

ATARI Kolkata NEWS



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From the Director's Desk

*'I had rather be on my farm than be emperor of the world'-
George Washington*

During last few decades, agricultural scientists in our country have contributed significantly towards sustainable agricultural productions through developing and introducing high-yielding seed varieties/livestock strains/breeds/fish seeds, applying soil test based fertilizers, following improved water management technologies, mechanizing agri-operations, establishing marketing linkages of produces and many more. As a result, income of farmers has increased substantially from their farming and now-a-days, farmers have accepted agriculture



as an agri-business for their livelihood. The skills of agricultural farmers are being continuously improved through conducting various skill trainings both on and off-campus by the scientists of Krishi Vigyan Kendras, ICAR institutes and State Agricultural Universities across the country. However, on the occasion of celebrating 'Azadi Ka Amrit Mahotsav', all 59 KVKs of this zone organized special programmes like 'PM Kisan Samman Nidhi Fund', 'Garib Kalyan Sammelan', 'Kisan Bhagidari, Prathamikta Hamari Campaign', 'International Yoga Day 2022' in addition to 'National Girl Child Day 2022', 'International Women's Day 2022', 'Republic Day 2022' celebration and conducted other various mandated activities. Not only that, during the period, scientists of ICAR-ATARI Kolkata and KVKs were actively involved in conducting many review meetings, workshops, seminars and field visits to monitor the progress of various ongoing projects being operated at the Zonal and National level. A large number of publications viz. research papers, technical bulletins, book chapters, invited lectures, abstracts in compendium of symposia/seminars/conferences etc. from ATARI Kolkata were also a part of scientific activities. Moreover, scientists of this institute have been conferred with awards and recognitions from different societies.

This issue of 'ATARI Kolkata News' will give the glimpses of various activities of this zone from January to June, 2022 and I congratulate all the scientists for their efforts in bringing out this publication in time. I look forward to have your valuable feedback and suggestions for further improvement.

S. K. Roy

(S. K. Roy)

Technologies applied successfully

Sweet corn cultivation: A new venture for livelihood income of tribal farmers

Sri Sukadeb Biswas, a young farmer of village- MV-9, block- Malkangiri, district-Malkangiri, Odisha used to cultivate paddy, groundnut, green gram and some vegetables in his land following the traditional methods. The profit from his farming was not sufficient for his family. Then, he contacted scientists of KVK Malkangiri, discussed his problems with them and received skill trainings from KVKs. Scientists also visited his farm and suggested to cultivate sweet corn (*Zea mays var. saccharata*) which was found to be a profitable farming at that time in



the district. The KVK selected the sweet corn var. 'Sugar-75' which was being popularized through Front Line Demonstration programmes. The seeds were supplied to the farmers of Malkangiri, Korkunda and Kalimela block under Tribal Sub Plan programme with the technological support of INM and IPM. Market linkage was provided



to the producers through formation of FPGs at the village level. As a result, during the year 2020, Mr. Biswas cultivated sweet corn in his 2.0 acre land.

Through adopting latest technologies, he harvested 22000

cobs per acre with good quality and size. From selling those cobs @ Rs. 5 to 6/- per cob in local markets, he received a gross return of Rs. 110000/- with net profit of Rs. 65000/- per acre. Now, he is not only producing and marketing sweet corn, but also guiding other



farmers about technical knowhow of sweet corn farming. Gradually, other farmers in his village and surrounding areas were attracted and started farming. Within a very short period, sweet corn production spreads about 180.0 acre land in the district and farmers are very happy with their earning from this farming.

Source: Malkangiri KVK, Odisha

Herbal gulal/eco-holi colour preparation: An entrepreneurial activity by SHGs in Uttar Dinajpur district

Since January 2017, Uttar Dinajpur KVK, Chopra, West Bengal started one drive on 'Preparing and using eco-holi colours'. Initially, a number of camps for school children at different blocks of Uttar Dinajpur district were organized to create awareness for discouraging use of chemical holi colours and for using/preparing



biodegradable and safe herbal gulal at their home. All participants were very much interested and were happy with that step. Few teachers who resided in urban localities also

showed their interest in purchasing the colours, if available. Thereafter, KVK formed 3 SHGs- 'Mahaprabhu SHG', 'Dolua Swarnajayanti Mahila Dal' and 'Dhondugach Shakti Mahila Dal' and the KVK imparted trainings to 'Dhondugach Shakti Mahila Dal' to start herbal gulal preparation as an entrepreneurial activity. The trained SHG started making herbal gulal colours using main base ingredient as arrowroot. Natural colours were extracted from turmeric, petals of marigold flowers, beetroot, leaves of different plants and petals of different flowers etc. and mixed with arrowroot to get particular colour. The groups, engaged in herbal gulal preparation,



earned a net profit of Rs. 8000/- to 9000/- per quintal. Not only that, SHG members started cultivating vegetables at their own farm which were being used in preparation of different colours herbal gulal. These SHGs showcased and sold herbal gulals through stalls in various Melas which were organized at their district. Local newspapers, Jalpaiguri Doodarshan and some private channels like News Time,



Kolkata TV and CCN highlighted the efforts of KVK and SHGs. Now, efforts are being made to get a brand from the competent authority to fetch more economic

benefits from their products. Herbal gulal has become very popular and a new remunerative venture for rural women in Uttar Dinajpur and its surrounding districts. School children at different blocks are being trained by the master trainers of SHGs/KVK scientists for preparing such types of gulals which are safe and environmental friendly. Now-a-days, herbal gulals are available in local markets in the district and has great demand. Although it is a seasonal business, SHGs are receiving advance orders for supplying herbal gulals from different nearby districts.

