

ATARI Kolkata NEWS



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From the Director's Desk

'The key lies in empowering the millions of smallholder producers and landless workers who form the backbone of rural economies in most developing countries to grow their incomes and improve their livelihoods by raising agricultural productivity and engaging in markets'- James Dargie

During the last few years, the National Agricultural Research and Extension System (NARES) of our country has been making the latest technologies relating to agriculture and allied sectors available to the farmers. The paradigm shift in Indian agriculture has enabled our country to become self-sufficient in food grain/ milk/ fish production and provided food security as well as improved socio-economy.



This reported period has been the witness of the first ever pandemic of Novel Corona Viral Disease 2019 i.e. COVID-19 in our country. The unprecedented declaration of the country's lockdown has put a halt in everyday's human life including agriculture in search of solace. In this unforeseen situation like no other, alongwith other stakeholders, the KVK personnel of Andaman and Nicobar Islands, Odisha and West Bengal and ATARI Kolkata were very closely associated with the farming community of this zone for making them aware about the pandemic and health related advisories through online mode apart from specific agricultural advisories from time to time.

Organizing various capacity building programmes/ extension activities, and many other such activities saw a typical innovative online mode of conduct so that the contact-less communication can be possible for farmers yet their agricultural activities become normalized as far as possible. I must appreciate the tireless efforts of our KVK personnel for working with the farming community during the course of this never-seen-before crisis.

Besides, scientists of this institute were not only engaged in attending various meetings/ workshops/ seminar/ conferences online but also working in publishing research papers, technical articles, technical bulletins, reports, books/ book chapters etc.

I also congratulate to all the scientists and staff of this institute for bringing out this publication. Feedbacks and suggestions on this valuable publication are highly solicited as always.

S. K. Roy

(S. K. Roy)

Technologies applied successfully

Inspiring story of a successful women entrepreneur

Mrs. Swarnaprava Pattnaik is a resident in Sunabeda village of Koraput district, Odisha. She is a house wife and her husband is working as Govt. employee at Sunabeda, Distt.- Koraput, Odisha. She had absolutely no experience of doing business, but, wanted to do something from her own. At first, she formed one SHG group after she came in contact with Koraput Krishi Vigyan Kendra and her group was trained with mushroom production, value addition and food processing activities by KVK. Within one year, her group became a successful mushroom producer. As she is very kind hearted person, she wanted to solve the problems of poor needy women. She formed 40 SHGs involving around 600 needy women and also formed 'SASWATI MAHASANGHA' within 6 years. Her SHG groups are now producing mushroom, pickles, papad, masala powder, candle, leaf plates, broom and malted ragi powder. The 'SASWATI MAHASANGHA' has become popular in Sunabeda. Initially, the job of convincing other women to form SHG groups was very tedious for her, but, with the passage of time after success of Mahasangha, it was easy for her. Again, after few years, she was able to form another SHG Mahasangha named 'JAGRUTI' with 40 SHGs involving around 560 members. She empowered those groups by sending them in different skill development training programmes. All the SHG groups are being engaged in various types of activities mentioned above. Now-a-days, she is supplying food items to Anganwadi centres in coordination with ICDS.

Not only that, to increase her business area, few years back she established one small dairy farm with 10 cows and were producing milk products and were selling at the local market. She extended her dairy business from the profit of her farm, set up a chilling plant with

the help of OMFED and provided the available service to 100 farmers in Koraput. Her annual income has become around Rs. 450000/- and she has created assets of 10 lakh from her own effort. She has created employment for 35 persons at her own farm and empowered more than 1000 SHG members. Each member of SHG is getting an income of around Rs. 5000/- per month. Apart from this, she is also involved in various kinds of social activities viz. organizing blood donation camp, ambulance service to needy people etc. She has been awarded with 'Koraput



Gourab Award' from Govt. Press Club, Semiliguda, Koraput and also received many such felicitation by different Govt. Departments. She has become a source of inspiration to other farmers in her district.

