

ATARI Kolkata **NEWS**



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From the Director's Desk

"Science is a beautiful gift to humanity; we should not distort it." - A.P.J. Abdul Kalam

ICAR-Agricultural Technology Application Research Institute (ATARI) Kolkata is continuously engaged in coordinating and monitoring technology application and frontline education system; and strengthening agricultural extension research and knowledge management for the benefit of farming community through Krishi Vigyan Kendras (KVKs) spread across the country.

In the present scenario, sustainable agri-farming has become a great challenge for agri-scientists, farmers and other related stakeholders due to climatic vulnerability, inconsistent landholding pattern, unavailability/ shortage of quality seeds, insufficient water availability, indiscriminate use of fertilizer and insecticides, huge post-production losses, improper market regulations, lack of region-specific policies etc. Further, the recent focus of Government of India on Doubling Farmers' Income by the year 2022 has put additional pressure to the agricultural sector. However, to overcome these hurdles, all 58 KVKs of this zone are trying hard to make strong liaison between farmers and ICAR research institutes/ state agricultural universities/ line departments of central and state government/ other related organizations for implementing recent farmers' friendly technologies to enhance agricultural production, for raising awareness among farmers, for linking with local marketing channels to get higher profit from agricultural produces and other related issues.

During the specified period, this Zone has conducted a large number of on-farm and off-farm trials, demonstrations, trainings, various special programmes/ events, e.g., *Sankalp Se Siddhi, Swachh Bharat Mission, World Soil Day, Kisan Mela, Kisan Gosthi, Technology Week, Hindi Pakhwada, Adibasi Divas* and many others. A number of workshops, review meetings, training programmes etc. were also conducted by ATARI Kolkata and Host Organizations of KVKs to improve the efficiency of scientists and other staffs towards the discharge of duties and to critically analyse the progress of various projects/ programmes of this Institutes. The impact making technologies, developed by our KVKs, are also a part of this issue.

I am sure that this issue of ATARI Kolkata News depicts a complete range of various activities conducted by this Institute which is actively involved in application research in improved agricultural technologies for the benefit of farming community of this country.

I appreciate and congratulate all scientists and staff of this Institute for their constant and sincere efforts in bringing out this publication. Feedbacks and suggestions are always welcome.



(S. S. Singh)

Technologies that made impact

Mushroom/ Spawn Production: An entrepreneurial venture of Dhenkanal

Dhenkanal district has a coverage of around 94000 ha area under kharif paddy production resulting huge availability of paddy straw. The KVK Dhenkanal were trying to popularize mushroom cultivation using that chief resource to convert into valuable food materials through creating awareness



among farmers, conducting on-campus and off-campus training programmes under different climatic conditions and demonstrations. Mr. Bijay Kumar Sahu, a resident of village Lamodarpur, P.O.-Bhaliabolakateni, Block- Dhenkanal Sadar, District-Dhenkanal, Odisha, was convinced by the scientists of Dhenkanal KVK and he started mushroom cultivation by procuring spawns from CTMRT and OUAT. The technical support was provided by KVK Dhenkanal



and OUAT, Bhubaneswar. Although, at the initial stage, marketing was a problem, but, with the passage of time, it has become very popular in the district. At present, around 200 mushroom growers in the district produce >30 q mushroom daily and some farmers are producing under poly-house during winter season. The yield of mushroom per bed comes around 1-1.5 kg which has a market price

of Rs. 100/- per kg against the cost per bed of Rs. 50/- . From 50 beds, the daily minimum yield is 50 kg with net return of Rs. 2500/- per day. For producing 1500 bottle mushroom spawn per day, the total expenditure comes around Rs. 10500/-. The gross return from the same is around Rs. 18000/- and the net return is Rs. 7500/-. Sri Sahu has been able to leverage support from various state Departments and Nationalized Banks. He has established a very good marketing linkage with the mushroom growers of the district and other surrounding districts.

The impact of the technology with Sri Sahu is quite visible from the farm economics point of view. He has provided employment for 10 persons in his unit, constructed a new building for spawn unit, purchased land as well as advanced agricultural implements like rice transplanter, paddy reaper, tractor,



power weeder and so on. He has been recognized as a successful entrepreneur in the district. He has been awarded by Department of Agriculture, Horticulture, OUAT, UCORSETI and many more. Seeing the benefit, many entrepreneurs of this district and nearby districts have adopted the technology. Now, more than 200 farmers are producing mushroom and 21 farmers are producing mushroom spawn in the district. They are supplying mushroom to various parts of the

district and to other districts like Angul, Sambalpur, Bargarh, Sundargarh etc.

Low cost nutritional weaning food: A case of up-scaled technology

Malnourishment amongst the pre-school children (0-5yrs age group) in Uttar Dinajpur district was alarming. As data revealed from District Project Office, ICDS, Uttar Dinajpur that around 10 percent children enrolled with 3737 numbers of Anganwari centres of the district were severely underweight and defined as "Red-Children". The Integrated Child Development Service (ICDS), Uttar Dinajpur was providing various services through 3737 service centres. Keeping this alarming situation in view and considering the poor economic condition of a large section of community, Uttar Dinajpur KVK since its inception has taken rigorous activities for protocol development of various low cost nutritious weaning food utilizing locally available ingredients (wheat, maize buck wheat, green gram, peanut, drumstick leaves etc.) through its mandated activities of on farm trials (OFTs). After rigorous trials for several years, Uttar Dinajpur KVK has been able to develop and standardize several formulations of low cost weaning foods. The calorie measurement and nutritive value of the feed formulations has been tested at CFTRI, Mysore. All the feed formulations passed the criteria on calorie measurement and nutritive value as per national standards.