Source: Uttar Dinajpur KVK, WB

Booming farmers income through crop diversification

Mr. Tarini Reddy is a 45-year-old Metric pass enthusiastic and innovative farmer from village-Kutharsingh, block- Rangeilunda,



district- Ganjam, Odisha having 4 acres agricultural land. His annual net income was Rs. 82671/- from 3 acres land through traditional farming of rice, beetle vine and vegetables, and the rest 1 acre remained as fellow land. Due to lack of scientific knowledge about agricultural farming, yield of rice was very low and his beetle vine/vegetable fields were frequently attacked by various pests and diseases. He visited KVK Ganjam II and discussed his problems with KVK scientists. He was suggested for diversified farming with systematic and scientific approaches for increasing income from his existing land. Mr. Reddy attended numerous training programmes at the KVK on integrated crop management (ICM) practices

including new high yielding crop varieties, fruits, vegetables, beetle vine, rice and mushroom cultivation technologies. He was advised for seed treatment, STBF application, line transplanting, application of weedicides and timely control of diseases and pests. As a result, production from the same land enhanced substantially and the net income increased to the tune of Rs. 365526/- from Rs. 82671/-. The economics of his new farming are given in the table.

Now, Mr. Tarini feels more secured due to the multifarious interventions that minimize his risk in livelihood income. Over 3 years, the socio-economic condition and way of living are considerably uplifted. He has become a source of inspiration to other many farmers in his villages and more than five adjacent villages in the district.

Components	Area (Acre)	Production (Q/No.)	Gross Expenditure (Rs.)	Gross Income (Rs.)	Net Income (Rs.)	B:C Ratio
Paddy var. 'Swarna Sub1'	1.5	28.6	32172	51440	19268	1.6
Beetle vine	1.5	110	32142	90000	57858	2.8
Chilli, Brinjal, Tomato and Cauliflower	1	133	44600	130000	85400	2.9
Papaya	0.5	96	24800	76800	52000	3
Paddy straw mushroom	0.5		69000	220000	151000	3.1
Total			202714	568240	365526	2.8

Contributor: Ganjam II KVK, Odisha

Important activities of KVKs (January to June, 2022)

Sl. No.	Activity	Achievement
1	Number of on-farm trials conducted (Number of technologies)	402 (58)
2	Frontline demonstrations conducted (Number)	10473
3	Farmers trained (in lakh)	0.29123
4	Extension personnel trained (Number)	3572
5	Participants in extension activities (in lakh)	1.14915
6	Production of seed (in quintals)	4054.7
7	Planting materials produced (in lakh)	12.35
8	Livestock strains and fish fingerlings produced (in lakh)	15.63
9	Soil, water, plant and manures samples tested (in lakh)	6597
10	Mobile agro-advisory provided to farmers (in lakh)	27.49

News from KVKs

Programme on release of 'PM Kisan Samman Nidhi Fund' attended

One special programme on the

occasion of releasing of 'PM Kisan Samman Nidhi Fund' was organized at the premises of all 59 KVKs under ICAR-ATARI Kolkata

on 01.01.2022. Farmers were invited to view the release of 10th installment of financial benefit under PM-KISAN scheme through video



conferencing. An amount of more than Rs. 20000 crore to more than 10 crore beneficiary farmer families was transferred during the programme. The State/UT-wise details of viewers have been presented in the table.



Name of State/UT	No. of KVKs where programme was viewed	Total number of farmers and others viewed the programme
A & N Islands	3	372
Odisha	33	3718
West Bengal	23	2669
Total	59	6759

'National Girl Child Day 2022' celebrated

The 'National Girl Child Day 2022' was celebrated at the KVKs of this Zone on 24.01.2022. On the occasion, various programmes viz. awareness



of observation of the special day was narrated by many distinguished speakers. The Government projects related to the girl child were also highlighted during the programme. The detail about participants are given in the table.



on nutritional security, women empowerment, right to education, health issues, 'Beti Bachao Beti Padao' and so on including art/debate/rangoli/dancing/singing competition were organized. The importance



No. of KVK	No. of VIP attended the programme	No. of participants	
		Students	Other than students
35	30	1564	540

'International Women's Day 2022' celebrated

The 'International Women's Day 2022' was celebrated by KVKs on 08.03.2022 at their respective KVK



challenges and achievements and the theme of International Women's Day was 'Empowering women farmers with skill and knowledge'. On the eve of the day, various programmes were organized on women empowerment, nutrition and income generation. All the KVKs of this Zone were conducting the programmes describing the role of women in agriculture. The detail report of celebration is given in the table.



campuses and some of the adopted villages of the KVKs under ICAR-ATARI Kolkata. The purpose of the day was to recognize the role of women in agriculture, their

Name of State	No. of KVKs organized the programme	Seminars organized		Training programme organized		Gosthis organized		Exhibitions organized		Total	
		No. of activities	No. of participants	No. of activities	No. of participants	No. of activities	No. of participants	No. of activities	No. of participants	No. of activities	No. of participants
A & N Islands	2	1	62					1	62	2	124
Odisha	24	8	389	24	882	7	210	6	298	45	1779
West Bengal	14	7	460	22	792	8	464	4	206	41	1922
Total	40	16	911	46	1674	15	674	11	566	88	3825

'Garib Kalyan Sammelan' organized

On the occasion of completing of 8 years of the government led by the present Prime Minister (PM) of India, 'Garib Kalyan Sammelan' was organized on 31.05.2022 across the country at State Capitals, District Headquarters, and Krishi Vigyan Kendras. The PM addressed



the gathering at different places from Shimla, Himachal Pradesh. The elected public representatives across the country directly interacted with the public to get feedback about the various welfare programmes being run by the Government. The 11th installment of financial benefits under the 'Pradhan Mantri Kisan Samman Nidhi Fund' was released. The PM also interacted with the beneficiaries of (PM-KISAN) across the country. About

48043 participants from various sectors attended the programme at 59 KVKs and different ICAR Institutes under ICAR-ATARI Kolkata.