Contributor: Koraput KVK, Odisha

Scientific mixed farming: A tremendous opportunity for rural women farmers to change livelihood income



Mrs. Rasmita Swain, is an enthusiastic women agricultural farmer from Village-Sankulei, P.O.- Tarava, Block- Dhenkanal Sadar, District- Dhenkanal, State- Odisha. She passed matriculation a long back. She had only 2 acres of land with her and she used to cultivate paddy and some vegetables under conventional methods which were not economic due to very

low production. Then, Mrs. Swain approached to the scientists of Dhenkanal KVK to get trainings/ demonstrations, guidance and support for scientific agricultural farming. Scientists visited the fields of Mrs. Swain and suggested her for mixed farming with latest scientific technologies. As a result, she started goat farming, backyard poultry farming, mushroom and vegetable cultivation, and paddy cultivation in 2 acres land. During the year 2019, she started one goat unit with 105 heads under MKUY scheme and earned a net income of Rs. 55000/- within a span of two years. She also started a backyard poultry unit with 100 birds which fetched a net income of Rs. 39500/- by selling both eggs and meat. She restricted her paddy cultivation to only one acre area and adopted latest technologies.



It resulted a net income of Rs. 25000/- per year which was quite higher than the income of previous years. Not only that, she cultivated seasonal vegetables in only 0.5 acre land which gave her a net income of Rs. 62000/- per year. Thus, within a short period of time, the income of Mrs. R. Swain has substantially increased due to adopting scientific technologies in her farming. Farmers from her village and from the adjacent villages have also started adopting latest technologies in their agricultural production.



Contributor: Dhenkanal KVK, Odisha

Developing successful social network based online marketing systems for various agricultural produces during COVID-19 lockdown

Coochbehar district is characterised by the dominance of marginal farmers with very low and fragmented land holdings. The district holds a significant position in steady production of variety of vegetables round the year. During last few years, the vegetable growers faced hardship of distress selling due to ill managed and tiring middleman dominated marketing system. Sometimes, they faced around 30-40% post-harvest losses of perishable commodities. In spite of all those bottlenecks, vegetable cultivation had been the mainstay of life sustenance and earning livelihood of a sizable number of farmers in the district. But, the situations become pathetic in the wake of COVID-19 pandemics and subsequent lockdown situations since end of March, 2020. The farmers of Coochbehar district started facing problem of marketing vegetable, cereals, pulses and fruit crops during lockdown period due to stand stillness of public transport system and absence of any mechanism to make agricultural products available to the markets. Local markets started



experiencing shortage of availability of vegetables. Bihar, Uttar Pradesh, Punjab, Bhutan and North Eastern states are the major consumers of vegetables from Coochbehar and Jalpaiguri. But, due to lockdown, the farmers failed to market and send their produces in those areas. Fresh green vegetables like pointed gourd, bitter gourd, brinjal, chilli, cucumber, ridge gourd, late cauliflower, late cabbage, tomato, water melon, leafy vegetables and

the prized local banana landrace the *Malbhog* started getting over matured and got rotten in the field itself. Phone calls and WhatsApp picture from the distressed farmers flooded the inbox of Coochbehar KVK.



At that juncture, Coochbehar KVK, West Bengal and the newly formed Startup-Kisankarts Agro Management Private Limited registered under the umbrella of 'Startup India' of Govt. of India with knowledge partnership of Coochbehar KVK jointly develop artificial intelligence (AI) enabled smart farm management portal and an online farm to home delivery model of fresh vegetables, fruits and others food grains during the lockdown period. The main objective was to develop an effective supply chain network for ensuring on-demand supply of agricultural produce at the doorsteps of the consumers *vis-a-vis* helping the growers to get remunerative price out of their field produces at the time of distress. The KVK acted as knowledge partner and Start-up Company provided the material technology as applicable. In primary stage, the beneficiary farmers was selected from adopted villages under Coochbehar KVK of UBKV. The company offered to make the farmers aware of the storage solution through product demonstration and information dissemination, getting the consumers on the platform to buy farmers' produce and arranging all logistic support to transport the farm produce to the doorstep of the consumers in a B2B, B2C and C2C type of agri e-commerce marketplace named as *KISANKARTS.COM* using social networking sites (Facebook, WhatsApp, YouTube) and phone call for online delivery of vegetables and fruits to the locked down people of Coochbehar.

