



APART RICE WEEKLY

April 25-30, 2022

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District ATMA, IRRI Assam**

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Field Visit on *Boro* Paddy under APART, KVK, Dhubri

A field visit was undertaken under APART, KVK Dhubri to the *Boro* paddy demonstrations at 3 different locations of Dhubri district. On April 25, 2022, Bikash J.Gharphalia (SMS, Agrometeorology), Ashok K.Gogoi (Project Associate), Rimjim S. Bora (Assistant Project Scientist), Akhoy Bharadwaj (Junior Researcher, IRRI) and Chandan Bora (Research technician, APART) visited Paschim Medhipara-2 and observed the MTR and LCD-STRV demonstrations on *Boro* paddy. Further, on April 27, 2022 the team inspected the ICMD-STRV demonstrations at Sonaluguri and Wet-DSR demonstrations at Chotogirairpar. The fields are presently at tillering stage and in good condition. Thiamethoxam was distributed to the farmers as pest infestation was observed in the fields. Some of the farmers were also advised to spray bispyribac sodium to control the weeds immediately.



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Field Visit under APART, KVK, Kokrajhar

On April 27 and 28, 2022, a field visit was carried out under APART by KVK, Kokrajhar team to various demonstrations under objective I, II and IV of IRRI supported activities. Under objective I the team visited 2 fields of Head to Head demonstration at Chautara and Badlagaon. Under objective II, the team visited 3 fields of Integrated Crop Management Demonstrations (ICMDs) of which 2 were at Kholsingimari and 1 was at Satbil No-1. On the same day the team also visited one Learning Centre Demonstration (LCD) field at Kholsingimari of *Boro* paddy and 6 fields on maize demonstration in rice fallow areas under objective-IV, 3 at Hogmabil and 3 at Hatigarh No-1. The paddy fields under objective I and II were at milking and maximum tillering stages stage. All the maize fields under objective IV were at cob formation stage. The visiting team comprised of Priyanka Borah (SMS, Agronomy), Shilpi Devi Borah (Project Associate, APART), Narzina Parbin (Assistant Project Scientist, APART), Gopal Ch. Ray (Research Technician). All the fields were well maintained by the farmers.



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Showcasing APART Promoted Technologies in the KISAN MELA

Celebrating India's 75th year of Independence, the Central Govt. has launched a campaign "Azadi ka Amrit Mahotsav" to mark the achievements in various sectors of the economy from March 12, 2021 to Aug 15, 2022.

About the programme: "Azadi ka Amrit Mahotsav", a week-long campaign has been launched by the Ministry of Agriculture and Farmer's Welfare from April 25 to April 30, 2022 to highlight the achievements made in the agriculture sector from the time of independence.

In collaboration with ATMA, a farmers' fair was organized by KVK, Howly in the Barpeta district of Assam on April 26, 2022. The programme was inaugurated by the Hon'ble MLA of Barpeta district and attended by Chairman, Barpeta Zilla Parishad, Chairperson, Howly Municipal Board, DAO, DVO, DFO, KVK staff etc. An exhibition was displayed during the 'Kisan Mela' where various APART promoted machineries, such as mechanical transplanter for paddy transplanting, Seed-cum-fertiliser drill for dry direct seeding of rice and drum seeder for wet direct seeding of rice and postharvest and value

chain machinery viz., dry grinding machine, moisture meter, rice puffing machine, etc., were showcased. Farmers and scientists interaction was held on Bharatiya Prakritik Krishi Paddhati, Technical discussion on millets, oilseeds and bio-fortified crops and farmers' queries were also answered by the Scientists. During the mela, different types of machinery were showcased to the farmers. More than 250 farmers participated in this mela.

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Field Visit for Boro Paddy at Goalpara under HRS, Kahikuchi

On April 28, 2022, APART staff under HRS Kahikuchi visited *Boro* paddy fields of Ajibur Rahman and Aliya Begum of Khalsamari village of Goalpara district to observe mechanically transplanted rice demonstrations of BINA Dhan 11 variety under APART. It was observed that the crop was in maximum tillering stage. The incidence of insect-pest and diseases was found to be low. However the farmer was advised to go for need based plant protection measures due to the prevailing intermittent weather changes in these days. The farmers are satisfied with the growth and performance of the standing crop and are hopeful for a good yield.



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Erection of 'T' Bird Perches for Pest Management in *Boro* Paddy

Birds act as an effective control mechanism to control pests mainly of the order-Lepidoptera in case of paddy crop. In this regard, a field visit was conducted to *Boro* paddy demonstration plots to ensure proper and timely management of insect pests. The demonstration plots were found in good growth condition at most of the visited locations. However, infestation of rice stem borer was observed in few spots which was below Economic Threshold Level (ETL). We suggested both chemical and physical method of pest control in *Boro* paddy i.e. application of Thiamethoxam 25 WG @ 100g/ha and erection of 'T' bird perches @ 50 nos./ha. Erection of 'T' perches will act as resting place for birds which feed on egg masses of pests. It was ensured that 'T' perch should be erected 2 ft above crop canopy which are to be removed from the field before flowering of crop. Farmers can adopt bird perches for their pest management practices to reduce pesticide application. Hence, bird perches are one of the eco-friendly ways to manage insect pests in major crops.