'Kisan Bhagidari, Prathamikta Hamari Campaign' organized

As a part of 'Azadi Ka Amrit Mahotsav', 'Kisan Bhagidari, Prathamikta Hamari Campaign' was undertaken in the country during 25th to 30th April, 2022. A farmers' fair on 'Bharatiya Prakitik Paddhati' was conducted by 59 KVKs from the State of Odisha and West Bengal including the UT-A & N Islands on 26.04.2022. The programme was attended by Hon'ble MPs, MLAs, officials from NITI Aayog, Departments of Agriculture, BDOs, ATMA, other Line Departments of States, Panchayat Samities, Zilla Parishads, IFFCO



and many others. The programme was inaugurated by Hon'ble Union Agriculture Minister, GoI through virtual mode. Live telecast of this programme was organized at all KVK campuses and villages, in few cases. Detail discussion was held on 'Natural Farming' for agricultural production. Technical discussion on millets, oilseeds and bio-fortified crops were also conducted. Exhibitions through stalls in Mela were also organized along with booklets, flex banner (literature), different improved farm implements etc. The necessary arrangements were made at all the KVK premises for live telecasting of Hon'ble Prime Minister and Union Agriculture Minister's address towards farming community. The details of participants in the programme have been given in the table.

Name of State/UT	Number of the KVKs organized the fair	No. of farmers participated	No. of public representatives participated		
			Central Ministers / MPs	State Ministers / MLAs	Others
A & N Islands	03	369	00	00	08
Odisha	33	10240	00	01	322
West Bengal	23	7200	02	02	156
Total	59	17809	02	03	486

Events

'Republic Day 2022' celebrated

The 'Republic Day 2022' was celebrated at ICAR-ATARI Kolkata on 26th January, 2022. All staff members of ATARI Kolkata assembled in front of the institute to commemorate the spirit of independent and individual India. The Director, Dr. S. K. Roy highlighted the importance of the



day and urged everybody to work at their best to develop our nation.

'International Yoga Day 2022' celebrated

On the occasion of celebrating the 75th years of Independence under 'Azadi Ka Amrit Mahotsav', a series of events on 'Awareness Programmes on Balance Use of Fertilizers', 'Region



Specific Agro-Forestry', 'International Yoga Day Celebration' were conducted on 21.06.2022 at 59 KVKs including ICAR-ATARI Kolkata. In those programmes, 4507 farmers and other stakeholders participated who were motivated to inculcate habits of yoga, awareness on balance use

of fertilizers and importance of region specific agro-forestry.

'International Yoga Day 2022' was celebrated by practising different yoga Asanas by farmers, staff of KVKs and neighbouring school children. Pranayams and many others were also performed by the participants. The programme was



attended by all staff of ICAR-ATARI Kolkata, SSH of KVKs, SMSs, other office staffs, line department officials, students, farmers and rural youth across the zone. Looking into the importance of balance use of fertilizers, KVKs organized awareness programme on balanced use of fertilizers for the farmers and farm women. Awareness was created to stop excessive use of fertilizers/chemicals. During the events of the day, KVKs made the participants aware of importance of adding organic matter to the soil in the form of manure / vermicompost / green manure which in turn will sustain the productivity of the



soil. To reduce the risk of climatic vulnerability in cultivation of field crops, awareness on region specific agro-forestry, tree plantation like bamboo, karanja and neem was imparted by expert to farmers. Several KVKs distributed saplings of eucalyptus, bamboo, palms etc.

Name of State/UT	No. of KVKs organized the event	No. of farmers and other stakeholders participated
A & N Islands	03	235
Odisha	33	2343
West Bengal	23	1929
Total	59	4507

Farmers' Field visited

The NABARD funded project on agroforestry has been implemented with the technical support of KVK, Purba Medinipur for establishing homestead Agroforestry in six villages of Panskura Block in agrarian coastal Purba Medinipur of West Bengal involving 300



farm families. A field visit was made on 23-24.06.2022 by Dr. A. Haldar, PI of the project and Dr. M. Datta, Former Joint Director, ICAR Research Complex for NEH Region, Tripura at the project implementing site to monitor the progress of work. The farmers have successfully implemented two kinds of three-tier systems fruit based agroforestry models viz. Model 1: Fruit Plants (Mango/Guava/Ber) + Forest Plants (Lambu/Kadamba/Sonajhuri) + Vegetables and Model 2: Fruit Plants (Sapota/Jackfruit/Aonla) + Forest Plants (Subabul/ Nim/Gamhar/Jam) + Spices at the small backyard lands. That agroforestry could provide



multiple products to the households and diversified need through the production of a wide variety of fruits, vegetables, spices, and different forest tree products and thus, increase the net income, opportunity for the employment of the local people, enhance soil health by positive tree crop interaction and mitigation of climate change.

