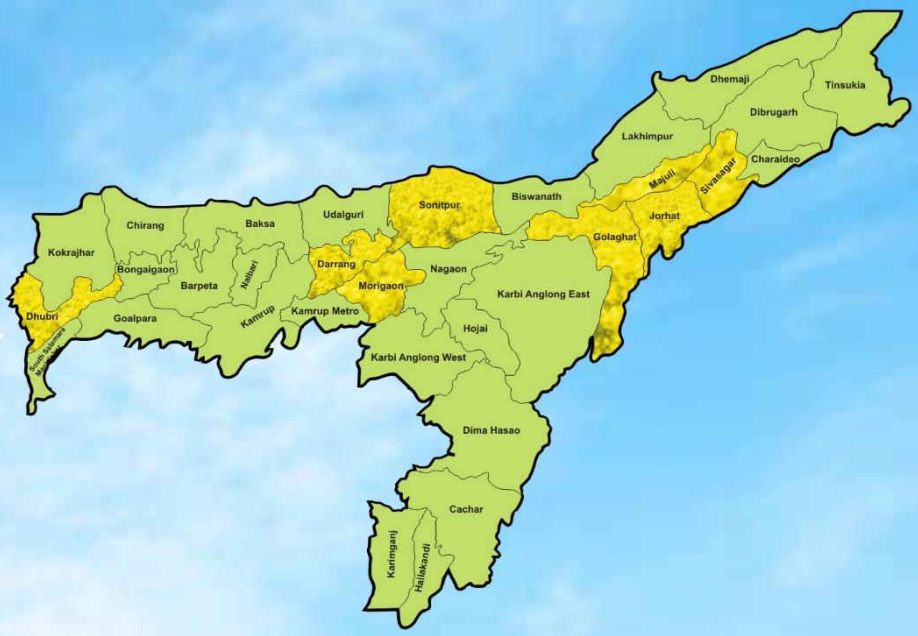
Second Six Month Progress Report

January-June 2021



ICAR-DIRECTORATE OF RAPESEED-MUSTARD RESEARCH
BHARATPUR, RAJASTHAN-321303

ASSAM AGRIBUSINESS & RURAL TRANSFORMATION PROJECT
(APART)

भाकृअनुप
ICAR

ICAR-DRMR
ICAR-Directorate of Rapeseed-Mustard Research

ARIAS Society
GOVERNMENT OF ASSAM
Assam Rural Infrastructure and Agricultural Services Society

APART

অসম চৰকাৰ
सत्यमेव जयते
GOVERNMENT OF ASSAM

Six Monthly Progress Report-II

January-June 2021

Consulting services for technical advisory support on Augmenting Rapeseed-Mustard Production of Assam Farmers for Sustainable Livelihood Security

Assam Agribusiness and Rural Transformation Project (APART)

Contract No. OPIU Agri/APART/DRMR/23

World Bank Financed

Submitted by

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Table and Figures

Acronyms

AAU	Assam Agricultural University
AEA	Agricultural Extension Agent
ANLD	Anisotropic Non-Linear Diffusion
ANMR	Additional Net Monetary Return
APART	Assam Agribusiness & Rural Transformation Project
ARIASS	Assam Rural Infrastructure and Agricultural Services Society
ATM	Assistant Technology Manager
ATMA	Agriculture Technology Management Agency
AWP	Annual Work-Plan
B:C Ratio	Benefit: Cost Ratio
BTM	Block Technology Manager
BVZ	Barak Valley Zone
CBVZ	Central Brahmaputra Valley Zone
CoC	Cost of Cultivation
CD	Crop Demonstrations
DRMR	Directorate of Rapeseed-Mustard Research
DoA	Department of Agriculture
FP	Farmers' practice
GDP	Gross Domestic Product
GMR	Gross Monetary Return
Ha	Hectare
HYV	High Yielding Variety
HZ	Hills Zone
ICAR	Indian Council of Agricultural Research
ICT	Information and Communication Technology
YIOFP	Yield Increase over Farmers' Practice
IP	Improved practices
IMD	India Meteorological Department
INM	Integrated Nutrient Management
INR	Indian Rupee
IPM	Integrated Pest Management
ITK	Indigenous Technical Knowhow
IWM	Integrated Weed Management
KVK	Krishi Vigyan Kendra
LBVZ	Lower Brahmaputra Valley Zone
MSP	Minimum Support Price
MT	Master Trainer
NARES	National Agricultural Research and Extension System
NBPZ	North Bank Plain Zone
NEH	North East Hills
NER	North Eastern Region
NGO	Non-Government Organization
PHM	Postharvest Mechanization
ToT	Training of Trainers
TT	Technical Training
UBVZ	Upper Brahmaputra Valley Zone
UPS	Uninterruptible Power Source
WUE	Water-Use Efficiency

