



ICAR Research Complex for Eastern Region, Patna
भारतीय कृषि अनुसंधान परिषद् का पूर्वी अनुसंधान परिसर, पटना

ICAR RCER NEWS

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From the Director's Desk



Pulses are an important component of diverse cropping/farming situations and provide nutritional security to the farmers. Eastern regions account for nearly 17.40% and 18.05% of the total area and production of pulses in the country. Within the Eastern region, Odisha and Eastern UP have witnessed significantly low productivity as compared to the national average. Even other states of the region are far from achieving and realizing the full potential of high-yielding varieties released for these regions. Of the total, 11.6 million ha rice-fallow area in the country, 82% lies in the Eastern states and offers an unique opportunity for enhancing the production of pulses through crop intensification. Low productivity of pulses due to limited availability of quality seed of improved varieties in the region is one of the major recommendations of the State Coordination Committee meetings of Second Green Revolution. This is evident from lower seed replacement rate (SRR) of major pulses in the region than the national average. Hence, to make the region self-sufficient in pulses production, availability of quality seed need to be ascertained as it alone will enhance yield level by 10-15 per cent. For augmenting the availability of quality seeds of pulses, the Department of Agriculture, Cooperation and Farmers' Welfare, Government of

India, has sanctioned a project on "Creation of seed hubs for increasing indigenous production of pulses in India" with a total outlay of Rs. 22531.08 lakhs for a period of two years from 2016-17. This project aims at establishing 150 seed hubs across the country in State Agricultural Universities/Krishi Vigyan Kendras/ICAR Institutes. Out of the 150 seed hubs, 46 have been sanctioned for Eastern region, of which two seed hubs are functioning under ICAR RCER Patna, i.e., at Patna and KVK, Buxar. The seed hub at Patna has been given a target of producing 50 tonnes quality seed of lentil (HUL 57 and KLS 218), field pea (HUDP 15 and Swarna Mukti), chickpea (Pusa 547) and summer mungbean (PDM 139, IPM 2-3 and HUM 16) and at KVK Buxar, the target is 50 tonnes quality seed of lentil (HUL 57 and KLS 218), and chickpea (Pusa 547) for the year 2016-17. The project has a provision of Rs. 50.00 lakhs in the first year at each seed hub for creating infrastructures to ensure seed production and processing as well as storage of seeds in addition to Rs. 100 lakhs to each seed hub as a revolving fund to meet various expenses for production, procurement and processing of seeds during 2016-18. It is expected that within three years, all the seed hubs will become self-reliant and will continue production of quality seed of pulses in a sustainable manner. The seed hubs have already started functioning. The endeavor is likely to result in bringing pulses self-sufficiency in India.

Research Highlights

Promising “Cleisto” Lines of Pigeonpea Identified

A preliminary yield trial comprising 11 “cleisto” lines (6 NDT + 5 DT), derived from advanced generation back cross populations (‘Bahar’ × ‘ICPL 87154’ and ‘IPA 203’ × ‘ICPL 87154’), was conducted along with the check variety ‘IPA 203’ during the cropping season 2015-16. All the test lines bred *true to the type* for the “cleisto” trait (*zero* out crossing). Out of the six, 2 NDT lines yielded at par with the check variety ‘IPA 203’ (~2000 kg/ha), showing no yield penalty. These two “cleisto” NDT lines have been put to further evaluation in station trial. This may have a great significance as it will obviate the need to purchase the seeds of pigeonpea varieties afresh every year by the farmers.



Crop Diversification with Pearl Millet

Pearl millet cultivars (Proagro-9001 and Proagro-9450) were evaluated under the upland rainfed condition of Bihar. Both these varieties are early maturing (85-90 days) and have high yield potential (4.5-4.8 t/ha) with very limited agronomic management practices. Hence, these varieties were found to be promising and may be promoted under the upland rainfed agro-ecosystem of Eastern India to develop the climate resilient cropping and help in food and nutritional security of the resource poor farming community.



Promising Rice Genotype for Elevated CO₂ and Temperature Identified

Four rice genotypes (R. Bhagwati, IR 64, IR83376-B-B-24-2 and IR84896-B-127-CRA-5-1-1) were evaluated inside open top chambers (OTCs) with two levels of carbon dioxide (ambient and elevated; 500±25 ppm) and temperature (ambient and ambient+2°C). Genotype IR83376-B-B-24-2 (4.8 t ha⁻¹) was found to be relatively resilient under higher CO₂ and temperature.