Meeting/ workshop/ training programme organized/ conducted

Online IMC Meeting organised

The Fifteenth Institute Management Committee (IMC) Meeting was conducted on 11th January, 2022 at ICAR-ATARI Kolkata under the chairmanship of Dr. S. K. Roy, Director, ICAR-ATARI Kolkata. After formal welcome by Dr. F. H. Rahman, Pr. Scientist-cum-Member Secretary of IMC, the chairman shared some of the salient achievements of ICAR-ATARI

Kolkata during recent times. Then, IMC members discussed the agenda items in details and approved by following necessary codal formalities.

Zonal Review Workshop of FFP (2021-22) organized

One online review workshop of Farmer FIRST Programme (FFP) pertaining to three ICAR Institutes and one SAU from Odisha state

under ICAR-ATARI Kolkata was conducted at ICAR-ATARI Kolkata on 12th January, 2022 at 10.30 AM under the Chairmanship of Dr. V. P. Chahal, ADG (AE), New Delhi to review the physical and financial progress during the year 2020-21. The Director and Chairman of Zonal Programme Management Committee (ZPMC) of FFP, ICAR-ATARI Kolkata and Prof. P. Mishra, Dean of Extension

Education, OUAT, Bhubaneswar and Chief Guest of the meeting were present. The meeting was also attended by Pr. Scientists from ICAR-ATARI Kolkata and four Principal Investigators (PIs) from concerned Institutes.

In his welcome address, Dr. S. K. Roy pointed out the importance



of the projects, its fund allotment, release and utilization. He urged about the approval of new ZPMC members for this zone, re-selection of villages and selection of villages considering the distance from the implementing centre. Dr. K. S. Das briefed the overview of FFP during the year 2020-21. Prof. P. Mishra requested to the PIs to develop model FFP villages in the district. He also appreciated the efforts of FFP team of different centres for continuing their programme under COVID-19 Pandemic situations. Dr. P. P. Pal and Dr. S. K. Mondal appreciated about the implementation and monitoring the projects.

The PI of all four projects presented their physical and financial progress during the year 2020-21 and Action Plan for the year 2021-22 which were critically reviewed and suggestions were given to the PIs and Co-PIs of the projects to achieve their targets. During the occasion, a short documentary film on FFP by ICAR-CIFA, Bhubaneswar was shown.

Dr. V. P. Chahal, in his Chairman's remark, emphasized to follow the prescribed methodologies mentioned in the guidelines of FFP regarding preparing different modules and to utilize the fund properly. Dr. Chahal also suggested to the PIs/ Co-PIs to prepare separate Action Plan for scaling up of different tested technologies.

NICRA - TDC Launching Workshop for new KVKs organized

The Launching Workshop of NICRA KVKs of Zone V was organized by ICAR-ATARI Kolkata on 28th February, 2022 on virtual mode. Dr. V. K. Singh, Director, CRIDA, in his opening remarks, emphasised on the progress and documentation as per farming system typology, component basis at household level. A format suitable for collecting information with identification of constraints, with better profitability for convergence and upscaling. Dr. S. K. Roy, Director, ICAR-ATARI Kolkata mentioned that the intervention under NICRA should read vulnerability with existing cropping practices and preventing this vulnerability through NICRA intervention is to be a priority. Dr. J. V. N. S. Prasad, Coordinator, NICRA-TDC, CRIDA, Hyderabad



stressed upon the baseline data collection, identification of important farming system and the constraints for action plan formulation and implementation and documentation of success stories. Dr. F. H. Rahman, Principal Scientist-cum-NICRA Nodal Officer presented the highlights of the salient achievements carried out by the NICRA-KVKs during the last ten years and shared his experiences from visits to various NICRA KVKs and highlighted the interventions like mulching, soil moisture conservation, custom hiring centre, etc., making significant contribution in resilience against climate change. Dr. P. K. Pal, DEE UBKV, Dr. P. Mishra DEE OUAT and scientists from other ICAR Institutes CRIDA, CIFRI, CSSRI-RRS, WBUAFS have also attended the workshop. One publication of NICRA



Newsletter of ICAR-ATARI Kolkata Jan 2022 volume was released during the workshop. In the technical session Heads of existing

seven NICRA- KVKs presented salient achievements of out scaled technologies during the last ten years. The 10 new NICRA- KVKs presented their Action Plan of 2021-22.

Launching Programme of NABARD Funded Project organized

One NABARD funded project on integrated farming has been launched for its activities in the whole West Bengal on 04.02.2022 through virtual mode. At the outset, Dr. A. Haldar, Pr. Scientist and PI welcomed the dignitaries and presented the project in details. The Chief Guest, Dr. S. K. Chakrabarti, the Hon'ble Vice-Chancellor, UBKV, Pundibari, Cooch Behar appreciated to take up such kind of unique project for developing strategies of integrated farming (IF) for different agro-climatic regions that would



enable adequate employment and income generation, especially for the smallholder farmers, in West Bengal. Dr. S. K. Roy, Director, ICAR-ATARI Kolkata highlighted the importance of IF for doubling farmers' income in West Bengal. Mr. A. Kumar, GM, NABARD, Kolkata



indicated that developing a software template would give a pictorial view of customized IF based on farmers’



demand, available resources including the potential combination of the components and also provide a clear view of possible return to the farmers for well understanding. A total of 60 existing IFs in six agro-climatic regions of West Bengal has



already been selected randomly in 15 districts by 16 KVKs situated in different districts of West Bengal. A set of questions was finalized to collect data for SWOT analysis as well validate questionnaires for data collection on IF.