Preface

In India, oilseeds contribute 3% and 10% to gross national products and value of all agricultural products, respectively with 14 and 1 million people involved in oilseed cultivation and processing, respectively. There is a huge gap between demand and supply of edible oil in the country. India is one of the biggest importers of vegetable oils. Rapeseed-mustard is the only crop that can meet the challenge of bridging the demand-supply gap of edible oil in India. India is the third largest producer of rapeseed-mustard in the world accounting to about 22.2% area and 10.7% of the world's total rapeseed-mustard production. In India, rapeseed-mustard is grown in diverse agro-climatic conditions ranging from north-east to north-west and northern India to the south with wide acceptability as an edible oil. The crop is grown as sole or in mixed cropping under both rainfed as well as irrigated conditions. It accounts for 23.64 % of total area under oilseed crops and its average yield is about 1511 kg/ha which is on the higher side compared to the combined oilseed crop average of 1135 kg/ha (2018-19).

ICAR-DRMR was established by ICAR, New Delhi to carry out basic, strategic and applied research on rapeseed-mustard. Besides, generating basic knowledge and material, it also engages in developing ecologically sound and economically viable agro production and protection technologies. ICAR-DRMR works for providing equitable access to information, knowledge and genetic material to develop improved varieties and technologies, coordinating applied research, developing location specific varieties and technologies and doing technology dissemination and capacity building of farmers, extension personnel and all stakeholders.

Rapeseed-mustard crop has good production potential, where the cultivation is supported with technology and knowledge inputs. Since rapeseed-mustard is capable of growing under diverse agro-climatic zones, an expansion of area in rice-fallow regions under this crop can lead to an increase in production.

Rapeseed and Mustard is grown in substantial area in Assam. But productivity is very low (660 kg/ha) in comparison to national productivity (1511 kg/ha) (2018-19). Low and unstable oilseed system productivity is major problem in the state where cultivation is undertaken mostly through small and marginal agricultural holdings. Some identified major reasons of low production and productivity of rapeseed-mustard in the state of Assam are; use of traditional varieties i.e. locally available materials especially short duration toria (mostly non-descript naturally crossed bred) varieties, non-availability of quality seeds in time, non-adoption of improved production and protection technologies (Poor land preparation, broadcasting seed, improper plant spacing, no weed control, harvesting at improper stages, etc.), inadequate moisture at sowing time in rice-fallow areas and lack of irrigation facilities, delayed sowing due to the adoption of longer duration rice varieties, biotic stresses (especially aphid, saw fly, bihar hairy catterpiller, white rust, Alternaria, stem rot), lack of confidence among the farmers to compensate the cost involved in intensive/scientific cultivation, lack of coordination between the technologists/extension workers, processors and the farmers, etc.

Keeping in view of vast availability of natural resources and fertile lands offering ample scope to promote oilseed cultivation in Assam, there is need to identify/screening the suitable technology of rapeseed-mustard for rice–fallow situation and motivate the farmers of these areas to adopt identified technology through demonstrations, trainings, fairs, exhibitions and visits to research and experimental farm.