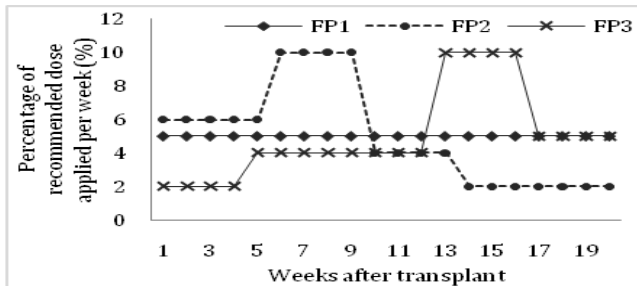


Improved Grain Sorghum Cultivars Identified

Ten grain sorghum cultivars (5 hybrid *viz.*, CSH 13, CSH 14, CSH 16, CSH 25 and CSH 30; and 5 varieties *viz.*, CSV 15, CSV 20, CSV 23, CSV 27 and SPV 462) were evaluated under 2 sowing dates (16 February and 3 March) during summer seasons of 2015 and 2016. Results revealed that the crop sown on 3 March produced significantly higher grain (4.30 t/ha) yield, net returns (₹38.4×10³/ha), benefit: cost ratio (2.22) and economic efficiency (₹376/ha/day) than 16 February sowing. Sorghum hybrids produced 22% higher grain yield than varieties. Hybrid ‘CSH 16’ (5.51 t/ha) and varieties ‘SPV 462’ (3.89 t/ha) and ‘CSV 27’ (3.82 t/ha) were found promising.

Improving Yield, Nutrient Uptake and Water Use Efficiency in Chilli through Planting Geometry and Growth Stage Linked Fertilization Pattern

Four planting geometries of 75 x 50cm (S1), 70x40cm (S2), 50x40cm (S3) and 30x40cm (S4) were evaluated in combination with three growth stage based fertilization patterns, *viz.* uniform dose per fertilization event (FP1), higher dose during development (FP2) and higher dose during mid-stage (FP3) of crop growth. The results showed that fertilization pattern FP2 recorded the highest N-uptake (98.2 kg/ha), N-recovery (64%), nitrogen use efficiency (125 kg/kg N), and water productivity



(28.9 kg/ha/mm). The combination of treatments FP2 and S4 showed the highest average N-recovery, NUE and water productivity of 68.6%, 141.3 kg/kg N and 31.1kg/ha/mm, respectively. Maximum yield, nutrient uptake, NUE and water productivity occurred with geometry having denser plant population which also had the greatest irrigation input. Planting of chili in a triangular arrangement (S3 or S4) with weekly application of 10 % of recommended dose of fertilizer during developmental stage (6th to 9th week after planting) is recommended for higher yield, nutrient uptake and water productivity of drip irrigated chili.

Multiple Use of Solar System

Solar energy has the potential to fulfil the energy requirements in agricultural operations, but its use in agriculture is limited due to the cost of solar system. However, if same solar panel is used for multiple operations, its effective cost would be reduced. Multiple use of same solar panel would create a renewed interest among the small farmers in adopting this energy mode. A solar system model has been developed for small farms, where a given solar array could perform various operations involved in integrated farming. This includes the groundwater pumping, aerating fishpond, supplying pressured water at 1.2 -1.5 kg/cm² for washing cattle shed, humidifying cattle sheds and operating pressurized irrigation for water use efficiency.

Bengal Goat with Five Kids

Bengal goats are known for their fecundity rate as most of the does give mostly twins and triplets. Quadruplets are reported sporadically. Increasing the herd horizontally by increasing the herd size could be one of the ways of improving total biomass productivity of the farm. Farmers rearing Bengal goats in the Samastipur locality were provided technical inputs on flushing the goats during the

breeding season aiming to improve the ovulation rate. Extension services have yielded the results as significant number of goats started giving quadruplets and some of the animals have also been recorded giving quintuplets in the locality.