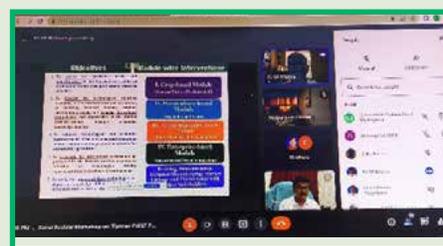
Zonal Review Workshop of FFP (2022-23) organized

One online Zonal Review Workshop of FFP for three ICAR Institutes and one SAU from Odisha state under ICAR-ATARI Kolkata was conducted at ICAR-ATARI Kolkata on 21.04.2022 at 3 PM under the Chairmanship of Dr. V. P. Chahal, ADG (AE), New Delhi to review the physical and financial progress during the year 2021-22 and to finalize the Action Plan for the year 2022-23. The Director, ICAR-ATARI Kolkata; Dean, Extension Education, OUAT, Bhubaneswar;



Pr. Scientists from ICAR-ATARI Kolkata four Principal Investigators (PIs)- Dr. S. K. Mishra, Pr. Scientist from ICAR-NRRI, Cuttack; Dr. H. K. De, Pr. Scientist from ICAR-CIFA; Dr. D. Sethi, Sr. Scientist from ICAR-IIWM and Dr. M. K. Mishra, Professor from OUAT; and SRFs from each concerned Institutes were present in the workshop.

In his welcome address, Dr. S. K. Roy pointed out the fund allotment, release and its utilization. He stressed upon the approval of new ZPMC members for ATARI Kolkata, change of villages after a span of 4-5 years, selection and shifting of new villages and inclusion of good modules including livestock and fisheries. He also requested to the PIs to strictly follow the recommendations of previous workshop. Dr. K. S. Das overviewed the physical/ financial achievements during the year 2021-22 and presented the proposed budget for the year 2022-23. Prof. P. Mishra appreciated the successful implementation of the project and involvement of NGO in FPO formation. He also pointed out the



initiative of ‘Farm Pond’ by the Govt. of Odisha and fish based integrated farming system development. Dr. P. P. Pal and Dr. S. K. Mondal showed their concern about the sustainability of the farmers’ income even after discontinuing the project at the adopted villages, proper statistical analysis of data to show the impact of the programme, adoption of new technologies at the surrounding villages and so on.

Dr. V. P. Chahal, in his inaugural address, opined that the projects were running well under this zone but there were chances of improvement, and the adopted villages might be changed gradually following the guidelines of FFP

and Farmer FIRST Approach. While concluding the session, he stressed upon upscaling of best technologies/practices of FFP involving state line departments/ other organizations through convergence mode, use of drone in agriculture, uploading information on *FFP Portal*, use of *FFP Module App*, mobilization of funds from other sources, preparation of action plan for all modules at the institute level etc.

The PI of all four projects presented their physical/financial progress (2021-22) and Action Plan (2022-23) one after another which were critically reviewed, discussed by the scientists and suggestions were given. The PIs/Co-PIs of the projects were requested to incorporate the suggestions for further improvement.

Annual Zonal Workshop 2022 of KVKs of Zone V organized

Annual Zonal Workshop 2022 of KVKs of this Zone was organized by ICAR-ATARI Kolkata in collaboration with KVK Jalpaiguri under WBUAFS, Belgachhia, West Bengal during 27 to 29.04.2022 at Lataguri, Jalpaiguri, West Bengal. In this program, 59 KVKs of A & N Islands (3), Odisha (33) and West Bengal (23) participated and presented their progress report (2021-22) and action plan (2022-23). Shri B. Mitra, Hon’ble Minister In-Charge, Agricultural Marketing, Govt. of West Bengal complemented the KVKs for their



contribution in the development of farm sector through transfer of technology and services rendered to farming community. He highlighted the initiatives of Govt. of WB in creating marketing avenues and strengthening infrastructure facilities for realization of good prices of

farmers' produces. Dr. J. Roy, Hon'ble MP, Jalpaiguri expressed with happiness that during COVID pandemic situations, country didn't face food crisis due to the



continuous efforts of KVKs, farmers and scientists. He emphasized on promoting natural farming on the back drop of decreasing soil fertility and productivity arising from use of chemical inputs in farming. Addressing the Zonal Workshop virtually, Dr. A. K. Singh, DDG (AE), ICAR complemented the KVKs of this zone who were doing commendable works and transferring many of the ICAR developed technologies to the farmers' field. He mentioned that



KVK became very important component in ICAR system, and KVKs were delivering wonderfully throughout the country by convincing the farmers with new technologies.

Swami Atmapriyananda Ji Maharaj, Pro-Chancellor, RKMVERI, Belur Math, in his virtual address stressed upon the need of translational research from lab to home over

the traditional concept of lab to land. He emphasized on the concept of 'One Health' with Soil-Plant-Animal-Human continuum (SPA) based on principle of *Ekatwa* or oneness. Prof. C. Guha, Vice Chancellor, WBUAFS urged that all KVKs should take special interest in adopting climate resilient technologies in the backdrop of climate change. He opined that KVKs are mouthpiece of the host organizations and appreciated their role in improvement of livelihood of farming community. Director, ICAR-ATARI Kolkata presented an overview of the activities and achievements of KVKs of this Zone of 2021-22. Six publications related to CFLD on Pulses, ARYA, NICRA, GKMS, ATARI Newsletter published by ATARI Kolkata and Jalpaiguri KVK Newsletter published by Jalpaiguri KVK were released during the occasion. After the inauguration, the KVKs presented their progress report and action plan in three concurrent technical sessions and the reports of all Technical Sessions were presented in the Valedictory Session. Prof. S. K. Chakrabarti, VC, UBKV that all the recommendations that emerged during the workshop would be certainly carried forward for implantation.

