion of personnel/award of degree/IRC etc.	5
7	Online and offline meeting/review meeting with DDG/ADGs/Pr. Scientists/Under Secretaries of AE (Ext.), ICAR, New Delhi and Director/ Pr. Scientists/ AAO/AFAO/others on fund utilization, progress of schemes/projects and other administrative issues organized by AE Division, ICAR, New Delhi	10
8	Review meeting with PIs/CO-PIs of different institute projects	4
9	Online meeting on 100-days and five-year action plan with DDG/ADGs (AE)/Director ATARIs/Scientists of the Division/ATARIs organized by AE Division, ICAR, New Delhi	10
10	Online and offline scientific advisory committee (SAC) meeting of KVKs	6
11	Selection committee meeting as Chairman/Member for selecting manpower at this institute and at the KVKs of this zone	6
12	Online and offline meeting of Director and other staff ATARI Kolkata with DG, DDG (AE), ADGs, Pr. Scientists and other administrative staff of the Council on financial, administrative and other various issues	8
13	Online meeting for orientation of KVKs to support Mass Drug Administration (MDA) Phase-II campaign for eliminating Lymphatic Filariasis (LF) disease in humans organized by AE Division, ICAR, New Delhi	2
14	Regional advisory group (RAG) meeting at NABARD, West Bengal Regional Office, Kolkata organized by NABARD, Kolkata	1
15	Online programme regarding celebration of 96 th ICAR Foundation and Technology Day at ICAR, New Delhi	15
16	Five days management development programme (MDP) programme for SSHs of KVKs of this zone at ICAR-ATARI Kolkata	9
17	Meeting with Director, ICAR-ATARI Kolkata on various issues	12
18	Programmes to celebrate various important days organized by the Council/ATARI Kolkata/KVKs of this Zone	15

Sl. No.	Name of the programme(s)	No. of scientist(s)/ staff attended
19	Online meeting with INM Section, DA & FW, GoI to discuss on 'National mission on natural farming (NMNF)' organized by Ministry of DA&FW, GoI	4
20	Online inception meeting on PM-KUSUM Component A with ASCI, Gurgaon organized by ICAR, New Delhi	3
21	Online preparatory meeting on 'Ek Ped Maa Ke Naam' with Addl. Secretary, DA&FW organized by Ministry of DA&FW, New Delhi	3
22	Online meeting on block contingency plan under NICRA organized by ICAR-CRIDA, Hyderabad	3
23	Workshop on technology prioritization for agriculture and allied sectors at ICAR-CRIJAF, Barrackpore, West Bengal	2
24	Online meeting of stakeholder consultation meet on 'Transforming agricultural research: enhancing role of private sector' organized by ICAR, New Delhi	4
25	Online meeting on 100 Years of INSA, Ranchi, Jharkhand organized by ICAR-INSA, Ranchi	12
26	Online training programmes at Karmayogi iGOT platform	7
27	GIZ World Soil Day Conference organized by FAI at New Delhi	1
28	Other meetings on various issues	15

Distinguished visitors

- Dr. D. B. Shakyawar, Director, ICAR-NINFET, Kolkata
- Dr. Jajati Mandal, Lecturer, School of Science, Engineering, and Environment, University of Salford, Manchester, UK

Publications

Research articles

Biswas P, Dutt T, Patel B H M, Mondal S K, Mandal M, Datta S, Saha D and Roy A. 2023. Assessment of gastro intestinal parasite prevalence in dairy cattle in three agro-climatic zones of West Bengal. *Indian Journal of Veterinary Public Health*, **9**(3): 36-41 [DOI: <https://doi.org/10.62418/ijvph.9.3.2023.36-41>].

De H K, Das K S, Sivaraman I, Saha G S, Mahapatra A S, Debbarma J, Banu H, Rath D P and Mohapatra A. 2025. Enhancing productivity and income of small farmer through adoption of Scientific Fish Farming in Odisha-a case of Farmer FIRST project. *Journal of Aquaculture* (Accepted).

Dwivedi S, Srivastava A, Gangwar S P, Dey Prithwiraj, Dey Pradip, Bhatt, M K, Sarkar S, Bhattacharya P, Mandal D, Alotaibi M and Seleiman M F. 2024. Soil-test-crop-response based nutrient scheduling can improve soybean-wheat productivity and system sustainability. *BMC Plant Biology*, **24**:1203 [https://doi.org/10.1186/s12870-024-05890-z].