Indigenous Duck Germplasm Evaluated

Performance of indigenous ducks native to Eastern states of India was evaluated. The results revealed that average daily gain was



the highest in Pekin ducks (8.77 g/d) followed by Odisha Deshi (6.94 g/d), Khaki Campbell (6.75 g/d) and indigenous ducks from other eastern states (5.43-5.54 g/d). Hen day egg production (%) up to 30th week of age recorded was higher in Khaki Campbell (45) followed by desi duck germplasm of Odisha (35), Jharkhand (28) and Bihar (27). Egg weight was observed highest for Pekin ducks (62.97±0.73 g) followed by Khaki Campbell (60.58±0.70 g) and indigenous ducks (55.45±1.22 g). Hatchability was highest for Khaki Campbell (70%) followed by White Pekin (65%), Odisha Desi (60%), Jharkhand Desi (60%) and Bihar Desi (55%).

Enhanced Reproductive Performance of Murrah Buffalo with Extended Wallowing Time

Though India receives its highest share of milk from buffaloes, the species of buffaloes has its own issue when it



comes into the terms of reproduction. Besides, climate change factors, especially high ambient temperature produces undesirable results in conception rate and also affects in total milk productivity. In order to sort out these issues, it was decided to allow the buffaloes in the wallowing with extended time. The animals, after milking and feeding in the morning hours, were sent into the wallowing pond from 8.00 a.m. and remained there till 4.00 p.m. in the evening. The arrangement brought fruitful results immediately, as the conception rate showed 30% increased on total insemination basis.

Events Organized

Van Mahotsav

The “Van Mahotsav” programme was celebrated at ICAR RCER, RC, Ranchi during 14-16 July, 2016.



During this programme tree plantation was carried out in huge scale at Farm II of the centre and more than 1000 trees of *Sagwan*, *Mahogani*, *Karanj*, *Lakshmitaru* and *Bahera* were transplanted by all the scientific, technical and administrative staff of the centre.

Institute Research Council Meeting

The Institute Research Council meeting was held during 21–22 July, 2016 under the Chairmanship of the Director,



ICAR RCER, Patna to review the ongoing projects, to discuss and to approve new projects to be taken up by the scientists of the institute and its centers. All the Heads of Divisions presented the achievements of various projects of their respective division and

centers for the year 2015-16. There was a thorough discussion on the ongoing research projects as well as new projects with the house. Accordingly, 10 new projects were finalized.

Parthenium Awareness Week

The 11th ‘Parthenium Awareness Week’ from 16-12th August, 2016 was observed at the ICAR RCER



Research Centre, Ranchi during which awareness was created among the staff of the centre and among the students and staff of schools nearby the research centre. Farmers who had visited the campus were also briefed about the ill effects of *Parthenium* (carrot grass) by the scientific and technical staff of the institute. The information poster and leaflets mentioning the harmful effects of *Parthenium* on health of humans, animals and crops were also shared with the visitors and school staff. On 19th August, 2016 all the staff of the centre participated in eradication of *Parthenium* from the farm and the area surrounding the office building. On 22nd August, 2016 a team of few staff members of the research centre visited nearby school ‘Immaculate Heart Of Mary Middle School’ located in Plandu, Ranchi for creating *Parthenium* awareness among the students and staff of the school.

XXIII ICAR Regional Committee Meeting

XXIII ICAR Regional Committee meeting –IV was organized at ICAR Research Complex for Eastern Region, Patna during 26-27 Aug, 2016. The meeting was chaired by Dr. Trilochan Mohapatra, Secretary DARE & DG, ICAR, New Delhi. Other dignitaries from ICAR Headquarter including AS& FA, DARE/ICAR, DDGs, Governing body members, DG, UPCAR, Vice Chancellors, ADGs, Directors and scientists of various ICAR institutes, Deans and

Directors of SAUs, State Dept. Officials of Bihar, Jharkhand and UP participated in the meeting.



Dr. Trilochan Mohapatra, Secretary DARE & DG, ICAR inaugurated the meeting. He emphasized that there is a lot of potential in Jharkhand, Bihar and Uttar Pradesh for agricultural development which needs to be harnessed with concerted efforts of scientists and development departments. The Chairman stressed that there is an urgent need to infuse the newer agricultural technologies for improving the productivity in these states. He exhorted the scientists and officials to pay maximum attention to the needs of the small farmers by improving the process of location specific technological interventions and initiatives for timely transfer of technology. Dr. Mohapatra also said that the technologies of disease forecasting and new tests for disease diagnosis can be offered in the field, research on the conservation of local breeds and varieties of different crops needs to be carried out. He also emphasized on effective planning to help two fold increase of farmer's income within 2022 in order to fulfill the vision of India. Dr. J.S. Sindhu, DDG, Crop Science and Nodal Officer of the regional committee emphasized that Bihar and Jharkhand have vast potential in growing pulses and vegetables but some constraints like fragmented land, water logging condition, soil degradation, natural calamities like flood, drought, non-availability of quality seed, green fodder and poor marketing are hindering the growth of agricultural production. Shri Vijoy Prakash, IAS, APC, Govt of Bihar, also discussed the problems of agriculture production in Bihar. He further said that research should be focused more on millets, oilseeds, pulses and on small animals like goat, rabbits, pig and rodents etc. for the improvement of livelihood of small farmers of Bihar and Jharkhand. In the technical session, the various issues regarding agriculture,