Review meeting on Gender and Nutrition Network Project organized

A review meeting of the project on gender and nutrition network project was held on 10.06.2022 at 11:30 AM through online mode for the participating 12 KVKs of this Zone (2 from West Bengal and 10 from Odisha). The objective



of the meeting was briefed by Dr. S.K. Mondal, Pr. Scientist, ATARI Kolkata and CCPI of the project. The detailed deliberations were made on the present status and future plan of activities relating to RCT etc. for successful and timely completion of Phase-II of treatment and data collection. It was reiterated that the nodal scientists of the KVKs are Co-CCPIs of the project and the due credit would be given to them.

Review meeting of Integrated Farming organized

One review meeting of NABARD funded project on integrated farming was held at ICAR-ATARI Kolkata on 27.06.2022 under the Chairmanship of Dr. A. Bandyoadhyay, Former National Coordinator of National Agricultural Science Fund (NASF),



previously named as National Fund for Basic, Strategic and Frontier Application Research in Agriculture (NFBSFRA), ICAR, New Delhi to discuss the progress of the project. Scientists from ICAR-ATARI Kolkata, RKMVERI, Belur and selected KVKs were present in the meeting.

Meetings/workshops/symposia etc. attended by scientists/ staff

Sl. No.	Name of the programme(s)	No. of scientist(s)/ staff attended
1	Online Zonal Review Workshop of FFP under ICAR-ATARI Kolkata organized by ICAR-ATARI Kolkata	7
2	Online Mid-Term Review Meeting of RAC approved projects organized by ICAR-ATARI Bengaluru	6
3	Online review meeting of officers and staff of ICAR H.Q., Institutes of ICAR, ASRB and DARE addressed by DG, ICAR organized by the Council	8
4	Online meeting on 'Indian Agriculture after 75 years of Independence' organized by ICAR, GIST (Global Indian Scientists and Technocrat Forum)	6

Sl. No.	Name of the programme(s)	No. of scientist(s)/ staff attended
5	Annual Zonal Workshop 2022 for KVKs of ATARI Kolkata at Lataguri, Jalpaiguri, WB organized by ICAR-ATARI Kolkata in collaboration with KVK Jalpaiguri	10
6	XII th Biennial National KVK Conference 2022 at YSPUH, Solan organized by ICAR-ATARI Ludhiana in collaboration with YSPUH, Solan KVK Jalpaiguri	5
7	Online meeting with PIs/CO-PIs/SSHs of KVKs of different network projects	6
8	Review meeting with PIs/CO-PIs of different Institute projects	4
9	Selection Committee Meeting as Chairman/Member for selecting SRF/YP-I/Project Assistants of FFP/ARYA/NEMA/NABARD funded projects at ICAR-ATARI Kolkata	10
10	Online interaction meeting with farmers and Hon'ble PM of India	15
11	Meeting as Chairman/ Committee member for scrutinizing application of various posts of KVKs at ICAR-ATARI Kolkata	5
12	Meeting with SSHs of KVKs under MDP programme and scientists of ICAR-ATARI Kolkata	9
13	Meeting on CFLD on Pulses and Oilseeds-area allotment during 2022-23	4
14	Online review meeting of ARYA	3
15	Scientific Advisory Committee (SAC) meeting of KVKs	6
16	Review meeting on 'Formation and Promotion of FPOs by KVKs and ICAR Institutes'	4
17	Meeting with Dr. P. Kumar, Former Director, ICAR-Zonal Project Directorate, Bengaluru and scientists of ICAR-ATARI Kolkata	7
18	Online meeting on 'Promotion of Kisan drones: Issues, challenges and way forward' organized by DAFW, New Delhi	8
19	Online meeting of DDG (AE), ICAR, New Delhi and scientists of ATARIs regarding interaction of farmers with Hon'ble PM held on 31.05.2022 organized by the Council	8
20	Meeting with WBSCTVESD, Department of Technical Education, Training & Skill Development, Govt. of West Bengal and scientists of ATARI Kolkata organized by ICAR-ATARI Kolkata	5
21	Online programme of 94 th Foundation Day of ICAR held at New Delhi organized by ICAR, New Delhi	22
22	Meeting to review documentation of 75000 DFI cases and finalization of format of presentation	4
23	Fifteenth Institute Management Committee (IMC) Meeting of ICAR-ATARI Kolkata	6
24	E-meeting of Division to discuss the revision of KVK Manager's Guide (Administrative and Financial Matter) and review of MoU/Agreement signed between the Host Organization and ICAR	3
25	Meeting of Task Force on agro-climatic zone of Eastern Himalayas	2
26	Online meeting on 100% budget utilization and other related issues organized by the Council	10
27	Workshop and District Committee meeting of ICAR-ARYA project at KVKs	2
28	Divisional meeting on DFI and Kisan Bhagidari organized by the Council	4
29	Meeting on <i>Kharif</i> planning for CSISA Project	2
30	Meeting for discussion on QRT recommendations organized by the Council	3
31	Meeting with Director, ICAR-ATARI Kolkata on various issues	12
32	Programme of Hon'ble Minister of State for Education, Govt. of India on 'Garib Kalyan Sammelan' at Bankura	4
33	Online meeting for launching of NABARD funded project on 'Integrated Farming' at ICAR-ATARI Kolkata	4
34	Online inaugural program of beekeeping training organised by KVK Nadia and Nimpith	1
35	Online meeting on 'Kishan Sharati' organized by the Council	2
36	Online meeting on 'Area expansion of sunflower in rice-fallows' under National Food Security Mission- Oilseeds, Ministry of Ag. & FW, GoI	2
37	Attended and delivered lecture in the inauguration program of training on 'Hygienic meat processing and value addition'	1
38	Other meetings on various issues	10