Sl. No.	Name of Village	No. of children	Adoption rate of technology
1.	Dhuliagacch	16	65%
2.	Gulamigacch	18	58%
3.	JhitkaTutikata	23	45%
4.	Kadamtala	14	72%
5.	Dhonogacch	21	75%

After standardization of feed formulation through On Farm Trials Uttar Dinajpur KVK started wide scale adoption of the technology through training of the SHG members and Anganwari workers for capacity building and sensitization, frontline demonstrations, case studies, awareness campaigns, field days etc. Three SHGs after getting trained from KVK, started producing low cost weaning food under direct supervision of KVK and selling it in the name of 'SHISHU AAHAR' in the local Mela, rural Haats, Krishi Mela, Swanirbhar Mela, Kanyashree Mela, Sabala Mela etc. As a result, the



brand name of 'SHISHU AAHAR' got a wide spread popularity and preference amongst the resource poor farm families. Then, Uttar Dinajpur District Administration decided to incorporate the low cost nutritious weaning food developed by Uttar Dinajpur KVK in a project called "PUSHTI"- an initiative for providing additional nutritional supplements to the malnourished pre-school children through SHG networks of the district. Skill development training on preparation and quality control was imparted to the selected SHG members by the KVK. The DRDC was in need to supply 3007 packets of food supplement for the children and 2054 packets for the pregnant mothers in the district per week and DRDC negotiated the matter with 10 SHGs one each from ICDS block of the district to produce and supply required numbers of food packets to the concerned ICDS centre of the block. On the other hand, DRDC remitted the fund for the cost of the food packets in the account of the concerned SHGs. The positive impact of the food supplements provided to the malnourished children can be revealed from the chart. Figure shows month wise data on severely malnourished children in Uttar Dinajpur District after supplementing with low cost weaning food developed by KVK.

Though "PUSHTI" project is operating in the whole district, now, Uttar Dinajpur KVK is working particularly on tribal children to eradicate malnutrition through FLD programme. The details are given in the following table.

Integrated Farming System as a profitable enterprise

Shri. Udit Bhabu Singh hailing from tiny Banamali Prasad village of Sadar Block of Dhenkanal District is an IT professional. He was working in Singapore since last 10 years before quitting his job and opting to take agricultural farming as a new career. He chose to use his ancestral properties in Dhenkanal, Odisha to start his entrepreneurship in agriculture and horticulture as an integrated farming model. His traditional farming was included only cashew with a small dairy unit. After coming back to India, he visited KVK Dhenkanal and discussed about his projects with scientists of KVK Dhenkanal and prepared a plan in developing his 9 acres of barren land into



a successful integrated farm. The technical support from KVK Dhenkanal helped him to shore up and integrate his farming through introduction of improved varieties / hybrids of horticulture crops, upgrading dairy unit, azolla as cattle feed, vermicompost, poultry, fodder bank, TC banana and TC pomegranate with drip irrigation through farm mechanisation at his level. The most crucial intervention is the introduction of pineapple (*var. MD2*) as inter crop in existing cashew orchard followed by cultivation of vegetable crops viz., pole beans, cucumber, tomato, bitter guard and brinjal, black gram etc. as intercrop in 5 acre older Cashew orchard by rejuvenating the older plants and adding new V4 varieties of cashew plants as a high density plantation. The rest of the lands were extended with 2-3 acres of TC banana and TC pomegranate, 1 acre of papaya (*var. Pusa Nanha*)

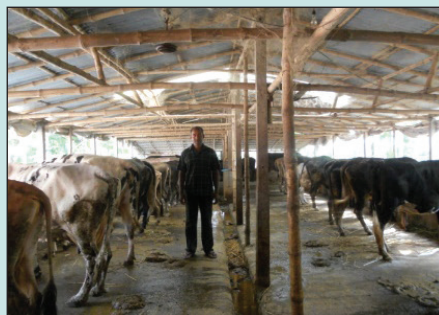
under micro irrigation system. Shri. Singh has successfully incorporated the enterprises in such a way that it enhanced productivity and profitability in relation to the farming system model. Earlier, the only source of income for Shri Singh was from the one acre cashew fetching him a net income of Rs.1,50,000/-only and Rs. 30,000/- from dairy unit. Now, he is earning a net annual income of 9-10 lakh from selling of different vegetables, pineapple, cashew, pomegranate, banana, poultry, dairy etc.

Shri U. B. Singh has developed his farm with a combination of horti-vermi-poultry-pasture cultivation. In the days to come this would become a major source of income for this model stake holder. To feed his small dairy unit (one Jersey & one Gir cow), he has established a fodder bank comprising Co-3, Co-4, and azolla with the support of KVK Dhenkanal. He has also planted *Glyricidia* all along the borders of his farm. The combination of azolla and the feed mixture has reduced his feed cost by Rs.150/- per day. As a water conservation practice, he has adopted micro sprinkler irrigation system in the cashew orchard, vegetable fields, banana cultivation and pomegranate orchard. To reduce drudgery, the farmer has opted for mechanisation to suit his farming and his practices. To recycle wastes, he has purchased a chaff cutter, a cycle weeder etc. to reduce the cost of labour. He recycles farm waste into a healthy manure through vermicompost unit. His practice of integrated farming meets over 75% of nutrient requirement through recycling of bio-mass available within the farm itself. He has initiated decomposing the farm waste using waste decomposer from National Centre of Organic Farming through the advice of KVK Dhenkanal which will help him in converting his farm practices from chemical farming into organic farming. He had cultivated black gram as intercrop in cashew orchard and incorporated the bio-mass as green manure into the crops. The average production from his farming per year is 2-3 tonnes of cashew nuts, 3 tonnes of vermicompost, 5 tonnes of cow dung, 10 tonnes of fodder grass and vegetables worth Rs. 3,40,000/-. At present, he is an employer of 15 people and is a role model of farmers across the state.

Dairy farming as livelihood income

Mr. Sumanta Ghosh, a progressive dairy owner from Village- Padmabila, Block- Chakdah, District- Nadia, West Bengal, started his dairy farming with two crossbred milch cows during the year 2010 which was increased by 26 milch cows and 11 calves/ heifers by 2015. He achieved tremendous success in the business by that time. If we look into his past, Mr. Ghosh had only 2.5 acre land. Out of which he used 1.5 acre land for annual and perennial fodder production and rest land for animal shed and own dwelling place. His all five family members devoted their time for animal rearing and ultimately, that business turned into a commercial venture. Shed and animals were maintained by Sri Ghosh himself

but fodder cultivation was supported by outside local labourers. The real and important fact was that Mr. Ghosh did not take any kind of credit from either Government or Private Institutions. The



necessary trainings were taken from the Scientists of KVK Nadia and from the Department of Animal Resources

Development, Nadia, West Bengal. The KVK Nadia supplied fodder crops namely Maize, Barseem, Cowpea, Oats, Rice bean, Sorghum, N. B. Hybrid which were successfully grown by him. His fodder growing land was also a point of attraction to neighbouring livestock farmers and also to the Officials of Animal Resources Development department, Nadia, West Bengal. Sri Ghosh had been awarded with “Best dairy cattle farmer in Nadia district” during 2013-14 by NABARD, Nadia. In addition, he established one gobar gas plant to supply energy to his animal shed, own house and feed preparing machine. The slurry, by-products of gobar gas plant, is very rich in inorganic matter and is being used for fodder cultivation in his own agricultural land.