horticulture, farm mechanization, livestock, fisheries and education were discussed. Six publications of IVRI, Izatnagar, ATARI Kanpur, IGFRI, Jhansi, ICAR-RCER, Patna and BAU, Ranchi were also released by the Chief Guest and other dignitaries.

Awareness Programme on Fish Health Management

An awareness programme on Fish Health Management under the project 'National Surveillance Programme on Aquatic Animal Diseases' was



organised by ICAR-RCER, Patna at Sarai Ranjan, Samastipur, Bihar, on 31st August, 2016 to sensitize fish farmers about the fish

diseases and its management strategies. Various topics such as prophylactic measures like healthy fish seed, use of potassium permanganate, lime, probiotics, maintaining optimum water quality parameters, feeding practices and better management practices etc. were discussed to avoid disease incidents. Farmers were also made aware of different schemes and government programme available in Bihar. Shri Sanath Kumar (DFO), Samastipur, Dr. Kamal Sarma, Pr. Scientist, Snatashree Mohanty and Ravi Kumar, Scientists, ICAR-RCER, Patna and more than 60 fish farmers participated in the programme.

Her Excellency Hon'ble Governor of Jharkhand Visited ICAR RCER, Research Centre, Ranchi

Smt. Draupadi Murmu, Her Excellency Hon'ble Governor of Jharkhand visited Research Centre, Ranchi of ICAR Research Complex for Eastern Region on 9th September, 2016. During the visit in the experimental



farm of the centre, a brief highlight was made regarding different promising technologies developed by the centre and also had an interaction with the scientists.



Her Excellency also planted a seedling of Kalptaru (*Adansonia digitata*) in the experimental farm. The Hon'ble Governor expressed her happiness regarding the activities of the centre. She emphasized on the need for close association between resource poor farmers and the institutions. She also stressed upon the need for strong linkage with KVKs and other line departments like ITDA for effective transfer of the technologies in the farmers' fields.

हिंदी चेतना माह एवं राजभाषा वार्षिक प्रतिवेदन

राजभाषा हिंदी के प्रागामी प्रयोग से सम्बंधित चारों तिमाही की तिमाही प्रतिवेदन, समय पर निदेशक एवं सदस्य सचिव, राजभाषा कार्यान्वयन समिति, कृषि भवन, नई दिल्ली को प्रेषित की गयी। 14 सितम्बर से 13 अक्टूबर 2015 के दौरान "हिंदी चेतना मास-2015" का सफल आयोजन किया गया, जिसमें विभिन्न वर्गों के कर्मचारियों के लिए कुल 17 प्रतियोगिताओं एवं कार्यक्रमों आयोजन किया गया। इस



दौरान विभिन्न विद्यालय के बच्चों के लिए निबंध, वाद विवाद एवं स्वरचित कविता पाठ जैसी लोकप्रिय प्रतियोगिताओं का भी आयोजन किया गया। इसके अतिरिक्त अनुसंधान केन्द्र रांची में भी हिंदी कार्यशाला का आयोजन किया गया। जिसमें 'वैज्ञानिक कार्यालयों में हिंदी का

प्रतिगामी प्रयोग' एवं 'पत्रकारिता में हिंदी का प्रयोग' विषयों पर व्याख्यान आयोजित किए गए।

Mid-Term Review Meeting on Improving Water Use for Dry Season Agriculture by Marginal and Tenant Farmers in the Eastern Gangetic Plains

A mid-term review meeting of ACIAR funded project was held from 26-29 Sept, 2016 at ICAR RCER, Patna to review the progress and future action to be taken for the project titled 'Improving water use for dry season agriculture by marginal and tenant farmers in the Eastern Gangetic Plains'.