Distinguished visitors

- Dr. P. Kumar, Former Director, ICAR-Zonal Project Directorate, Bengaluru.
- Dr. A. Bandyopadhyay, Former National Coordinator of National Agricultural Science Fund (NASF), previously named as National Fund for Basic, Strategic and Frontier Application Research in Agriculture (NFBSFRA), ICAR, New Delhi.
- Dr. S. S. Singh, Former Director, ICAR-ATARI Kolkata and Dean, Extension Education, RLBCAU, Jhansi.



Publications

Research articles

- Attapuram N M, Mondal S K and Das K S. 2022. Sexual Behavioural Activities of Purebred Landrace Boars under Different Mating Regimens. *Asian Journal of Research and Review in Agriculture* 4(1): 13-16.
- Basak P, Sarkar D, Mandal B, Mal S, Adhikary S, Kundu R, Dutta J, Deb S and Rahman F H. 2022. Determination of critical concentrations of boron in soils and plants of cauliflower (*Brassica oleraceavar. botrytis* L.) using a polynomial equation. *Soil Science and Plant Analysis*(Submitted).
- Debbarma N, Haldar A, Bera S, Debnath T, Paul A, Chakraborty S and Dhama K. 2022. Effect of different management systems on the performance of Black Bengal goat for sustainable and profitable farming. *Journal of Veterinary Medicine and Animal Sciences* 5(1): 1112.
- Jena M and Pal P P. 2022. Empowering rural women of Odisha, India through self-help group intervention- An assessment. *International Journal of Bioresource and Stress Management* (Accepted).
- Mondal S K, Das K S, Roy S K and Rajkhowa C. 2021. Physical characteristics and chemical composition of mithun (*Bos frontalis*) carcass. *Journal of Veterinary and Animal Science* (in press).
- Mondal S K, Pal D T, Das K S and Roy S K. 2020. Nutrient composition of preserved fodder grasses of Nagaland used for feeding of mithun (*Bos frontalis*). *Indian Agriculturist*, 64(1&2): 35-39 [Published in the year 2022].
- Nanda B K, Ramakrishna Y, Kumaravardan R J, Bhattacharya R and Rahman F H. 2022. Adaptation potential of dyke vegetable cultivation to overcome the impact of climate change on Island Agriculture. *Indian Agriculturist*, 64(1 & 2): 63-66.
- Technical bulletins**
- Das K S, Mondal S K, Roy S K, Pal P P, Haldar A and Rahman F H. 2022. ATARI Kolkata News. Published by the Director, ICAR-ATARI Kolkata, Vol 5, No. 2, pp:1-12.
- Ghorai D, Rahman F H, Sahu N C, Sen H S and Mandal B. 2022. Fertilizers and Environment News. Published by the Society of Fertilizers and Environment, Vol. 8, No.1, pp: 1-16.
- Ghorai D, Sarkar S, Garai S, Jana C, Ziauddin G, Saikia P, Singh M S, Rahman M A, Behera M S, Rahman F H and Kar G. 2022. Successful farmers- Tales of KVK Burdwan. Published by the Director, ICAR-CRIJAF Barrackpore, Bulletin No. CRIJAF/KVK/2021, pp:1-32.
- Ghorai D, Sarkar S, Rahman M A, Behera M S, Rahman F H and Kar G. 2022. Compendium on Advanced farming technology for Doubling Farmers Income. Published by the Director, ICAR-CRIJAF Barrackpore, Vol 1, pp:1-40.
- Pal P P, Dutta S and Das S. 2020. Attracting and Retaining Youth in Agriculture-An approach towards youth empowerment. Published by the Director, ICAR-ATARI Kolkata, pp:1-144 (Published in the year 2022).
- Rahman F H, Bhattacharya R and Nandi S. 2022. NICRA Newsletter: Towards climate smart agriculture. Published by the Director, ICAR-ATARI Kolkata, Vol. 8, No. 1, pp:1-8.
- Rahman F H, Nandi S and Bhattacharya R. 2022. GKMS Newsletter. Published by the Director, ICAR-ATARI Kolkata, Vol. 3, No. 1, pp:1-16.
- Abstracts presented in national/international seminars, conferences etc.**
- Bhattacharya R, Nanda B K, Ramakrishna Y, Kumaravardan R J, Ghosh S, Murmu S and Rahman F H. 2022. Adaptation potential of dyke vegetable cultivation to overcome the impact of climate change on island agriculture. Paper presented in 9th Annual Convention and A Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Das S, Rahman F H, Roy R, Bhowmik P, Majumder D, Rudra B and Sarkar V. 2022. Effect of arka mango special application on inflorescence development, fruit setting and fruit quality of mango in Malda District, West Bengal. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Garain P K, Mondal C K, Rahman F Hand Jana S. 2022. Climate resilient farming models for different farming system typologies in Sundarbans. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Jena D, Sethy S, Rahman F H, Sarangi D R, Sahoo T R, Mohanta R K. 2022. Piloting district agromet unit for enhancing the economic benefit of farmers by minimizing the input cost and providing block level weather forecast based agromet advisory: A case study of Cuttack district of Odisha. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Majhi P, Rout K K, Phonglosa A, Das D M, Mohanty A and Rahman F H. 2022. Relative effect of different long term manurial practices on concentration of ammonium (NH₄⁺) in ponding water and determination of minimum holding period to reduce N loss in irrigated rabi rice. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Mishra P, A. Phonglosa A, Rahman F H, Mahapatra N, Sahoo P K and Mishra S N. 2022. Quality vegetable planting material production under heavy rainfall Kedrapara district of Odisha. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Roy S, Maitra N J, Goswami A, Nandi S K and Rahman F H. 2022. Studies on scientific rearing of small ruminants for rural development in Sundarbans. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.
- Roy S, Maitra N J, Rahman F H. 2022. Music-A nonchemical method of