Important activities of KVKs (June-Dec 2017)

Sl. No.	Activities	Achievements
1.	Number of on- farm trials conducted (Number of technologies)	238
2.	Frontline demonstrations conducted (Number)	17806
3.	Farmers trained (in lakh)	0.94375
4.	Extension Personnel trained (in lakh)	0.08016
5.	Participants in extension activities (in lakh)	2.07508
6.	Production of seed (in quintals)	2345.04
7.	Planting material produced (in lakh)	17.91
8.	Livestock strains and finger lings produced (in lakh)	49.14
9.	Soil, water, plant, manures samples tested (in lakh)	0.10385
10.	Mobile agro- advisory provided to farmers (in lakh)	19.34

News from KVKs

“Mahila Kisan Diwas” celebration

In recognizing the role of women, women empowerment, nutrition and income generation in Indian agriculture, “Mahila

Kisan Diwas” was celebrated on 15th October, 2017 at various KVKs under this Zonethrough organizing various programmes viz. debate, essay, drawing

competition, exhibition etc. In the occasion, women were honoured by the KVKs for their significant contribution in agriculture.

Celebration of “Mahila Kisan Diwas” by KVKs

State	Number of KVKs Organised program	Participants (No.)						
		No. of places MLAs Attended program	No. of places Chairman /Zila Panchayat	No. of places Distt. Collector/ DM	No. of places Bank Official	Farmers	No. of places Govt. Officials, PRI member etc.	Total
A & N Islands	2	0	0	0	0	105	1	106
Odisha	25	2	4	0	1	1245	19	1271
West Bengal	14	0	3	0	4	713	9	729
Total	41	2	7	0	5	2063	29	2106



Cuttack KVK



Nimpith KVK



Nicobar KVK

“Jai Kisan Jai Vigyan” week celebration

On the occasion of the birth Anniversary of former Prime Minister Shri Atal Bihari Vajpayee and Late Shri Chaudhary Charan Singh, many KVKs under ICAR-ATARI Kolkata celebrated ‘Jai Kisan Jai Vigyan’ Week w.e.f. 23rd December to 29th December, 2017. Various awareness programme (importance of soil testing, rain water harvesting and its judicious

use, scientific cultivation of oilseed and pulse during *rabi* summer season), showcasing of different KVK assessed as well as refined technologies to improve

the productivity, animal health camp, farmers-scientist interactions, training programmes etc. were the part of celebration of the week.



Events

“Sankalp se Siddhi” programme

As a part of New India Movement 2017-2022 and in view of achieving doubling the farmers’ income by the year 2022, and adopting seven point programme on agriculture and allied sector development, a programme on “Sankalp se Siddhi” was conducted for the agricultural farmers at various KVKs under ICAR-ATARI

Kolkata. Under seven point programme, farmers were motivated for providing assured irrigation, enhancing agricultural production, using inputs efficiently, reducing post-harvest losses, producing quality agricultural produce, promoting e-marketing for agricultural commodities and providing insurance cover in reducing risk in agriculture. Number of scientists from ICAR-ATARI Kolkata, KVKs and

nearby ICAR institutes; experts from line department of respective states and other organizations; public representatives; press and media; and a large number of farmers including progressive farmers, rural youths, and women farmers of the district took participate in the programme at the KVKs. The details of programmes under ICAR-ATARI Kolkata have been presented in the table.

“Sankalp se Siddhi” programme organised at KVKs

Sl. No.	Stae	No. KVKs organised the pro-gram	No. of Union Ministers attended the pro-gramme	No. of Hon'ble MPs (Loksabha/ Rajyasabha) participated	No. of State Govt. Ministers	Participants (No.)							Coverage by Door Darshan (Yes/ No)	Coverage by other channels (Number)
						MLAs Attended the pro-gramme	Chairman Zila Pan-cha-yat	Distt. Collec-tor/ DM	Bank Officials	Farm-ers	Govt. Officials, PRI members etc.	Total		
1.	A & N Islands	3	0	0	0	0	2	1	5	606	19	633	1	4
2.	Odisha	27	3	12	1	16	11	6	65	11090	194	11382	14	66
3.	West Bengal	18	1	9	1	7	5	0	31	8070	102	8215	5	24
	Total	48	4	21	2	23	18	7	101	19766	315	20230	20	94



Khorda KVK



Port Blair KVK



Jagatsinghpur KVK



Howrah KVK

'Swachhta Hi Seva' programme 2017 at KVKs and ICAR-ATARI Kolkata

As a part of the implementation of the Swachh Bharat Mission, Indian Council of Agricultural Research (ICAR) decided to launch a campaign 'Swachhta Hi Seva' from 15.09.2017 to 02.10.2017 at all Institutes / DUs/ CAUs/ NRCs/ Bureaus/ ATARIs/ KVKs/ Offices under DARE/ ICAR. The following action plan was prepared during the campaign.

- * Sanitation and cleanliness drive in and around the institute campus

throughout the period.

- * Awareness campaign for sanitation and hygiene and their importance in public health.

- * Undertaking specific activities on specified dates during the period.

Among different activities, displaying the banners "Swachhta Hi Sewa" at appropriate places in and outside the institute campus, Sapath/Oath taking, maintaining Swachh Monitoring System and everyday Shramdaan by officials were carried out at this Zone including ATARI Kolkata. On the occasion, Sewa

Diwas on 17.09.2017, Samagra Swachhta Diwas on 24.09.2017, Sarwatra Swachhta



on 25.09.2017 and Swachhta of nearby tourist spots on 01.10.2017 were also celebrated.