The portal is used for distance marketing of agriculture produces along with equipment, pesticides and insurance too. It gives a platform to the suppliers and manufacturers to showcase their products and sell them without the intervention of any middlemen. Apart from online and digital presence, this Startup has also a strong offline network at village panchayat level to provide 24x7 hand holding assistance to the farmers. Since inception of this experimental extension model on April 9, 2020 *Kisankarts Agro Management Private Limited* procured green vegetables (05 t), watermelon (90 t), wheat (25 t), pulses (10 t), potato (70 t) and has paid an amount of Rs. 25.91 lakh to the farmers of the KVK adopted villages of Coochbehar district within a period of two weeks' time (9/4/2020 to 23/4/2020). Moreover, the startup procured field crops (in advance) like lentil (100 mt) worth of Rs. 53.5 lakh and maize (1000 mt) worth of Rs. 1.35 crore from the farmers of Coochbehar district. The experimental extension model of developing value chain social networking system, farmers cooperation and collective action created some positive research insights which can effectively be replicated to some competent and potential Farmers Producers Companies of the district for scaling up such marketing model for enabling them stepping



into the marketing domain of post-harvest segment of Indian agriculture. This initiative can pave the way of long cherished objective of doubling farmers income through getting rid of them from ill managed and tiring middleman dominated marketing systems and fetching remunerative price by the farmers from their agricultural produces.

Contributor: Coochbehar KVK, West Bengal

Important activities of KVKs (January to June, 2020)

Sl. No.	Activity	Achievement
1	Number of on-farm trials conducted (Number of technologies)	539 (63)
2	Frontline demonstrations conducted (Number)	1207
3	Farmers trained (in lakh)	0.892
4	Extension personnel trained (Number)	3543
5	Participants in extension activities (in lakh)	4.46
6	Production of seeds (in quintals)	9218.54
7	Planting materials produced (in lakh)	4.625
8	Livestock strains and fingerlings produced (in lakh)	4.92
9	Soil, water, plant, manures samples tested (in lakh)	0.052
10	Mobile agro-advisory provided to farmers (in lakh)	11.5

News from KVKs/ project institutes

COVID-19 Pandemic related For farmers initiatives by KVKs

All 59 KVKs under ICAR-ATARI Kolkata took many initiatives at their respective KVKs and also for farmers to manage COVID-19 Pandemic situations which are briefed as under.

At KVKs

- o Sanitization of KVK premises.
- o Following COVID protocols like hand washing, maintaining physical distance, using face mask etc. by KVK staffs including visitors.
- o Conducting awareness programs on COVID preventing measures.
- o Online training through WhatsApp, Google meet and others.
- o Preparing and providing farm advisory through SMS alert, voice message etc.
- o Procurement and distribution of inputs like seed, sapling, fish seeds, bio-pesticides etc. for farmers following COVID protocols.
- o Organizing off-campus and on-campus trainings following Govt. notifications and so on.

o Providing precautionary/ safety measures during all agricultural operations

- Farmers were advised to download and install *AAROGYA SETU* App of Govt. of India for regular guidance and monitoring of COVID-19.
- Farmers were advised to follow all above COVID protocols while doing any farm operations / harvesting/ storage of crops.
- Agro advisories and weather forecast were sent to the villagers through SMS and voice messages.

o Marketing of agricultural produces

- For managing distress sell of agricultural produces due to lock down, farmers were guided by the KVK staff in many ways. Instead of harvesting small amount of different types of vegetables by different farmers in a single day, they were advised to harvest same vegetables at a particular day of a week e.g. chilli in Monday, cucumber in Tuesday, okra in Wednesday, brinjal in Thursday and so on.

This planning helped to have a bulk amount of a particular vegetable at a particular time and bargain with the middleman for a better price.

- Some of the KVKs used online social media platforms/ Apps for marketing of agricultural produce in their districts.
- Safety measures and strategies for marketing of agricultural produce.
- o Providing animal health care instructions**
- Scheduled pre-monsoon vaccination of FMD/HS and Artificial Insemination (AI) in consultation with veterinary officer on door to door basis rather than direct visit to the dispensaries.
- Regular supplementation of mineral mixture @ 50-60 g/day in adult dairy animals and 20-30 g in small ruminants to maintain productivity.
- Following general hygiene practices when handling animals and animal's products. Washing hands before and after feeding and milking animals with soap and water or using alcohol-based sanitizer.

- Cleaning of floor of animal house with phenol @1 ml per litre of water and white washing of the feeding and watering trough to prevent infection. Disinfection of farm premises with bleaching powder (7 gm in 1 litre of water).
- Frequent cleaning and sanitation of milk utensils and equipment's with suitable detergent.
- Adequate personal safety measures following COVID protocols during loading/ transport/ sale of animal related produces.
- Disinfect the premises of poultry houses with 1% sodium hypochlorite and restrict the entry of outsiders into the poultry houses and premises. Backyard poultry farmers were advised to use locally made feed for survival of birds

o Providing suggestions to the fish farmers

- Apply of potassium permanganate @ 200g/ac pond area to prevent dissolved oxygen depletion as well as preventive measures for fish diseases. Lime application to maintain pH of pond water and application of raw cow dung @ 200-300 kg/ac and urea with SSP to maintain the plankton concentration of pond water.