milk production enhancement in dairy cattle. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.

Sahoo T R, Sahoo H K, Rahman F H, Behera M R, Mohapatra R K and S. N. Mishra S N. 2022. Performance of flood tolerant rice variety CR-1009 sub 1 in flood prone area of coastal Odisha. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.

Sarkar S, Sultana S, Rahman F H and Roy B. 2022. Assessment of different chemistries against mango hopper in Terai region of West Bengal. Paper presented in 9th Annual Convention and a Webinar on 'Managing Agro-chemicals for Crop and Environmental Health' of Society for Fertilizers & Environment held on February 25 & 26, 2022.

Book chapters/ contribution made in compendium

Dash L, Sahoo S K, Rahman F H, Mohanty S, Nanda P K, Kundu

D P, Mishra S N and Dash S K. 2022. Kendrapada Sheep: An Insight into Productivity and Genetic Potential of this Prolific Breed. Book Chapter published by Springer Nature Singapore Pvt. Ltd., pp:1-14.

Ghosh S, Bhattacharya M and Rahman F H. 2022. Socioeconomic study of prospective of probiotics, prebiotics, and symbiotics for sustainable development of aquaculture in Indian Sundarbans. In: Prebiotics, Probiotics and Nutraceuticals. Published by Springer Nature Singapore Pvt. Ltd. (https://doi.org/10.1007/978-981-16-8990-1_13).

Haldar A, Mandal S N, Deb S, Roy R and Laishram M. 2022. Application of information and electronic technology for best practice management in livestock production system. In: Kumar A, Kumar P, Singh S S, Trisasongko B H and Rani M. (Eds). Agriculture, Livestock Production and Aquaculture. Published by Springer, Cham. (<https://doi.org/10.1007/978-3-030-93262-6-11>).

Haldar A, Samanta I and Patra A. 2022. Knowledge intensive livestock resource management in a changing environment. In: Kumar P, Pandey A K, Singh

S K, Singh S S and Singh V K (Eds.). Sustainable agriculture systems and technologies. Published by John Wiley and Sons Ltd., pp: 117- 168 (<https://doi.org/10.1002/9781119808565.ch7>).

Mondal S K, Das K S and Singh S S. 2022. Smallholder pig value chains development and livelihood security. Book chapter In: 'Agriculture, Livestock Production and Aquaculture'. Published by Springer Nature (in press) [DOI: 10.1007/978-3-030-93258-9].

Invited lectures

Rahman F H. 2022. Climate resilient agricultural practices for sustainable livelihood in Eastern India. Lecture delivered in 6th International Conference on 'Current issues in agricultural, biological and applied sciences for sustainable development (CIABASSD-2022)' at Kalimpong Science Centre, Deolo, Kalimpong held on 11-13th June, 2022.

News items

- 'Zonal Review Workshop of FFP (2021-22)' held on 12.01.2022 for ICAR, KVK Portal and ICAR-ATARI Kolkata website.
- 'Zonal Review Workshop of FFP 2022-23' held on 21.04.2022 for ICAR, KVK Portal and ICAR-ATARI Kolkata website.

Award/ Recognition

Award/ recognition

➤ Dr. F. H. Rahman, Pr. Scientist of this Institute has been conferred with 'Fellow of Himalayan Scientific Society for Fundamental and Agricultural Research 2022' during 6th International Conference on 'Current Issues In Agricultural,

Biological & Applied Sciences for Sustainable Development'



(CIABASSD-2022) at Kalimpong Science Centre, Deolo, Kalimpong held on 11 to 13th June, 2022.

➤ Dr. S. K. Mondal, Pr. Scientist of this Institute has been awarded with 'Appreciation Certificate' for reviewing articles of *Net Journal of Agricultural Sciences Journal*.

Personalia

Joining

Ms. S. Das has joined this Institute as SRF, ARYA on 21.02.2022 (forenoon).

Mrs. U. Das has joined this Institute

as Project Assistant, NABARD Funded Project on 01.04.2022 (forenoon).

Ms. A. Begam has joined this Institute as SRF, FFP on 25.05.2022 (forenoon).

Relieving

Sh. S. Murmu, SRF, FFP has been relieved from this Institute on 31.03.2022 (afternoon).

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



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