Observation of 'Swachhta Hi Sewa' programme

Sl. No.	Activity	No. of KVKs involved	No. of villages involved	No. of participants	No. of VIPs (If participated with their names)
1.	Celebration of Sewa Divas (17th Sept. 2017)	54	123	3324	2 (Mr. Bijay Kumar Soren, DAO, Gunupur; Shri. Pravhakaran, Sarpanch, Gram Panchayat Shipuram)
2.	Celebration of Samagra Swachhta Diwas 24th Sept. 2017	54	151	4485	2 (Sri Mukunda Ari, Panchayet Upa-pradhan; Mr. K. Someswara Rao, Sarpanch, GP- Gadiakhala, Block- Gumupur, District- Rayagada)
3.	Celebration of Sarwatra Swachhta 25th Sept. 2017	51	114	2152	5 (Mr. Bijay Kumar Soren, DAO, Gunupur, District-Rayagada; Smt Sebastian Lakra, Pradhan; Smt Bina Rao, Sarpanch; Mr. Subhashis Banerjee, Sr. Technical Supervisor, SE Railway, Adra Division; Mr. Sudip Kr. Kumbhakar, Stn. Manager, Kustaur)
4.	Swachhta of nearby Tourist Spots.	45	-	-	-
5.	Public Function/ Award Ceremony	31	-	-	-
6.	Other Misc. activities	49	-	-	-

'हिन्दी पखवाड़ा- 2017' समापन समारोह का आयोजन

भा.कृ.अनु.प.-कृषि तकनीकी अनुप्रयोग संस्थान, कोलकाता में दिनांक 07.09.2017 से दिनांक 21.09.2017 तक "हिन्दी पखवाड़ा-2017" का समापन समारोह का आयोजन लगातार तीसरी साल के लिए किया गया। इनमें संस्थान के सभी अधिकारी एवं कर्मचारी भाग लिया। संस्थान में 21.09.2017 को "हिन्दी पखवाड़ा-2017" का समापन समारोह



आयोजित की गयी। इस समापन समारोह की अध्यक्षता संस्थान के निदेशक महोदय डॉ. एस.एस. सिंह ने की।

पखवाड़ा का समापन समारोह का शुभारंभ डॉ. एस. के. मंडल, प्रधान वैज्ञानिक के स्वागत भाषण एवं मुख्य अतिथि के परिचय से हुआ। तत्पश्चात डॉ. मंडल ने संस्थान में राजभाषा कार्यान्वयन की प्रगति प्रतिवेदन प्रस्तुत की। इस प्रतिवेदन में संस्थान से

प्रकाशित हो रहे वार्षिक वैज्ञानिक पत्रिका "कृषि- पूर्वी किरण", हिन्दी में पत्राचार एवं सभी हिन्दी पत्रों में हिन्दी टिप्पणी देना इत्यादि के उल्लेख किए गए।

हिन्दी पखवाड़े के दौरान आयोजित हिन्दी काव्य पाठ प्रतियोगिता एवं हिन्दी अनुवाद प्रतियोगिता; तत्कालिकद्व के विजेताओं को मुख्य अतिथि डॉ. एस.



के. झा, प्रधान वैज्ञानिक, काईजाफ, वाराकपुर द्वारा पुरस्कार वितरित किए गए।

पखवाड़े के समापन समारोह के मुख्य अतिथि डॉ. एस. के. झा, प्रधान वैज्ञानिक, काईजाफ, वाराकपुर ने अपने संबोधन में संस्थान के सभी अधिकारी एवं कर्मचारी के प्रशंसा करते हुए हिन्दी को और तेजी से बढ़ावा देने पर जोर दिए एवं सूचना प्रौद्योगिकी के सफल प्रयोग के साथ हिन्दी के प्रगति पर अपने विचार रखे। डा. एफ. एच. रहमान, प्रधान वैज्ञानिक के धन्यवाद ज्ञापन के उपरान्त समारोह समाप्त हुआ।

Vigilance Week

The Vigilance Awareness Week on the theme "Public participation in promoting integrity and eradicating corruption" was observed by ICAR- ATARI Kolkata



and all KVKs under this zone spread in Anadaman & Nicobar Islands, Odisha and West Bengal for a week from 31st October to 5th November, 2017. The entire programme was commenced with an oath taking occasion by reading a pledge to fight against corruption. The Director of ICAR- ATARI, Kolkata (Zone V) and Senior Scientist and



Heads of various KVKs highlighted the importance of Vigilance Awareness Week at their respective institutions. Thereafter, an in-house discussion was made among

the staff on the theme.

“World Soil Day” celebration

The “World Soil Day” programme was

celebrated on Dec 5, 2017 at various KVKs under ICAR-ATARI Kolkata. The State-wise Summary on Celebration of World Soil Day has been given below.

State/UT	Number of KVKs Organised the programme	No. of farmer participated	Total No. of Participants	No. of Soil Health Cards distributed
A & N Islands	3	450	484	198
Odisha	30	6964	7210	6560
West Bengal	18	5838	6150	4325
Total	51	13252	13844	11083



DAESI Programme

During the period, a number of KVKs of this Zone e.g. Birbhum, Coochbehar, Howrah, North 24 Parganas, South 24 Parganas-Nimpith, Purulia and many



others started conducting ‘Diploma in Agricultural Extension Service for Input-Dealers’ (DAESI) programme to educate Agri-Input Dealers in their concerned districts on agriculture, to facilitate them to serve farmers better and to act as para-extension professionals. The program was



implemented by MANAGE through State Agricultural Management and Extension Training Institutes (SAMETIs) in West Bengal state.

Field visit for monitoring Tribal Sub Plan (TSP) activities

Dr. K. S. Das, Nodal Officer of TSP from ICAR-ATARI Kolkata and Dr. M. P. Nayak, Joint Director, Directorate

of Extension Education, OUAT, Bhubaneswar jointly visited farmers’



fields of Katadaganda, Biarapanga and Bandhaguda village of G. Udayagiri block, Kandhamal to monitor various TSP activities of Kandhamal KVK. They also visited the FLD plots conducted under TSP grown with cabbage (Hybrid-Disha) and garden pea (*var. GS-10*).



The beneficiary farmers admitted to the officials that all the critical inputs were properly distributed among the farmers by the KVK.