Field visit for monitoring Farmer FIRST Programme (FFP) activities

A field monitoring visit-cum-farmers' interaction was conducted in three adopted villages viz.



Biswanathpur, Satyabhamapur and Laxminarayanpur of Salipur Block, Cuttack on 10th January, 2020 under FFP project of ICAR-NRRI, Cuttack. Dr. S.K. Mishra, PS and PI of the project, Dr. S. Das, SRF (FFP), ICAR-ATARI Kolkata, Mr. M.K. Das, SRF (FFP), ICAR-CIFA, Bhubaneswar and other project staff from NRRI made an extensive field visit in above 3 adopted villages and interacted with more than 50 adopted farmers including farm women.



The team visited a large patch of vegetable demonstration plots of Biswanathpur village where cauliflower, cabbage, brinjal, tomato, french bean, cow pea etc. were grown. The relay cropping in trellis system using locally available materials (bamboo twigs) in around 50 acres area was adopted by about 50 vegetable growers which was very innovative. Efforts were done through the project to make the trellis more scientific and to grow 4-5 climber vegetables crops in relay per year with the same trellis structure. The commonly followed relay sequence of climber vegetables was bitter melon (Feb.-May), cucumber (May-Aug.), cowpea (Aug.-Nov) and lab bean/French bean (Nov.-Feb.). With such practice, farmers used to earn a net income of about Rs. 4-6 lakhs /acre/ annum. The farmers expressed overwhelming satisfaction with the performance of vegetables under demonstration in comparison to previous years. No significant insect attack was seen in the plots. The pod/fruit size was also very good which fetched good market price and earned more income. Later, the

rice field of Mr. Ramakanta Padhi with demonstration on 8-row power-operated machine transplanting with 'Hasnata' variety was visited. The standing crop was very nice in the field and the farmer was happy with low cost of cultivation.

The team visited Laxminarayanpur village, met and interacted beneficiary farmers to get their feedbacks on the benefits received and any difficulty faced. Mr. Mrityunjay Dash was one of those beneficiaries who adopted fish-duck farming in 0.25 acres pond along with banana and papaya plantation in the dykes and was also producing vermicompost. A fish catch was made on the spot and the growth of stocked IMC fingerlings fishes ranged from 500 gm to 1 kg within 5-6 months of stocking. The operation of power operated paddy thresher-cum-winnower by the adopted farmers in the community threshing floor was seen.



The team also visited Satyabhamapur village to see the fish-duck-poultry-vegetables-fruits based Integrated Farming System model in one acre adopted by Mrs. Sandhyarani Mohanty w/o Mr. A. K. Mohanty. Some enterprise related units were also visited by the team where healthy fruits and vegetable seedling like papaya, mango, banana, tomato, capsicum etc. were grown under poly-house. During the field visit and interactions, all the adopted and some non-adopted farmers/farm women expressed their satisfaction with the interventions under FFP project and requested to continue the project for the benefits of the farming community.

Meeting/ workshop/ training programme organized/ conducted

Organized review meeting of Farmer FIRST Programme

One review meeting of Farmer FIRST Programme (FFP) pertaining to three ICAR Institutes and one SAU from Odisha state under ICAR-ATARI Kolkata was organized on 09.01.2020 at 3 PM in collaboration with OUAT, Bhubaneswar under the Chairmanship of Dr. S. S. Singh, Director, ICAR-ATARI Kolkata in the Office of Dean of Extension Education, OUAT, Bhubaneswar to review the physical and financial progress during the year 2019-20. Prof. P. K. Roul, Dean of Extension Education, OUAT was Chief Guest of the meeting. The meeting was also attended by Dr. K. S. Das, Member-Secretary, FFP of ICAR-ATARI Kolkata; Dr. M. Mahapatra, Joint Director, Extension Education, OUAT; Dr. H. K. Sahoo, Joint Director, Extension Education, OUAT; four PIs (Dr. S. K. Mishra, Pr. Scientist from ICAR-NRRI, Cuttack;

Dr. H. K. De, Pr. Scientist from ICAR-CIFA, Dr. P. Nanda, Pr. Scientist from ICAR-IIWM and Dr. B. Behera, Prof. from OUAT), Scientists, SRFs and progressive farmers from each concerned Institutes, and other staff members of OUAT, Bhubaneswar.