The meeting was attended by the members of ACIAR, University of Queensland, Australia, CSIRO, Australia, IWMI, Nepal, BIRRI, Bangladesh, Dept. of Irrigation, Nepal, International Developmental Enterprises (IDE), Nepal, Groundwater Resource Development Board, Nepal, UBKV, West Bengal, CDHI, West Bengal, SAKHI, Bihar, Director, Heads and project associated scientists of the institute.

In the four days meeting, progress, problems faced, risks, key success and challenges and activity planning for the next year of all the partners of respective regions were discussed thoroughly not only in the field of biophysical area but social issues related with the interventions.



The review meeting was followed by stakeholders meeting on 30th Sept, 2016 wherein the Director, ICAR RCER, Scientists from SAUs, State Department Officials, members from NSC, NGOs, farmers from various parts of Bihar, members of

different company firms participated in the meeting. The purpose of the meeting was to create awareness about agricultural water management and its scaling up for the benefit of farming community.

Swachh Bharat Abhiyan

Swachh Bharat Abhiyan was organized on 2nd Oct, 2016 at ICAR RCER, Patna. All the staff participated in the programme and cleaning of the campus and office premises was carried out.



Swachhata Pakhwada

Swachhata pakhwada was celebrated at ICAR-RCER, Research

Centre, Ranchi from 16th October to 31st October, 2016. It started with an oath taking ceremony in the forenoon of 17th October, 2016, in which, Dr. A. K. Singh, Head, ICAR RCER, RC, Ranchi administered the Swachhata



shapath to all the scientific, technical, administrative, supportive staff etc. All staff at the centre took the pledge to keep the surroundings clean and to also inspire others for cleanliness. The oath taking ceremony was followed by a cleanliness drive in the premises of Farm II of the centre where everyone participated in cleaning the surroundings and fields of the farm area. Segregation of biodegradable and non

biodegradable waste both at the centre and in the farms was initiated as a part of *swachhata abhiyan*. Different color garbage bins; red for non-biodegradable waste and green for biodegradable waste were put in all the laboratories and common areas including sale counter and canteen.

Winter School on Optimization of Production Efficiency of Fish-Livestock Integrated Farming

ICAR sponsored 21 days winter school on “Optimization of Production Efficiency of Fish-Livestock Integrated Farming” was organized from 17 Nov-7 Dec, 2016, at ICAR Research Complex for Eastern Region, Patna. Shri Vijoy Prakash, former Agriculture Production Commissioner, Govt. of Bihar was the Chief Guest in the inaugural function. In his inaugural address, the Chief Guest stressed that the major hurdle of present day farming is the small and fragmented land holding and the major task would be how small landholders can be linked to the market and export. He urged the corporate sector to come forward for marketing of agricultural products. He also hoped that the forum may discuss many issues like corporatization of land, introduction of traditional fisheries, integrated farming with local animals and fish farming without grain. Scientists, Assistant Professors and Subject Matter Specialists from different states participated in the training programme.



Agriculture Education Day

Agriculture Education Day was celebrated on 3rd Dec, 2016 at ICAR RCER, Patna. Dr. J.S. Mishra, Head,

Division of Crop Research, Dr. Abhay Kumar, Head, DSE&E, Dr. A.K. Singh, PS, ICAR RCER, Patna expressed their views on the agriculture education. The main objective of the programme was to create awareness regarding the agriculture and its scope as



career to the students. Students visited different farms of the institute. More than 90 students from different schools of Patna participated in the programme. A debate was also organized for the students and everyone participated actively.

World Soil Day

World Soil Day was celebrated at ICAR Research Complex for Eastern Region, Patna on 5th December 2016. Shri Sanjeev Chaurasia, MLA, Digha



Constituency was the Chief Guest. He appreciated the efforts of ICAR RCER for its contribution towards holistic development for farmers. Dr. B.P. Bhatt, Director, ICAR RCER in his welcome speech sensitized the farmers regarding the importance of soil testing, judicious use of chemical fertilizers and efficient use of farm resources to maximize the crop production without deteriorating the soil health. Dr. A. Dey (Head, DLFM) and Dr. Abhay kumar (Head, DSE&E) also presented their views on importance of soil management. Field demonstration was carried out for the collection of soil sample along with farmers' scientist interaction sessions. Around 50 no. of

farmers of Karai, Simra, Badipur, Dimra, Bikram, Dehri, Naubatpur and Mahungupur participated in this programme.