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Direct Seeding of Rice: An Emerging Technology in Morigaon through KVK-IRRI convergence

IRRI experts, Dr. Vipin Kumar and Dr Suryakanta Khandai visited the project sites on Dry- and Wet-DSR in Morigaon district on April 22, 2022, to have a farmer-scientist interaction and to monitor the performance of environment protecting intervention in the fields, under the world-bank funded APART project. Mr Rupam Bonia, Research Technician (RT) of Morigaon district also accompanied the team during the visit.

The team visited at different demonstration plots and collected the feedback from the farmers on crop performance, challenges faced, remedies made and their plan for future adoption of the technology in larger area for reducing the cost of cultivation, address the scarcity of labor, increasing yield and reducing greenhouse gas emission. Many fields of dry- and wet-DSR were visited, and their complete details were collected which are provided below:

Wet-DSR at Junbeel, Morigaon (N 26.168649; E 92.215212)

The team visited village Junbeel of Morigaon district and interacted with farmer, Mr Diganta Konwar, at his field, where Wet-DSR was planted. The farmer had planted paddy variety DRR Dhan 44 and BINA Dhan11 and he shared his experience of planting the crop including problems faced and the support he received for cultivating this technology from the experts of IRRI and KVK. In total, 21 bigha of Wet-DSR was planted in that village out of which 15 bigha was supported by APART program. Looking at the benefits of wet-DSR, Mr Diganta was very happy as the technology needs less labor compared to traditional method. Initially, the villagers of Junbeel village were criticizing the farmer for this technology, but with assurance from IRRI and KVK team, he not only agreed to plant the demonstration but also planted the additional 6 bigha and now the field is in good condition. The fellow farmers were surprised looking at the results of this low-cost establishment method. Mr Diganta mentioned that he used 130 kg DAP, 210 kg Urea, 100 kg MOP and 50 kg of Zinc sulfate in his 15 bigha land.

The farmers raised some issues during planting to get better yield and some of the observation seen by IRRI experts were as follows:

- Weed management was not proper on the surrounding bunds of the fields and the team advised for hand weeding to avoid multiplication of weed seeds in the same field.
- The field was infested with stem borer and it was advised to apply insecticide Chlorantraniliprole 0.4% G @ 10kg/ha or Cartap hydrochloride 50% SP @ 2g/L of water throughout the field for effective control of the pest.



Farmer was very much satisfied with the wet-DSR technology and assured the team that he will take responsibility to continue the technology and spread it among fellow farmers up to 50 bigha in the coming year. He was also interested to go for mechanized maize sowing in his field from next season. He was contacted with Yangli FPC to take multi-crop planter on custom hiring basis for maize sowing.

Wet-DSR of Mr Lakhi Das, Morigaon (N 26.276562; E 92.320693)

After that one more field on wet-DSR at Durimari village was visited by the experts. In this village the farmer Lakhi Das mentioned that he had sown 7.5 bigha of BINA Dhan11 by using drum seeder with the support of KVK and IRRI on February 09, 2022. He had used Kavatch (fungicide) for seed treatment (25 gm/kg seed) and fertilizers (DAP 60 kg; Urea 60 kg; MoP30 kg; Zn 25kg) in his 7.5 bigha field. As guided, he used Pretilachlor @ 200ml/bigha as pre-emergence herbicide at sowing time; Pyrazosulfuron Ethyl 10% WP (Sathi) @ 25 gm per bigha on March 30, 2022, and Bispyribac- sodium 10% EC (Nominee Gold) @ 33 ml per bigha on April 17, 2022, for weed management. In this field, the deficiency of nutrients was observed on one corner of the field and the team has advised to use NPK (19:19:19) @ 2% in the field.



Dry-DSR field at Borchola, Morigaon (N 26.373928; E 92.390705)

To address the need for alternatives to puddled transplanting of rice (PTR), IRRI and KVK teams has explored the potential of direct seeding of rice (DSR), which more recently has been promoted using a multi-crop planter to sow rice seed in non-puddled fields. DSR has been advocated to address many limitations of PTR, as it avoids nursery raising, seedling uprooting, transplanting, and puddling, thereby leading to reduced labour requirement. Looking at all the benefits, Mr Sosida Nanda Bordoloi of Poohar Agro FPC of Morigaon district put his interest to try the technology in 13.5 bigha. Mr Sosida Nanda had used multi-crop planter for sowing of rice varieties, DRR Dhan 44 and Dishang, on March 21, 2022. Now the crop is in good condition and power weeder is being used for weeding. The farmer has applied DAP @ 70 kg, MOP @ 50 kg and Urea @ 130 kg in his are of 13.5 Bigha land. Although the farmer has used an imbalanced dose of fertilizer because the recommended rate of fertilizer is DAP @ 65 kg, MOP @ 50 kg,Urea @ 105 kg and ZnSO₄@ 25 kg per ha. Secondly the Urea application was very early as the recommendation of Urea is at 15-20 days after sowing when the plant stand has established in the field. The farmer also found that un-levelled field may have a negative impact on DSR. He planned to go for levelling of his field in next season and will adopt the technology in larger area. The neighbor farmers criticized him for this new attempt, and he took it as challenge and monitored the field at regular intervals. IRRI team advised him to apply fertilizer in his fields and to share the photographs of his dry-DSR field every week for better monitoring.



Use of Manual weeder in dry-DSR field



Use of Power weeder in dry-DSR field

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