Under Assam Agribusiness and Rural Transformation Project (APART), the contract on 'Consulting services for technical advisory support on Augmenting Rapeseed-Mustard Production of Assam Farmers for Sustainable Livelihood Security' was signed between Operational Project Implementation Unit (OPIU), APART, Directorate of Agriculture (DoA), Govt. of Assam and ICAR-DRMR, Bharatpur on April 28, 2020. As one of the major knowledge partners in APART, ICAR-DRMR is providing technical support to the Department of Agriculture (DoA), Govt. of Assam for implementation of project with following specific objectives:

a) Enhancing adoption of high yielding short duration rapeseed-mustard varieties.
b) Enhancing area and raising productivity, profitability, and resource use efficiencies of rapeseed-mustard cultivation in Assam through improved crop management and protection technologies.
c) Strengthening post-harvest management, reduce losses, increase efficiency and profitability, and improve mustard value chain.
d) Developing knowledge materials and capacity development of various stakeholders and extension functionaries in Assam.

Project activities covered 7 undivided districts namely; Darrang, Dhubri, Golaghat, Jorhat (including Majuli), Morigaon, Sivsagar and Sonitpur of Assam.

Keeping in view the low productivity, poor marketing support and low confidence and capacities of the value chain actors, it was felt that interventions with regards to organizing crop demonstrations along with technical trainings, PHT demonstrations, and training and capacity building of the value chain actors is critical for enhancing the production and productivity of rapeseed-mustard in Assam. Therefore, ICAR-DRMR aimed to work with the Department of Agriculture, Government of Assam on the mustard value chains especially organizing demonstrations, and training & capacity building programme to increase average productivity of rapeseed.

Other interventions in the mustard value chain would be development of knowledge materials in the form of simple and actionable farmer-friendly extension material and digital/IT tools on the different aspects of scientific production and protection technologies of rapeseed-mustard to reach a large number of farmers quickly at a low cost and provide accurate, motivating, credible and distortion free information to them. To create awareness among farmers about varieties, technologies, practices in the mustard value chain including post-harvest and market linkages, ICAR-DRMR providing technical support to organize farmer fairs.

To reinforce the confidence of the extension personnel and farmers in new technology, methods, etc., exposure visit of extension functionaries and farmers have been planned to be

organized for ICAR-DRMR along with interaction with progressive farmers and visit to farmers' field in Bharatpur and adjoining areas to have better knowledge and understanding of technology, methods and to improve the skills of the extension personnel and farmers in scientific production and protection technologies of rapeseed-mustard.

ICAR-DRMR will support in organizing a round table conference/workshop/ seminar to gain further insights into opportunities in Assam and to include and identify all mustard value chain actors from the agro-system (farmers to consumers).

Executive summary

Under the APART project, seven districts of Assam namely; Jorhat, Golaghat, Sivasagar, Darrang, Sonitpur, Morigaon and Dhubri were selected. For better supervision, monitoring, efficient delivery and effective implementation of mustard activities, ICAR-DRMR has deployed its team at all seven locations.

During 2020-21, 20 mustard crop demonstrations in each of the selected 22 clusters were approved. Accordingly, a total of 440 mustard crop demonstrations in 79 selected villages of 22 clusters of seven selected districts were laid out. Based on the climatic situation, prevailing cropping pattern and resources, these demonstrations were conducted with three improved varieties of Indian mustard viz. NRCHB-101 (224), PM-28 (116) and DRMR-150-35 (78) and one variety of toria, i.e. TS-38 (21) along with crop management and protection technologies like line sowing, proper seed rate, seed treatment, proper plant population, thinning, weeding, intercultural operations, management of pest and diseases, etc. against the control plot. The seed of these improved varieties were timely supplied by ICAR-DRMR to DAOs of seven selected districts. The seed of demonstrated varieties along with required fertilizers and need based fungicides/pesticides were given to selected farmers for demonstration along with seed alone for control plot.