World Soil Day cum Pre-Rabi Mela was also celebrated at its KVK, Ramgarh, in which 252 farmers including 48 women farmers from all the blocks in the Ramgarh District had participated. Shri Amrender

Kumar Gupta, Member, Regional Advisory Committee, NABARD



was the Chief Guest of the function. On this occasion, a Kisan Ghosti (Farmers-Scientists Interaction Programme) and an exhibition was also organized in which the technologies developed by the ICAR-RCER Research Centre, Ranchi were displayed along with the activities of the NGOs based at Ramgarh, Support and Srijan Foundation.

Capacity Building Programme on “General Administration and Management”

A three day Capacity Building Programme on “General Administration and Management” was organized from 14–16th December, 2016 at ICAR



Research Complex for Eastern Region, Patna. The programme was inaugurated by the Director Dr. B. P. Bhatt, in the august presence of Shree Sanjeev Kumar Singhal, IPS, ADG, Bihar Military Police (BMP),

Govt. of Bihar. The Chief Guest emphasized the need for continuous training process because he felt that in the changing scenario, the approach towards work should change and the importance of human resource management has increased. The faculty members include Sh. S.K. Singhal, IPS, ADG, BMP, Govt. of Bihar; Sh. P.K. Jain, Deputy Secretary, ICAR Headquarters; Sh. Vishwa Ranjan, CAO, Indian Institute of Management (IIM), Lucknow; Sh. G.C. Prasad, SFAO, Central Institute of Cotton Research, Nagpur; Sh. Vampad Sharma, Under Secretary, ICAR Headquarters, apart from others. More than 35 participants from various ICAR institutes like CIPHET, (Ludhiana), NRC Mushroom, (Solan), Directorate of Onion & Garlic Research, (Pune), IVRI (Varanasi), CIFRI, (Barrackpore), Directorate of Medicinal & Aromatic Plants, Anand (Gujarat), IVRI, Bareilly, NRRI (Cuttak), IISS, Mau (U.P.), CPRS, (Patna Centre) and Central Agricultural University (CAU) participated in the programme.

Sessions were taken on various topics including strategic approach in HRM, good governance, processing of cases under CAS, DPC constitution and its proceedings, assessment cases of technical staffs in ICAR system etc., apart from various other topics. All the participants actively interacted with the faculties during the entire course of programme.



Dr. A.K. Singh, Vice Chancellor, BAU, Sabour and Dr. P.S. Pandey, ADG, HRD, ICAR, New Delhi were the Chief Guest and Guest of Honour, respectively, on the occasion of valedictory function. The Chief Guest emphasized the need for similar kind of programme for the administrative and financial staff of his University with the help of ICAR.

Interface Meeting on “Documentation of Technologies and Development of Road Map for Livestock and Poultry Sectors in Eastern Region”

An interface meeting on “Documentation of technologies and development of road map for livestock and poultry sectors in Eastern region” was convened on 19th December, 2016, under the chairmanship of Dr. H. Rahman, DDG, Animal Science, ICAR, New Delhi at ICAR Research Complex for Eastern Region, Patna, for ushering livestock productivity and to bring out state specific recommendations for Eastern region. The meeting



was attended by Prof. Purnendu Biswas, Vice-Chancellor, WBUAFS, West Bengal, Dr. R.C. Srivastava, Vice-Chancellor, Dr. R.P. CAU, Pusa, Bihar, and Prof. S. Pasupalak, Vice-Chancellor, OUAT, Odisha, Shri R.P. Singh, ICAR Governing Body member. Apart from this, the experts who participated from across the country were Dr. R. Bhatta, Director, NIANP, Bangalore, Dr. P.K. Ghosh, Director, IGFRI, Jhansi, Dr. B.S. Prakash, ADG (AN&P), Dr. Ashok Kumar, ADG (AH), Dr. Vineet



Bhasin and Dr. Rajan Gupta, Principal Scientists, ICAR, New Delhi, Dr. H.R. Khanna, Assistant

Commissioner (Animal Health), DADF, Govt. of India, Dr. D.K. Singh Dron, Director of Research and Dr. M.P. Sinha, Professor, BAU, Ranchi, Dr. M.K. Padhi, Head, CARI Regional Station, Bhubaneswar, Dr. T.K. Dutta, Head, NDRI Regional Station, West Bengal, Dr. S. Samantray, Principal, B.V. College, Patna, Dr. Suresh Das, Principal Scientist, IVRI Regional Station, West Bengal and other scientists from ICAR and State Agriculture Universities.