Field visit for monitoring CFLD Oilseeds and Pulses programme

Dr. S. K. Mondal, Pr. Scientist of ICAR-ATARI Kolkata visited Jampali village of Sonepur district, Odisha on 21.12.2017 and Lahanda village of Bargarh district, Odisha on 22.12.2017 to monitor the progress of CFLD on Pulses and Oilseeds under field conditions. In Sonepur



district, soil testing and seed treatment were done by the farmers before sowing. The green gram crop fields were in initial growth stage. On the other hand, the groundnut fields of Bargarh district were in very good condition. While discussing with the farmers of Bargarh district, they showed their happiness with seed germination rate.

Dr. K. S. Das, Pr. Scientist of this Institute visited the cluster fields of field pea of Biarapanga and Katadaganda village under Kandhamal district, Odisha on 28.12.2017. The fields were completely weed free and the crops were also free from any diseases and pests. During his visit of green gram and pigeon pea fields of Boudh district, Odisha on 29.12.2017, Dr. Das interacted with many farmer beneficiaries regarding field preparation, inputs from KVK, other crop management practices etc. The fields of Boudh district were very good.



Meeting/ workshop/ training programme organized/ conducted

Review Workshop of NICRA-TDC of Odisha KVKs

One day NICRA workshop of Odisha KVKs was organized on 12th July, 2017 at ICAR-ATARI, Kolkata. The workshop was chaired by Dr. S. S. Singh, Director, ICAR-ATARI, Kolkata. Dr. J. V. N. S. Prasad, Coordinator, NICRA-TDC, CRIDA, Hyderabad; Dr. A. Haldar, Dr. K. S. Das and Dr. S. K. Roy, Principal Scientist, ICAR-ATARI, Kolkata; and all the Programme Coordinators of NICRA implementing five KVKs of Odisha attended the meeting. Dr. S. S. Singh, in his speech, mentioned that the intervention under NICRA should read the vulnerability with existing cropping practices and the vulnerability should be prevented through NICRA interventions on priority. He emphasized to include new interventions in the model to combat those climate stresses. Dr. J. V. N. S. Prasad mentioned in his presentation that each intervention should be planned in relation to the climatic vulnerability like drought, cyclone, salinity, heat stress, flood etc. All concerned KVKs presented the status of achievements during the period.

Meeting on Seed Hub

In a view to assess the performance of the KVKs implementing seed hub programme, a review workshop for KVKs of Bihar, Jharkhand, Odisha & West Bengal was conducted on 2nd August, 2017 at ICAR-ATARI, Kolkata under the Chairmanship of Dr. N. P. Singh, Director, ICAR-IIPR, Kanpur in the presence of Dr. S. S. Singh, Director, ICAR-ATARI, Kolkata, Director, Seed and Farm, Govt. of West Bengal, DEEs of the SAUs. Scientists from ICAR-ATARI Kolkata, Sr. Scientist & Head of implementing KVKs and other dignitaries. In the formal welcome address, Dr. S. S. Singh expressed the importance of this flagship programme. Dr. P. P. Pal, Pr. Scientist, ATARI, Kolkata briefly presented the performance of 19 KVKs involved in seed hub programme including the expenditure statement and a few issues related to the programme. Dr. N. P. Singh, the Chairman of the programme, briefed about the objectives of the workshop emphasising the

detailed guidelines in which it should be conducted. The DEEs and Director Seed and Farms also pointed out the region specific issues regarding this programme. All the participating KVKs presented the status of the achievements during 2016-17.

Second Coordination Committee Meeting for Doubling Farmers' Income

The 2nd Coordination Committee Meeting for Doubling the Farmers' Income by March 2022 was held under the Chairmanship of Dr. D. D. Patra, Vice-Chancellor, BCKV, Mohanpur, Nadia, West Bengal on 8th August 2017 at ICAR-ATARI Kolkata. At the outset, Dr. A. Haldar, Principal Scientist, ICAR-ATARI, Kolkata welcomed all the Hon'ble members of Coordination Committee, representatives of different organisations, and scientists of ICAR-ATARI, Kolkata. After self-introduction by all the members and participants, Dr. S. S. Singh, Director, ICAR-ATARI, Kolkata presented a brief about the purpose of the meeting. Mentioning the reference of last meeting in this regard, he stressed upon the preparation of a comprehensive document which was to be submitted to the Ministry of Ag. & FW, GoI. Dr. D. D. Patra asked the members of the house to deliver their valuable opinion/ suggestions on Doubling the Farmers' Income in West Bengal by March 2022. Accordingly, the points, raised by all the participants, were recorded for the preparation of documents. The meeting concluded with:-

- * Cost of production should be decreased.
- * The productivity should be increased on per capita basis.
- * Multi-tier cropping system was to be adopted due to its less input cost.
- * For higher cropping intensity, crop insurance should be promoted.
- * High value crops like strawberries, capsicum etc. should be cultivated.
- * Development of social organisation for farmers and shifting them into non-agricultural sectors.
- * Available resources should be used

efficiently.

- * Value addition through processing like potato chips must be promoted.
- * Post-harvest process should be minimized.
- * Value chain system should be established in buy back policies.

Zonal Review Workshop of Farmer FIRST project under ICAR-ATARI, Kolkata and Patna

A review workshop of Farmer FIRST project for eight institutes from Bihar, Jharkhand and Odisha state under ICAR-ATARI, Kolkata and Patna was held in the Conference Hall of ICAR-ATARI Kolkata on 21st August, 2017 at 10.30 AM under the Chairmanship of Dr. A. K. Singh, Hon'ble Vice Chancellor, BAU, Sabour, Bhagalpur to review the progress and to finalize the Action Plan during the year 2017-18. The meeting was attended by Dr. S. S. Singh, Director-cum-Chairman, ZPMC of FFP, ICAR-ATARI Kolkata; Dr. Anjani Kumar, Director-cum-Chairman, ZPMC of FFP, ICAR-ATARI Patna; Dr. Vishal Nath, Director, ICAR-NRCL, Muzaffarpur; Dr. P. K. Roul, Dean Extension Education, OUAT, Bhubaneswar; Dr. K. S. Das, Pr. Scientist-cum-Member Secretary, ZPMC of FFP, ICAR-ATARI Kolkata; Scientists from ICAR-ATARI Kolkata, PIs / Co-PIs from concerned institutes; SRFs; YP-II; DEOs and other staffs from ICAR-ATARI Kolkata attended the meeting.