In his welcome address, Dr. K. S. Das briefed about the status of FFP for the year 2019-2020. The PI of all four projects presented the physical and financial progress during the period. It was critically reviewed and suggestions were given to the PIs and Co-PIs of the projects to achieve their targets. Prof. Roul stressed upon the frequent field visits and interaction among scientists and farmers for quick addressing of problems in the farmers' fields. He pointed out that farmers' innovations must be considered and accordingly, the technologies may be modified/ generated for better yield/ production. For cross learning, the review meeting

should be conducted at different locations of the project area in the presence of progressive farmers from various sectors.

Dr. S. S. Singh, in his Chairman's remark, gave emphasis upon the quantification of data in favour of any good agricultural technologies; livelihood income mapping considering five capitals like human capital, social capital, natural capital, physical capital and financial capital; adopting strategies for sustaining technologies even after withdrawal of projects from a particular location; percolating technologies from one farmer to another in an easier way etc. He also stressed upon the documentation and spread of viable technologies through various publications including local languages. During the occasion, specially developed brochures on Farmers FIRST Programme by OUAT, Bhubaneswar and ICAR-CIFA, Bhubaneswar were released.



Organized review workshop of ARYA project

With the objective to assess the performance of nine Attracting and Retaining Youth in Agriculture (ARYA) project implementing KVKs of Odisha and West Bengal (Sambalpur, Ganjam-I, Puri, Cuttack and Nayagarh of Odisha and Hooghly, Purulia, Uttar Dinajpur and Nimpith of West Bengal), a Review Workshop was conducted on 24th January, 2020 at ICAR-ATARI Kolkata under the

Chairmanship of Dr. S. S. Singh, Director, ICAR-ATARI Kolkata. The workshop was attended by Prof. T. Hath, Dean, Faculty of Agriculture and the Ex-Director of Extension Education, UBKV, Coochbehar; Dr. M. P. Nayak, Joint Director, OUAT, Bhubaneswar; Dr. S. K. Roy, Dr. P. P. Pal, Dr. A. Haldar, Dr. S. K. Mondal, Dr. F. H. Rahman, Dr. K. S. Das, Principal Scientist, ICAR-ATARI Kolkata, Senior Scientist & Heads and the concerned Subject Matter Specialists of the respective KVKs.

The workshop started with welcome address delivered by Dr. S. K. Roy, Pr. Scientist, ICAR-ATARI Kolkata where he elaborated the basic purpose of the Review Workshop. Dr. P. P. Pal presented a brief account of ARYA guidelines and activities carried out by the KVKs. He stressed on the establishment of micro-entrepreneurship through cluster formation at village level to show the impact of the project more conspicuously and to enable the State governments to replicate the success in the districts. Dr. S. S.

Singh highlighted the rationale of the project underlining the need of identification of potentiality of the district, documentation of livelihood indicators like physical, financial and social indicators. He stressed upon the need for greater utilization of farmer to farmer communication. He urged to prepare baseline data of income before and after ARYA project. He also laid emphasis on preparation of success indicators to assess the impact more objectively. He concluded his deliberation with an assigned task to all 9 ARYA

implementing KVKs of this zone to ensure lucrative return from the enterprises on a sustained basis even after withdrawal of the project.

In technical session, the Senior Scientist & Head of all ARYA implementing KVKs presented their achievement of ARYA activities during 2019-20 including the expenditure statement and a few issues related to the programme one by one. The achievements and action plan was critically reviewed by the house and finally, some action

points came out from the day-long interaction session. Prof. T. Hath, Dr. M. P. Nayak, Dr. S. S. Singh gave their views and suggestions for better implementation of ARYA project.

Organized institute management committee meeting

The thirteenth Institute Management Committee (IMC) Meeting was conducted on 07.03.2020 at ICAR-ATARI Kolkata.