These demonstrations were harvested successfully in Feb.-March 2021 and yield data were analyzed to study the performance of demonstrated technologies. The data show that the mean seed yield under IP ranged from 1114 in Golaghat to 1477 kg/ha in Sonitpur, whereas under FP ranged from 730 in Golaghat to 1054 kg/ha in Sonitpur. The yield increase due to IP ranged from 31.8% in Sivsagar to 52.6% in Golaghat. The cost of cultivation of IP ranged from Rs. 22808 in (Darrang) to Rs 28053 /ha (Jorhat), while for FP it ranged from Rs. 18158 (Morigaon) to Rs 24750 /ha (Sivsagar). The maximum additional cost of Rs. 5364/ha for IP incurred in Golaghat, while minimum Rs. 2296/ha in Dhubri. The maximum ANMR (Rs 19011 /ha) was reported due to the improved practices in Sonitpur, while minimum was (Morigaon) (Rs 12792 /ha). All IP had positive ANMR. The Gross Monetary Return for IP ranged from Rs. 61270 (Jorhat) to Rs 81235 /ha (Sonitpur), while for FP it ranged from Rs. 40150 (Golaghat) to Rs. 57970 (Sonitpur). The B:C ratio for IP ranged from 2.34 (Golaghat) to 3.46 in Sonitpur, while for FP it ranged from 1.32 (Dhubri) to 3.02 (Sonitpur). The higher gross monetary return (GMR) and B:C ratio of demonstrated technology and positive additional net monetary return (ANMR) in all districts shows that demonstrated technology of rapeseed-mustard during 2020-21 was economically viable and profitable for the farmers of Assam.

Regular visits and monitoring of the crop demonstrations and minikit demonstrations were done by Research Associates and ATMA personnel to educate and motivate the farmers to adopt crop management practices like thinning, intercultural operations, weeding, applying irrigation, management of insect pests and diseases, etc.

ICAR-DRMR organized a total of 44 field days in 22 clusters (two in each cluster) of seven selected districts at maturity stage during Feb.-March 2021 at the demonstrated fields of selected farmers. A total of 1354 farmers and farm women participated in these field days.

As per approved activities, a total of 22 PHT demonstration trainings were organized in 22 clusters of seven selected districts during Feb.-March 2021. A total of 545 farmers and farm women participated in these 22 PHT demonstration trainings.

During 9-10th February 2021 ICAR-DRMR organized one Exposure visit-cum-training of progressive farmers and one exposure visit-cum-training of Master trainiers/ extension personnel to Reginoal Agriculture Research Station (RARS), Shillongani, Nagaon, Assam, one of coordinating centres under All India Coordinated Research Project on Rapeseed-Mustard (AICRP-RM) working under ICAR-DRMR,. A total of 20 master trainers/extension personnel, including research associates and 24 farmers from seven selected districts participated in the exposure visit-cum-training programme.

ICAR-DRMR organized a farmer fair at RARS, Shillongani, Nagoan, Assam on February 10, 2021. More than 250 farmers, farm women and extension personnel from Dhubri, Darrang, Golaghat, Nagaon, Jorhat, Majuli, Sivsagar, Sonitpur, Hojai, Nalbari districts participated in the fair.

ICAR-DRMR developed and published a state specific document on "Best management practices of rapeseed-mustard technologies for Assam" in the form of technical bulletin that will help the agricultural officials and farmers of the state to focus on the specific requirements and activities needed to address the production constraints to achieve higher productivity of rapeseed-mustard.

ICAR-DRMR has also developed a simple and actionable farmer-friendly extension material in the form of two technical folders on "Scientific technology of rapeseed-mustard for Assam" and "Integrated insect and disease management in rapeseed-mustard". The details of the targets and achievements of the activities are presented in Table 1.

Table 1: Executive summary of physical targets and achievements during January-June. 2021 as per AWP 2020-21

Activities	Unit	Target	Achievement	Remarks
Crop Demonstrations	No.	440	440	All demonstrations were harvested successfully.
Field days	No.	44	44	completed

PHM demonstrations	No.	22	22	Completed
Exposure visit-cum-training of progressive farmers	No.	1	1	Completed
Exposure visit-cum-training of extension personnel	No.	1	1	Completed
Farmers Fair	No.	1	1	Completed
Publication of Technical bulletin	No.	01	01	Completed
Publication of technical folders	No.	02	02	Completed

Chapter 1: Detailed Report

1.1 About ASSAM

Assam, a state with a geographical area of 78,438 km^2, forms about 2.4% of the country's total geographic area and is the core of the North Eastern Region (NER) of India. It is situated in the South of the Eastern Himalayas, between 89°42□ E to 96°E longitude and 24°8□ N to 28°2□ N latitude. A large part of Assam is surrounded by hilly areas and it has both National as well as International boundaries. Assam shares its north boundary with Bhutan and Arunachal Pradesh. Nagaland, Manipur and a part of Arunachal Pradesh are to the east of Assam while Mizoram to the south of it. States Tripura, Meghalaya and the country Bangladesh are situated to the south-west of the state and West Bengal to the west of it. Assam comprises three broad natural divisions, viz., the Brahmaputra valley, the Barak valley, and the Hill range. The Brahmaputra valley is the largest strip of plain land extending from the West to North-East in the northern part of the state. The river is the main source of life for the people of Assam and a contributing factor for the fertile agricultural land of the state. Adding quality to alluvial soil, the river Brahmaputra is a perennial source of water for the state.