Dr. S. S. Singh, Director, ICAR-ATARI Kolkata welcomed all dignitaries and participants of the meeting. He briefed the purpose of the Zonal Review Workshop of Farmers FIRST project and requested to all the PIs/ Co-PIs to strictly follow the guidelines of Farmer FIRST project for smooth running at different centres. He also highlighted the following points related to the project.

- * The projects are to be implemented in such a way that can create impact in the society for its future need in sustainable mode.
- * The project should be run considering the doubling farmers' income by the year 2022.

Dr. K. S. Das appraised the house about FFP and its status under ATARI, Kolkata

and Patna. He requested to all PIs/ Co-PIs to present the progress as per approved models. Dr. Roul raised the issue of inter-institute cross-learning through conducting state level review meeting. He requested to involve agricultural graduates under “Student Ready” programme in FFP. But, the house did not agree with. Dr. V. Nath pointed out that some of the facilities like training should be extended towards the small farmers of target villages (who could not be included in the project) for its holistic development.

In Technical Session I, Dr. (Mrs) Lipi Das from ICAR-NRRI, Cuttack; Dr. Prabhakar Nanda from ICAR-IIWM, Bhubaneswar; Dr. B. Behera from OUAT, Bhubaneswar and Dr. S. Sarkar from ICAR-CIFA, Bhubaneswar presented the achievements and action plan of their projects for the year 2017-18. In technical session II, Dr. V. B. Patel from BAU, Sabour, Bhagalpur; Dr. (Ms.) Niva Bara from BAU, Ranchi and Dr. S. K. Singh from ICAR-NRC Litchi, Muzaffarpur presented their work.

After presentation, Dr. S. K. Roy showed his concern about the case of asset transfer created from the project. Dr. P. P. Pal pointed out the issue of marketing of agricultural produce in the project area and requested to all PIs for developing proper market linkage. Dr. S. K. Mondal stressed upon the importance of proper baseline survey while implementing livestock module to differentiate the actual improvement arisen from adoption of interventions in livestock module. Dr. Halder requested to all PIs to give equal importance to livestock based modules for getting sustainable and consistent income of farmers. Dr. Roul requested for sharing the presentations among different project institutes. The Director, ICAR-ATARI Patna emphasized on the proper documentation of the project. In the concluding remarks, Dr. A. K. Singh expressed the importance of undertaking baseline survey, developing fertility map and categorizing the farmers’ income group in the project area.

Meeting of Institute Management Committee

The tenth Institute Management Committee (IMC) Meeting was held on



26th September, 2017 at ICAR-ATARI Kolkata.

Visit of Zonal Monitoring Committee of NICRA-TDC to KVKs Kendrapara and KVK Jharsuguda, Odisha

The Zonal Monitoring Committee of NICRA-TDC of Zone V comprising Prof. H. K. Senapati, Former Dean PG-cum-DRI, OUAT, Bhubaneswar as Chairman,



Dr. S. S. Singh, Director ATARI Kolkata as Vice Chairman, Dr. Md. Osman, NICRA-TDC Coordinator as CRIDA Nominee, Dr. B. Maji, Principal Scientist & Former Head, ICAR-CSSRI, RRS, Canning Town as DDG (NRM) Nominee, Dr. P. K. Roul, Dean Extension Education, OUAT Bhubaneswar and Dr. F. H. Rahman, Principal Scientist, ICAR-ATARI Kolkata



as Member Secretary, visited Kendrapara and Jharsuguda KVKs and NICRA Project sites to get an overall view of the agro-climatic conditions of the ecosystem in the region during the period of 31st October to 1st November, 2017. The committee

interacted with KVKs personnel and reviewed the salient achievements of NICRA-TDC programme during last six years. Thereafter, the committee moved to the NICRA village Dasmankul and interacted with VCRMC members and visited the different interventions implemented at the village. In the next day the committee moved to Jharsuguda KVK, visited KVK farms and interacted on major activities of NICRA-TDC programme implemented during last six years. The Committee also visited NICRA village, Bhoimunda and reviewed all the demonstration and interacted with the VCRMC members on the activities and impact of the programme.

The ZMC Team during their visits to the sites was accompanied by the project personnel. Following the presentation made initially at the KVKs for an overview of the problems and the activities undertaken in-depth discussions took place with the farmers and VCRMC members at respective sites of both the KVKs.

Meeting on Revised Estimate (2017-18) at Kolkata and OUAT Bhubaneswar

The meeting on Revised Estimate for KVKs of West Bengal and Odisha were conducted on 10th November, 2017 at Kolkata and 15th November, 2017 at OUAT, Bhubaneswar, respectively for finalization of Revised Estimate of the Budget for 2017-18. The meeting at Kolkata was Chaired by Dr. S. S. Singh, Director, ICAR-ATARI, Kolkata and the meeting was attended by scientists and AF&AO, ICAR-ATARI Kolkata and Programme Coordinators of KVKs of West Bengal. At Bhubaneswar, the meeting was Chaired by Dr. S. Pashupalak, Vice-Chancellor, OUAT. The meeting was also attended by Dr. S. S. Singh, Director, scientists, AF&AO, AAO and all accounts staff of ICAR-ATARI, Kolkata. The meeting was also attended by Dean Extension Education, OUAT, Bhubaneswar and all the Programme Coordinators of KVKs Odisha.

Meeting/workshop attended by scientists of ICAR-ATARI Kolkata

Sl. No.	Purpose of visit	No. of scientist(s) attended
1	State Level Review Workshop for CFLD - Pulses & Oilseeds 2017 - 18	7

Sl. No.	Purpose of visit	No. of scientist(s) attended
2	Review Workshop on Seed Hub	7
3	Scientific advisory committee meeting of KVKs of ATARI, Kolkata	7
4	NICRA-TDC Zonal Workshop	3
5	Site selection committee visit for establishing new KVKs	5
6	RE Meeting	4
7	Review of NFSM Project	2
8	Selection of various posts at KVKs/host organizations/ others	7
9	Delivering of lectures at different institutes/ universities	6
10	Conducting of viva-voce	4
11	State-wise coordination committee meeting for doubling the farmers' income	7
12	Conference/symposia/workshops	7
13	Workshop on Implementation of PFMS	1
14	82nd Annual Convention and National Seminar of Indian Society of Soil Science	2
15	Farmers Seminar organized by Society for Fertilizers and Environment	2
16	Workshop on Minilab	2
17	Visit as a representative/ member of ICAR Committee to KVK Jamui	1
18	Programme of DAESI Training	4