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

Sl. No.	Name of the programme (s)	No. of scientist(s)/ staff attended
1	Meeting on brainstorming session regarding 'Adoption pattern of wheat production technologies in India-key recommendations' at IIWBR, Karnal	1
2	Meeting with DDG (AE) and ADG (AE) regarding KVK transfer, cyclone grant to KVKs etc.	3
3	Meeting with ADG(AE) regarding CFLD (Oilseed) budget, Farmer FIRST review meeting at ICAR, New Delhi	2
4	Meeting with Under Secretary (AE) regarding revision in sanction of 3 KVKs administrative buildings and other KVK related issues	1
5	Krishi samridhi mela-cum-national workshop on 'Integrated farming system towards nutritional security and sustainable agriculture' at Dhaanyaganga KVK, Sargachi, Murshidabad	1
6	Foundation stone laying ceremony of new KVK building of KVK Khorda	1
7	The EFC meeting under the chairmanship of DDG (AE)	4
8	Thirteenth institute management committee meeting of ICAR-ATARI Kolkata	7
9	International conference on 'Pulses as the climate smart crops: Challenges and opportunities' at ICAR-IIPR, Kanpur	1
10	Workshop on 'Milk products development for augmenting income' at BCKV, Mohanpur	1
11	Eleventh national conference on KVK-2020 at NASC, New Delhi	6
12	Directors conference of Indian Council of Agricultural Research (ICAR)	1
13	Interface meeting with the Secretary, DARE & DG ICAR on various issues of KVKs	1
14	Meeting on revised estimate (2019-20) OUAT KVKs at OUAT, Bhubaneswar	2
15	Meeting of QRT and visit/interaction with 18 KVKs, line department officials and farmers of the different adopted villages of Jharkhand state	2
16	Review meeting of FFP in collaboration with OUAT, Bhubaneswar	3
17	Visit to different KVKs of ICAR-ATARI Kolkata	12

<i>Sl. No.</i>	<i>Name of the programme (s)</i>	<i>No. of scientist(s)/ staff attended</i>
18	Review workshop of ARYA projects under ATARI Kolkata	15
19	Stakeholders' workshop/ meeting of QRT of ICAR-ERS, Patna	20
20	Preliminary meeting of Research Advisory Committee (RAC) of Agricultural Extension Division, ICAR, New Delhi for 11 ATARIs	3
21	Interface meeting with KVKs on technology backstopping of farmers and migrant labourers	6
22	Meeting on revised estimate for West Bengal KVKs at ICAR-ATARI Kolkata	15
23	Final meeting of QRT regarding finalization of report at Kolkata	15
24	Meeting on virtual workspace or video conferencing during COVID-19 crisis	6
25	Scientific Advisory Committee (SAC) meeting at various KVKs under ICAR-ATARI Kolkata	6
26	Meeting on management of summer pulses, oilseeds and vegetables during lockdown period	8
27	Meeting on management of poultry birds and cattle during lockdown period	6
28	Workshop on ' <i>Smallholder farming enterprises for income generation in Eastern India perspective</i> '	5
29	Meeting on ICT in Agricultural Extension	4
30	Multi-location audio conference on ' <i>Standing crop management & kharif planning & safety measures to fight against COVID-19 pandemic situation</i> ' at different KVKs	5
31	Online meeting on technology dissemination to boost Horticulture sector during post-COVID.	6
32	Online meeting on the safety measurement in agriculture practices and management during COVID-19 situation	6
33	Twenty fifth meeting of ICAR Regional Committee-II at ICAR-NRRI, Cuttack	3
34	Online meeting with SAMETI, WB regarding managing 'Amphan' cyclone	6
35	Online review meeting of NICRA-TDC of ICAR-ATARI Kolkata	4
36	Online review workshop on ARYA project organized by AE Division, ICAR, New Delhi	2
37	Online review workshop of FFP project organized by AE Division, ICAR, New Delhi	3
38	Online meeting on GKRA programme organized by AE Division, ICAR, New Delhi	6
39	Online review meeting of NEMA with DDG (AE) organized by AE Division, ICAR, New Delhi	4
40	Online review workshop of CFLD on Pulses and Oilseeds organized by AE Division, ICAR, New Delhi	3
41	Online National Seminar on ' <i>Advance technology for commercial agriculture</i> ' organized by RKMVERI, Belur	3
42	Other meetings/workshop/ seminars as committee member(s) on various issues	15