Krishna Murthy R, Bhavya N, Govinda K, Basavaraja P K, Uday Kumar S N, Annappa N N, Saqueebulla M H, Gangamurutha GV, Srivastava S and Dey P. 2024. Optimizing fertilizer use through soil testing and yield modeling for okra (*Abelmoschus esculentus*) in Alfisols of Southern India. *Theoretical Biology Forum / Rivista di Biologia*, **13**(1): 23-29.

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N, Veeranagappa, Uday Kumar S N, Annappa N N, Srivastava S and Dey P. 2024. Evaluation of multi-nutrient extractants for determination of available phosphorus, potassium and micronutrient cations in red soils of Alfisols. *International Journal of Advanced Biochemistry Research*, **8**(8): 771-778 [DOI: 10.33545/26174693.2024.v8.i8j.1865].

Meher S, Panda A, Mishra P J, Majhi T, Mondal S K and Phonglosa A. 2024. Effect of integrated nutrient management on growth and yield of aromatic rice (*Oryza sativa* L. var Dubraj). *International Journal of Bioresource and Stress Management* (Submitted).

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Rangaiah K M, Nagaraju B, Kasturappa G, Basavaraja P K, Uday Kumar S N, Saqueebulla, H M, Gangamrutha G V, Srivastava S and Dey P. 2024. Optimizing nutrient management for Kodo millet (*Paspalum scrobiculatum* L.) in the Alfisols of Southern India through modeling soil, plant, and fertilizer interactions. *Scientific Reports*, **14**:

31852 [DOI: 10.1038/s41598-024-83265-y].

Rangaiah K M, Nagaraju B, Kasturappa G, Nagendrachari A N, Kadappa B P, Narayanaswamy, U K S, Saqueebulla M, Sab H, Veerabadraiah, G G, Srivastava S and Dey P. 2024. Inductive cum targeted yield model-based integrated fertilizer prescription for sweet corn (*Zea mays* L. *Saccharata*) on Alfisols of Southern India. *PLoS ONE*, **19**(8): 1-20 [https://doi.org/10.1371/journal.pone.0307168].

Technical/Popular articles

Mohapatra A, Banu H, Debbarma J, Mahapatra A S, Mohanty S K, Das K S and De H. K. 2025. Gramin Krushire Paribartan: Khordha Jillare Farmer FIRST Pariyojanara Safalata (in Odia). *Krishi Jagaran*, **9**:10-15.

Mondal S, Pramanik A, Das K S and Mondal S K. 2024. Efficient dairy farm management for optimizing milk production. *AgroScience Today*, **5**(11): 990-994.

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Technical bulletins

Acharya L K, Chatterjee S, Roy A, Saha S, Das A, Basu T, Mondal S K, Chattopadhyay C, Pal P P and Dey P. 2024. Safe and effective spray applications by drone: Brief guidelines. Published by Director, ATARI Kolkata, pp: 1-14.