Distinguished visitors

- * Shri Radha Mohan Singh, Hon'ble Minister of Agriculture & Farmers' Welfare, Govt. of India
- * Dr. Ashok Kumar Singh, Deputy Director General (Agril. Ext.), ICAR, New Delhi
- * Dr. Ajoy Kumar Singh, Vice Chancellor, Bihar Agricultural University, Sabour, Bihar
- * Dr. D. D. Patra, Vice Chancellor, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal
- * Dr. C. Chattopadhyay, Vice Chancellor, Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar, West Bengal
- * Dr. A. Kumar, Director, ICAR-ATARI, Patna
- * Dr. N. P. Singh, Director, ICAR-IIPR, Kanpur
- * Dr. V. Nath, Director, ICAR-NRC Litchi, Muzaffarpur, Bihar
- * Dr. J. N. V. Prasad, Principal Scientist, ICAR-CRIDA, Hyderabad
- * Dr. K. Manoranjan, Director, Directorate of Jute Development, Kolkata
- * Dr. J. Mitra, Director, Central Research Institute for Jute and Allied Fibres, Barrackpore, West Bengal
- * Dr. A. Goswami, DREF, WBUAFS, Bengachhia, West Bengal
- * Dr. P. P. Singh, Director (Seed and Farm), BAU, Sabour, Bihar
- * Dr. D. N. Singh, Director (Research), BAU, Sabour, Bihar
- * Dr. J. Oraon, Director (EE), BAU, Ranchi
- * Dr. P. K. Roul, Dean Ext. Edu., OUAT, Bhubaneswar
- * Dr. H. Bhattacharya, DEE (Acting), UBKV, Pundibari, West Bengal.
- * Mr. Jintu Das, Joint Director, DJD
- * Dr. S. Biswas, Deputy Director & PDHCRC (Fisheries, Govt. of West Bengal
- * Dr. B. Koli, Director (In-Charge), RFS, Kalyani, GOI.
- * Dr. P. K. Saha, National Consultant, DAC&FW, Ministry of Ag. & FW, GoI
- * Dr. S. Bhattacharya, Deputy Director (Agriculture), Govt. of West Bengal

Ongoing projects/ programmes

Sl. No.	Name of the Project	Scientist involved
1	Cereal Systems Initiative for South Asia (CSISA)	Dr. S. K. Roy; Dr S. K. Mondal
2	Cluster Frontline Demonstration (CFLD) on Pulses	Dr. S. K. Roy; Dr. F. H. Rahman
3	Cluster Frontline Demonstration (CFLD) on Oilseeds	Dr. P. P. Pal; Dr. K. S Das
4	Farmer FIRST Programme (FFP)	Dr. K. S. Das
5	Integrated Farming System (IFS)	Dr. P. P. Pal
6	KRISHI Portal	Dr. K. S. Das
7	KVK Portal	Dr. K. S. Das
8	Management Information System (MIS) including Financial Management System (FMS)	Dr. S. K. Mondal
9	Mera Gaon Mera Gaurav (MGMG)	Dr. P. P. Pal
10	mKisan Portal	Dr. K. S. Das
11	National Attracting and Retaining Youth in Agriculture (ARYA)	Dr. P. P. Pal; Dr. K. S. Das
12	Protection of Plant Variety and Farmers Right Act (PPVFRA)	Dr. P. P. Pal
13	Seed Hub programme	Dr. S. K. Roy
14	Skill Development Training programmes (ASCI)	Dr. S. K. Mondal

Sl. No.	Name of the Project	Scientist involved
15	Swachh Bharat Abhiyan	Dr. S. K. Mondal
16	Technology Demonstration Component of National Innovations on Climate Resilient Agriculture (NICRA-TDC)	Dr. F. H. Rahman
17	Tribal Sub Plan (TSP)	Dr. K. S. Das; Dr. S. K. Mondal
18	HRD Programme	Dr. S. K. Mondal

Publications

Research articles

Debnath T, Bera S, Deb S, Pal P, Debbarma N and Haldar A. 2017. Application of radio - frequency based digital thermometer for real-time monitoring of dairy cattle rectal temperature. *Veterinary World*, 10 (9): 1052- 1056.

Haldar A, Das D, Saha B, Pal P, Das S, Das A, Rajkhowa D, Hazarika S and Datta M. 2017. Smallholder Pig Farming for Rural Livelihoods and Food Security in North East India. *Journal of Animal Research*, 7 (3): 471- 481.

Haldar A, Das D, Santra A, Pal P, Dey S, Das A, Rajkhowa D, Hazarika S and Datta M. 2017. Traditional feeding system for pigs in Northeast India. *International Journal of Livestock Research*, 7 (8): 122- 132.

Technical bulletins/reports/books/monographs

Das K S, Mondal S K, Haldar A, Rahman F H, Pal P P, Roy S K and Singh S S. 2017. ATARI Kolkata News, Volume I, Number 1 (January to June, 2017). Published by Director, ICAR-ATARI Kolkata, pp: 1-12.

Mondal S K, Das K S and Singh S S. 2017. *Krishi Purbi Kiran III* (in Hindi). Published by Director, ICAR-ATARI, Kolkata, pp: 1-108.

Rahman F H, Roy S K and Singh S S. 2017. NICRA Annual Report 2016-17. Published by Director, ICAR-ATARI Kolkata, pp: 1-52.

Roy S K, Pal P P, Mondal S K, Rahman F H, Das K S, Singh S S and Haldar A. 2017. ICAR-ATARI Kolkata Annual Report 2016-17. Published by Director, ICAR-ATARI Kolkata, pp: 1-108.

Roy S K, Rahman F H, Pal P P and Basak J. 2017. Enhancing Pulse Productivity through Agro-Technologies under Clustered Frontline Demonstration Programme. Published by Dr. S.

S. Singh, Director, ICAR-ATARI Kolkata, pp: 1-26.

Singh S S, Pal P P, Roy S K and Mondal S K (Eds.). 2017. Symbols of Success – Pathways to Prosperity. Division of Agricultural Extension, Indian Council of Agricultural Research, New Delhi. pp 1-116 (9, 29, 51, 69, 77).