The southern part of the state is another valley with the river Barak passing through it, known as the Barak valley. This region is relatively small and accounts for only about 9% of the area of the state, accommodating about 12% of the state's population. The hilly range of Karbi Anglong and North Cachar lies in the middle of the state, separating the two valleys.

1.2 Agro-climatic Zones of Assam

Based on the amount and characteristics of rainfall, temperature, relative humidity, terrain condition (a stretch of land with regard to its natural features), and soil characteristics, Assam has been broadly divided into six agro-climatic regions. They are:

1. The North Bank Plain Zone (NBPZ), comprises of the districts Dhemaji, Lakhimpur, Sonitpur, Udalguri (BTAD) and Darrang, contributing to 18.37% area of Assam. Rice, Rapeseed-Mustard and Sugarcane are the major crops of the zone.
2. The Upper Brahmaputra Valley Zone (UBVZ), comprises of the districts Tinsukia, Dibrugarh, Sivasagar, Jorhat, and Golaghat, and accounting for 20.40% of the total area of Assam. Rice, Rapeseed-Mustard and Sugarcane are the major crops of the zone.
3. The Central Brahmaputra Valley Zone (CBVZ) comprises of the districts Nagaon and Morigaon, accounting for only 7.08% of the area of the state. This region is bowl-shaped and often flooded. Rice, Rapeseed-Mustard, Jute and Pulses are the major crops of the zone
4. The Lower Brahmaputra Valley Zone (LBVZ) comprises of the districts Kamrup, Nalbari, Barpeta, Bongaigaon, Kokrajhar, Chirang, Baksa, Dhubri, and Goalpara covering an area of 20,222 km2, accounting for 25.75% of the area of the state. Rice, Rapeseed-Mustard, Jute, Potato, Wheat and Pulses are the major crops of the zone
5. The Barak Valley Zone (BVZ) comprises of the districts Cachar, Hailakandi, and Karimganj and covers a total area of 6,962 km2, i.e., 8.9 % area of the state. Rice, Sugarcane and Potatoare the major crops of the zone
6. The Hills Zone (HZ) comprises of two districts Karbi Anglong and North Cachar Hills, encompassing 19.4% of the total state area. Maize and Sugarcane are the major crops of the zone.