- Das K S, Mondal S K, Haldar A, Ghosh S, Begam A, Pal P P and Dey P. 2024. ATARI Kolkata News. Published by Dr. P. Dey, Director, ICAR-ATARI Kolkata, 8(1): 1- 12.
- Mondal S K, Das K S, Pal P P, Haldar A and Dey P. 2024. ATARI Kolkata Annual Report 2023, Published by the Director, ICAR-ATARI Kolkata, Kolkata, pp: 1-174.
- Mondal S K, Maitra N J, Dhara K C, Tudu B, Nayak A, Pathak P, Pal K, Maji C, Adhikary P, Saren S and Molla M H. 2024. Promising climate resilient technologies for coastal area of North 24 Parganas district. Published by North 24 Parganas Krishi Vigyan Kendra-I, Ashokenagar, North 24 Parganas, West Bengal, India, pp: 1-24.
- Singh S R K, Raut A A, Gour S and Tripathi R. 2023. Nutri-Sensitive Agricultural Resources and Innovations (NARI): Implementation by KVKs. Published by The Director, ICAR-ATARI, Zone-IX, Jabalpur, pp: 1-30.
- Books edited**
- Das K S, Mondal S K, Begam A and Dey P. 2024. Prosper: Empowering tribes-transforming lives. Published by the Director, ICAR-ATARI Kolkata, pp: 1-182.
- Book chapters**
- Begam A, Das K S and Dutta S. 2024. Irrigation water quality for sustainable agriculture development. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Bhattacharya R and Mondal S K. 2024. Strategy and management practices of soils for agricultural sustainability. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Chowdhury S, Chakraborty M, Nayak A and Mondal S K. 2024. Value addition in fish and fish products for human health and nutrition. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
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- Das S, Mondal S K and Das K S. 2024. Innovative management practices for biotic and abiotic stress for sustainable horticulture. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Garain P K, Das K S and Mondal S K. 2024. Innovative management practices for insect pest and diseases and reconcile the plant health in agro-ecosystem. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Ghosh S, Anju P, Pattanayak R and Das K S. 2024. Ornamental fisheries in India: Diversity, sustainability, trade, livelihood and management. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
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- Khan M, Das K S and Mondal S K. 2024. Capacity development and sustainable livelihood generation by successful and profitable pig farming in semi-arid region of India. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
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- Sahoo G, Dash A C, Prusty M, Jena M, Wani A M, Raj A J and Das K S. 2024. Agroforestry microbiome diversity and function for climate resilience and biotic stress tolerance in agriculture. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Shee A, Mondal S K and Das K S. 2024. Livestock nutrition: An issue for farmers' friendly technology. In: Singh A K, Singh S S and Kumar P (eds). Sustainable Agriculture Management in Semi-Arid Climates: Opportunities and Threats. Published by Springer Nature (In press).
- Abstracts presented/published in seminar/ conference/ workshop etc.**
- Borkotoky D, Samajdar T, Das K S and Mondal S K. 2024. Evaluation of various duck breeds for egg quality and economics under backyard system in North 24 Parganas district of West Bengal. Abstract in compendium of XXXII Annual Conference of Society of Animal Physiologist of India & International Symposium on 'Advances in physiological research in omics era for sustainable animal production and livelihood security under the changing climate scenario' organized by ICAR-CIRC, Meerut in collaboration with SAPI held at Meerut on 27th to 29th November, 2024, pp: 46.
- Dash L, Sahoo S K, Das K S and Mondal S K. 2024. Effect of feeding concentrate mixture on reproductive performance of crossbred heifers in Keonjhar district, Odisha. Abstract in compendium of XXXII Annual Conference of Society of Animal Physiologist of India & International Symposium on 'Advances in physiological research in omics era for sustainable animal production and livelihood security under the changing climate scenario' organized by ICAR-CIRC, Meerut in collaboration with SAPI held at Meerut on 27th to 29th November, 2024, pp: 34.
- Ghosal, A., Saha, M., Mukherjee, A., Sahu, N.C., Haldar, A., Dey, P. 2024. Impact of Natural Farming Practices on Crop and Soil Health: Insights from Bio-Concoction Formulations. Kumar P et al. (Eds), Extended Summaries-cum-Proceedings of the International Conference on Enabling Sustainable Food Systems through Natural Farming (ESFS-NF) organized by Dr. YS Parmar University of Horticulture and Forestry, Solan, HP, India in collaboration with French National Research Institute for Agriculture,

Food and Environment (INRAE), France and The Indian Ecological Society (Himachal Chapter) at Dr. Y S Parmar University of Horticulture and Forestry, Solan, HP, India on 13th to 14th September, 2024, pp: 136-137.

Meher S, Panda A, Das K S and Mondal S K. 2024. Performance evaluation of dual-type poultry breeds under low-input backyard system in Kalahandi district of Odisha. Abstract in compendium of XXXII Annual Conference of Society of Animal Physiologist of India & International Symposium on 'Advances in physiological research in omics era for sustainable animal production and livelihood security under the changing climate scenario' organized by ICAR-CIRC, Meerut in collaboration with SAPI held at Meerut on 27th to 29th November, 2024, pp: 61.