Singh S S, Roy S K and Pal P P. 2017. In: Treasure of Biodiversity Conservation by Farmers. Published by Dr. A. Mishra, Director, ICAR-ATARI Jabalpur.

Paper presented/published in symposia/ conferences/ other fora

Biswas S, Roy B, Sarkar S, Saha S and Rahman F H. 2017. Effect of surfactant on irrigation requirement and recovery efficiency of major nutrients for paddy in terai flood plains. Abstract in the proceedings of 82nd Annual Convention and National Seminar of Indian Society of Soil Science at Amity University Kolkata during Dec. 11-14, 2017.

Ghosh B, Basak J, Rahman F H, Pal P P, Roy S K and Singh S S. 2017. Effect of different bio fertilizers on pulse and oilseeds frontline demonstration in eastern region of India. Abstract in the proceedings of 82nd Annual Convention and National Seminar of Indian Society of Soil Science at Amity University Kolkata during Dec. 11-14, 2017.

Haldar A, Mondal S K, Das K S, Rahman F H, Anjani K and Singh S S. 2017. Strategical interventions of climate resilient technologies for doubling income of livestock farmers by 2022 in Eastern India. Effect of enrichment of milking environment on milk yield crossbred dairy cows: A field study. Abstract published in XXVI Annual Conference & National Symposium of the Society of Animal Physiologists of India (SAPI) on "Physiological

innovations to forecast the impact of and evolve strategies for sustainable livestock production" organized by Department of Veterinary Physiology and Biochemistry, Veterinary College, Nandinagar, Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar-585401, Karnataka on 21-22 December, 2017, pp: 65.

Majhi P, Rout K K, Mondal S, Mandal M and Rahman F H. 2017. Soil quality for crop productivity and yield sustainability of a continuously manured rice soil of Eastern India. Abstract in the proceedings of 82nd Annual Convention and National Seminar of Indian Society of Soil Science at Amity University Kolkata during Dec. 11-14, 2017.

Nagesh R, Das K S, Mondal S K and Singh S S. 2017. Effect of different levels of nitrogen application on rice yield in Andaman and Nicobar Islands. Abstract published in 26th National Conference on "Natural resource management for climate smart sustainable agriculture" organized by Soil Conservation Society of India, New Delhi in collaboration with CAU, Imphal (Manipur) and College of Post Graduate Studies, CAI (I), Barapanu, Shilong, Meghalaya held at Barapani on 11-13 September, 2017, pp: 119.

Patra S, Das K S, Mondal S K and Singh S S. 2017. Comparative performance of various ratios of Chital fishes with Tilapia and Silver Carps in seasonal ponds in West Bengal. Abstract published in 26th National Conference on "Natural resource management for climate smart sustainable agriculture" organized by Soil Conservation Society of India, New Delhi in collaboration with CAU, Imphal (Manipur) and College of Post Graduate Studies, CAI (I), Barapanu, Shilong, Meghalaya held at Barapani on 11-13 September, 2017, pp: 84.

Rahman F H, Nath S, Bhattacharya Rand Singh S S. 2017. *In-situ* moisture conservation technologies to cope with moisture stress situation for augmenting yield productivity in NICRA adopted villages of eastern India. Abstract in the proceedings of 82nd Annual Convention and National Seminar of Indian Society of Soil Science at Amity University Kolkata during Dec. 11-14, 2017.

Ravinder K, Mondal S K, Das K S, Haldar A and Singh S S. 2017. A field-based study on dry cow therapy as a preventive measure for mastitis. Abstract published in XXVI Annual Conference & National Symposium of the Society of Animal Physiologists of India (SAPI) on “Physiological innovations to forecast the impact of and evolve strategies for sustainable livestock production” organized by Department of Veterinary Physiology and Biochemistry, Veterinary College, Nandinagar, Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar-585401, Karnataka on 21-22 December, 2017, pp: 117.

Roy S, Maitra N J, Mondal S K, Das K S, Haldar A and Singh S S. 2017. Effect of enrichment of milking environment on milk yield crossbred dairy cows: A field study. Abstract published in XXVI Annual Conference & National Symposium of the Society of Animal Physiologists of India (SAPI) on “Physiological innovations to forecast the impact of and evolve strategies for sustainable livestock production” organized by Department of Veterinary Physiology and Biochemistry, Veterinary College, Nandinagar, Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar-585401, Karnataka on 21-22 December, 2017, pp: 94.

Singh S S, Mondal S K, Das K S, Datta D and Haldar A. Skill development of farmers and rural youth for doubling income in agriculture and allied sectors. National Seminar on “Doubling farmers’ income and farm production through skill development and technology application” organized by Department of Extension Education, BAU, Sabour and Indian Society of Extension Education, New

Delhi held on 28-30th November, 2017 at BAU, Sabour, pp: 60.

Invited lectures

Haldar A. 2017. Endocrine markers for selection of economic traits in small ruminants. In: Compendium of ICAR sponsored 10 days short course on ‘Conservation of indigenous breeds of small ruminants in their respective tracts’ organized from 18th to 27th July 2017. Ed. Goswami, A. Published by Directorate of Research, Extension and Farms, West Bengal University of Animal and Fishery Sciences, Kolkata, pp: 89- 93.

Rahman F H, Sahu N C and Das I. 2017. Sustainable soil health management through model agronomic practices to meet crop production target for specific agro-eco regions with delineated boundaries in eastern India with special reference to West Bengal. Invited Article published in Souvenir of 82nd Annual Convention and National Seminar of Indian Society of Soil Science at Amity University, Kolkata during Dec 11-14, pp: 163-184.

Personalia

Joining/ promotion

- * Mr. S. Mukherjee, JAO joined (on promotion) this institute on 30.10.2017.
- * Mr. Praniti Kumar Chakraborty joined this office as SRF, NICRA-TDC Project on 17.07.2017 and relieved from this office on 31.08.2017.
- * Ms. Swarnadyuti Nath joined this office as SRF, NICRA-TDC Project on 06.09.2017 and relieved from this office on 21.09.2017.
- * Ms. R. Bhattacharya joined as SRF, NICRA-TDC Project on 06.11.2017.

Relieving

- * Ms. Debdyuti Datta, YP-II, ICAR-ERP has been relieved from this office on 28.11.2017.

Sad demise

- * Mr. Nirbhik Tripathy, LDC passed away on 05.07.2017.

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



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