Distinguished visitors

- o Dr. R. Parsad, Former Assistant Director General, Agril. Extension, ICAR, New Delhi
- o Dr. R. K. Samanta, Former Vice Chancellor, BCKV, Mohanpur, West Bengal
- o Dr. Y. V. Singh, Former Director, ICAR-ATARI, Jodhpur
- o Dr. R. B. Sharma, Former Director, Extension Education, IGKV, Raipur
- o Dr. B. P. Bhatt, Director, ICAR-RCER, Patna
- o Dr. A. Kumar, Director, ICAR-ATARI Patna
- o Prof. C. Satapathy, Former Dean, Extension Education, OUAT, Bhubaneswar
- o Dr. A. N. Mukhopadhyay, Former Vice-Chancellor, AAU, Assam.
- o Dr. Kusumakar Sharma, ADG (Edu.), ICAR, New Delhi
- o Dr. V. V. Sadamate, ADG (Ext.)
- o Dr. D. D. Patra, Vice Chancellor, BCKV, Mohanpur, West Bengal
- o Dr. A. K. Tripathy, Director, ICAR-ATARI Guwahati
- o Dr. J. Mitra, Director, ICAR-CRIJAF, Barrackpore
- o Dr. B. Bhattacharyya, DDR, FVS AAU Khanapara, Assam
- o Dr. N. C. Banik, Senior Specialist, IRRI, Bhubaneswar, Odisha
- o D. A. Kumar, CSISA Hub Coordinator, Bhubaneswar, Odisha
- o Dr. R. K. Singh, ADG (CC), ICAR, Krishi Bhawan, New Delhi
- o Dr. G. H. Pailan, Pr. Scientist and OIC, ICAR-CIFE Kolkata Centre, Salt Lake
- o Dr. B. Saha, Pr. Scientist, ICAR-NINFET, Kolkata
- o Dr. S. Saha, Pr. Scientist, ICAR-NRRI, Cuttack
- o Dr. D. Burman, Head, ICAR-CSSRI, Canning Town, S 24 Pgs, WB
- o Mr. A. Singh, FAO, ICAR-NINFET, Kolkata
- o Mr. S. Dutta, IMC Member, Behala, Kolkata
- o Mr. S. Banerjee, IMC Member, Behala, Kolkata

Publications

Research Articles

- Biswas P, Mahato B, Mahato D C, Rahman F H and Ghosh C. 2020. Effect of vermicompost and biochar on growth and yield of carrot in red lateritic soils of Purulia district of West Bengal. *International Journal of Plant & Soil Science*, **32**(8): 15-20.
- Bommayasamy N, Singh L and Rahman F H. 2020. Effect of planting methods and seedling age on growth, yield and nutrient uptake in rice under high rainfall areas of Bay Islands. *International Journal of Plant & Soil Science*, **32**(6): 96-102.
- Chaudhary R, Sailo L, Singh A, Karthikeyan A, Mehrotra A, Mondal S K, Sahoo N R and Kumar Amit. 2020. Genetic parameter estimates for growth performance of crossbred piglets. *Indian Journal of Animal Sciences*, **90**(1): 102-104.
- Das K S, Singh, J K and Chandrasekar T. 2020. Effect of pre-partum management on the post production performance in Nili-Ravi primiparous buffaloes. *Indian Journal of Animal Sciences*, **90**(3):134-139.
- Das S, Rahman F H, Mukherjee S and Nag K. 2020. Evaluation of different germplasm of turmeric (*Curcuma longa* L.) for growth, yield and quality attributes in new alluvial zone of West Bengal. *Advances in Research*, **21**(6): 35-40.
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Mondal S K. 2020. Routine farm management for dairy animals. A note on the lecture delivered on 23.01.2020 in ASCI Skill Development Training Programme on Dairy Farmer/ Entrepreneur held at West Bengal University of Animal and Fishery Sciences, Kolkata during 08.01.2020 to 27.01.2020

E-Book Published

- o E-book on 'Innovative agricultural solutions during COVID-19'
- o E-book on 'Kharif agro-advisories to farmers'

News Items

- o FFP review meeting for KVK portal, ICAR-ATARI Kolkata and ICAR website
- o ARYA review workshop for KVK portal, ICAR-ATARI Kolkata and ICAR website

Personalia

Joining

Dr. S. K. Roy, Pr. Scientist has taken over the Charge of Director, ICAR-ATARI Kolkata on 20.03.2020 (forenoon).

Relieving

Dr. S. S. Singh, Director, ICAR-ATARI Kolkata has been relieved on 13.03.2020 (afternoon).

Ms. S. Haldar, SRF of ARYA project has been relieved on 12.06.2020 (afternoon).

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



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