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Important news items published in ICAR website

- 'Third Phase of MDP for KVK Heads Inaugurated'

- 'ICAR-ATARI, Kolkata signs MoU with BENJHARC to revolutionize aquaculture in rural areas and strengthen cooperative movements'
- 'Certification Course on 'Integrated Nutrient Management for Fertilizer Dealers' Inaugurated'
- 'प्रधानमंत्री किसान ऊर्जा सुरक्षा एवं उत्थान महाभियान योजना पर जागरूकता कार्यशाला का आयोजन'
- 'भाकृअनुप-अटारी द्वारा कृत्रिम बुद्धिमत्ता एवं मशीन लर्निंग पर संगोष्ठी का आयोजन'
- 'प्रधानमंत्री किसान ऊर्जा सुरक्षा एवं उत्थान महाभियान योजना पर जागरूकता कार्यशाला का आयोजन'
- 'Vigilance Awareness Week 2024 to spread awareness and nurture a culture of integrity'
- 'Awareness programme organised on the occasion of Ganga Utsav 2024 for Conservation and Culture'
- 'e-Agroadvisory to empower farmers in post-DANA Cyclone recovery in West Bengal and Odisha'
- 'International Day of Rural Women celebrated'
- 'गांधी जयंती के अवसर पर भाकृअनुप-केवीके में "एकीकृत संचार तथा जागरूकता कार्यक्रम एवं वृक्षारोपण" का आयोजन'
- 'हिंदी के रंग में रंगे भाकृअनुप-अटारी का हिंदी पखवाड़ा संपन्न'
- 'अनुसूचित जाति उप-योजना के तहत लॉन्च कार्यशाला का आयोजन'
- 'भाकृअनुप-अटारी, कोलकाता में सफाई मित्र सुरक्षा शिविर आयोजित'

- 'भाकृअनुप-अटारी, कोलकाता में 'स्वच्छता पखवाड़ा' के तहत मानव श्रृंखला निर्माण कार्यक्रम आयोजित'
- 'Annual Zonal Workshop of ICAR-KVKs under ICAR-ATARI Kolkata organized'
- 'DDG, ICAR visits ICAR-KVK Puri, Odisha'
- 'Workshop-cum-Awareness Programme on Protection of Plant Varieties and Farmer's Rights Act 2001'
- 'भा कृ अनु प-अटारी द्वारा केवीके में 'एक पेड़ मां के नाम' समर्पित पौध वितरण कार्यक्रम का सफल आयोजन'
- 'e-Pashu Chikitsa Shivir, focusing on animal health and deworming during the monsoon season, organized'
- 'Seminar on Strengthening Farmers Producer Companies and Co-operative Societies Organised'
- 'ICAR-ATARI, Kolkata, Hosts Third Phase of MDP for ICAR-KVK Heads of Zone-V'
- 'DG, ICAR inaugurates multiple establishments at Ramakrishna Mission Vidyapith, Purulia'
- 'Review-cum-convergence meet organized'
- 'MFOI Samridh Kisan Utsav'
- 'Awareness campaign for farmers on PM-KUSUM Component B'
- 'Seminar-cum-Awareness Programme on the occasion of World Zoonoses Day'

Personalia

Joining

- Mr. A. Dewanji has joined this institute as YP-II on 01.08.2024.
- Mr. S. Khuntia has joined this institute as YP-II on 05.08.2024.
- Sh. S. Mukherjee joined this institute as AF&AO on 06.08.2024.
- Mr. S. Das has joined this institute as DEO, CFLD on Pulses on 20.12.2024.

Relieving

- Mrs. A. Mazumdar, I/C, AF&AO of this Institute and FAO, ICAR-NINFET, Kolkata has been relieved on 30.08.2024.

Awards/Recognitions

Dr. S. K. Mondal, Pr. Scientist was recognised with Certificate of Excellence for peer-reviewing for the 'Asian Journal of

Research and Review in Agriculture', 'Journal of Scientific Research and Reports' and 'Asian Journal of Biochemistry, Genetics and Molecular Biology' during the year 2024.

Dr. K. S. Das, Pr. Scientist was recognised with 'Reviewer Excellence Award' for the 'Indian Journal of Animal Research' and a Certificate each for the 'Discover Animals' and 'Scientific Reports' for peer-reviewing during the year 2024.

A PDF version of the Newsletter is also available at: <http://www.atarikolkata.org/publications>



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Bhumi Vihar Complex, Block-GB, Sector- III, Salt Lake, Kolkata- 700097 (W. B.)
Tele-fax: +913323352355, E-mail: atarikolkata@gmail.com, Website: www.atarikolkata.org



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Dr. S. K. Mondal and
Dr. K. S. Das