The deliberation in the meeting was primarily centered on improving productivity of different species of livestock and poultry reared by farmers in the Eastern region. The challenges confronted in the Eastern region in augmenting the productivity, and the possible solutions available with ICAR and SAUs with the technologies developed by these institutions were discussed.

Training on Improved Agricultural Implements and Machinery

A three-day workshop-cum- training programme was organized at ICAR Research Complex for Eastern Region, Patna during



22 - 24 December, 2016.

Shri Radha Mohan Singh,

Union Minister of Agriculture and Farmers Welfare presided over the valedictory function. In his address, he informed that Farm Machinery Resource Centre was established on 28th June 2016 at Patna with the mandate to make available improved farm equipments to farmers besides imparting training on their manufacturing, repair and maintenance. This unique facility has trained more than 100 farmers. The trained farmers can start microenterprises and provide employment in their respective locations. He also stressed that it is the responsibility of manufacturers and research and development organizations to make technologies available to the farmers. There is a need that academic and agricultural industry sector to collaborate and jointly

formulates strategies for the coordination of activities in this direction. He felicitated six progressive farmers from Patna and East Champaran district in the programme. During the 3 day workshop, working knowledge on use and maintenance of different instruments and tools used in agriculture such as tractor, zero till seed drill, manual weeder, power weeder, reaper etc. was given by subject matter

experts of farm machinery. A total no. of 87 farmers from Patna and East Champaran districts took part in this programme.



First Meeting of Institute Management Committee of National Research Centre on Integrated Farming, Motihari

The first meeting of IMC of NRC-IF was held at ICAR-RCER, Patna on 27th December, 2016 under the Chairmanship of Dr. B.P. Bhatt, Director, ICAR RCER, Patna and OSD, NRC- IF. Other members present were Dr. S. Bhaskar, ADG (AAF&CC), ICAR, New Delhi, Director (Fisheries), Govt. of Bihar, Dr. A. Dey, Head, DLFM, ICAR-RCER,

Patna, Dr. V.K. Mishra, Head, CSSRI RRS, Lucknow, Sh. U.K. Saxena, F&AO and Sh. Alok



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Kumar, AO(P), ICAR-RCER, Patna. Head of Divisions and Scientists of the ICAR-RCER, Patna also attended the meeting. A thorough discussion was held on various topics like budgets, construction work of Office-cum-Laboratory Building, boundary wall, farm area, and other important issues etc.

Award and Recognition

- Dr. Rakesh Kumar, Scientist (Agronomy) received **Fakhruddin Ali Ahmad Award 2014-15** for outstanding research in tribal farming system on the occasion of ICAR's foundation day on 16th July, 2016 at New Delhi.



Selection/Promotion/Transfer/Retirement

New entrants

- Dr. Kirti Saurabh, Scientist, Soil Science *w.e.f.* 14.10.2016
- Dr. Mohammad Monobrullah, Principal Scientist, Entomology *w.e.f.* 22.11.2016

Promotions

- Dr. Deokaran, SMS, KVK, Buxar promoted from T-6 to T-7 *w.e.f.* 10.10.2013
- Sh. Bipin Mishra, ICAR RCER, Patna promoted from T-1 to T-2 *w.e.f.* 12.07.2015
- Sh. Paul Sanjay Sirkar, RC, Ranchi promoted from T-6 to T-7 *w.e.f.* 10.09.2016
- Sh. Dhiraj Prakash, RCM, Dharbanga promoted from T-1 to T-2 *w.e.f.* 31.12.2016

Transfer/Selection

- Dr. R.K. Singh, Head, DLWM selected as Project Coordinator at ICAR-CIPHET, Ludhiana *w.e.f.* 12.08.2016.

Retirements

- Sh. D. K. Sah, Sr. Technical Officer (Farm) *w.e.f.* 31.08.2016
- Sh. Chandradeo Rai, Technical Officer (T-5) *w.e.f.* 31.08.2016.
- Sh. Shakil Ahmed, PS *w.e.f.* 30.09.2016
- Sh. Madi Lakra, Technical Assistant (Driver) *w.e.f.* 30.11.2016

Obituary

- Sh. Duka Oraon, SSS, RC, Ranchi on 05.08.2016.

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