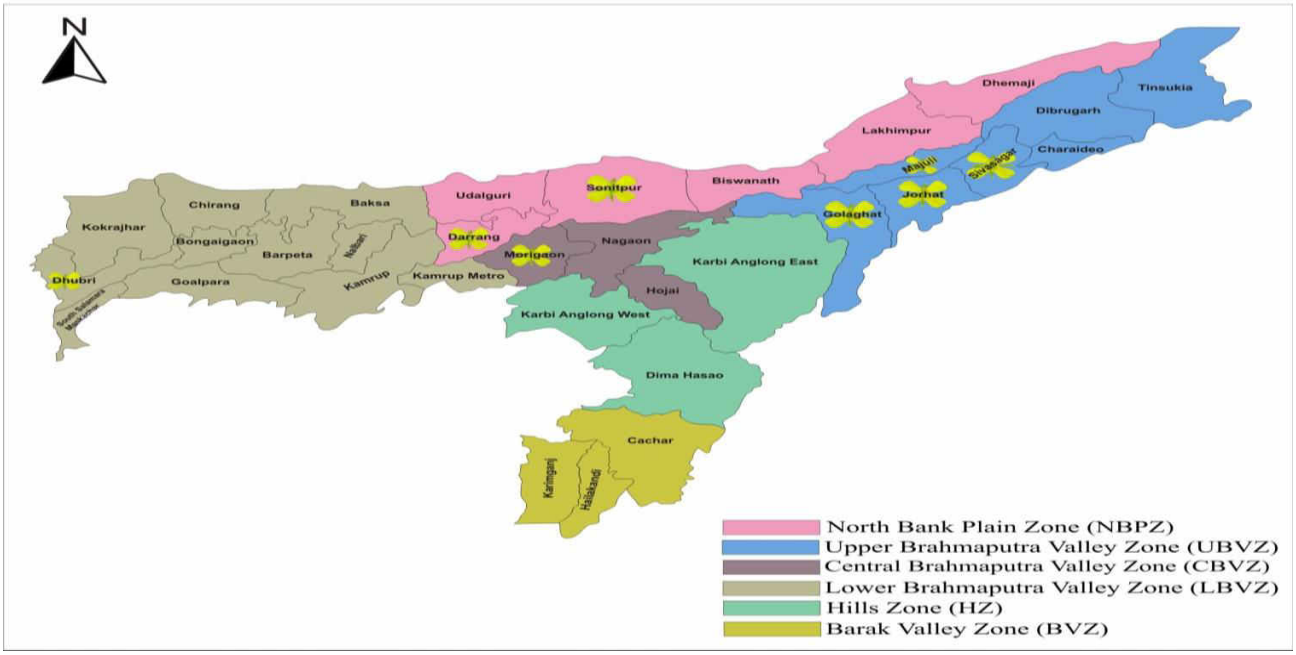


Fig 1: Agro-climatic Zones of Assam

There is a similarity of farm operation in the first five plain agro-climatic zones of Brahmaputra valley and Barak valley. The method of cultivation adopted in the plain region of Assam is more or less similar to that followed in most parts of India. Rice, grown during the wet season (June-Oct/Nov) also called Sali /winter rice, has traditionally been the principal crop in all these zones. Moreover, jute is also grown during the same period at a substantial scale. During the winter months when rainfall is scanty, and the scale of cultivation is also much smaller, the less water requiring crops, such as oilseeds, pulses, potato, and vegetables are traditionally grown in the plains. On the other hand, the system of farming in the hilly areas is significantly different from the system of farming in the plains. The primitive practice of shifting cultivation is still predominant mode of cultivation in the hills.

Climatic Condition: Generally Assam's climate comprises very wet summer season and sunny winter season. The monsoon rain normally starts from early June and continues up to the month of October. Moreover, in late April and May, normally there is also heavy pre-monsoon rain in the state. In Assam, during the summer, temperature normally varies between 25° C and 40° C. During the winter period, i.e., from the month of November to the February, climate mostly remains dry. Sometimes, the temperature during the winter falls bellows 5° C.

The state normally witnesses a very heavy rainfall during the period from June to September. As opposed to monsoon season, the state witnesses on an average 51.0 millimeter rainfall during the winter season. Again in summer and post monsoon period, the average rainfall is 578.00 and 176.00 millimeter, respectively. The average rainfall in the state in a year is 2294 millimeter.

Sources of Irrigation: The major sources of irrigation in Assam are canal, tube well, tank and well supplying irrigation.

1.3 Brief description of the districts identified for rapeseed-mustard programme under the project

For the rapeseed-mustard programme under APART project, seven districts of Assam namely; Jorhat, Golaghat, Sivasagar, Darrang, Sonitpur, Morigaon and Dhubri were selected. For better supervision, monitoring, efficient delivery and effective implementation of mustard activities of APART, ICAR-DRMR has deployed its team at all seven locations. The selected districts belong to different Agro-climatic zones of the state were:

Districts for rapeseed-mustard programme	Agro-climatic zone of Assam
Jorhat, Golaghat and Sivasagar	Upper Brahmaputra Valley Zone
Darrang and Sonitpur	North Bank Plain Zone
Morigaon	Central Brahmaputra Valley Zone
Dhubri	Lower Brahmaputra Valley Zone

Normally, there are considerable variations in physiography, climate, soils, flooding and cropping pattern etc. in an agro-climatic zone and these variations lead to formation of agro-ecological situations within the zone.

Morigaon: This district comprises of 1551 km^2 area, having 5 blocks. Total cropped area of the district is 214921 ha. and rice, mustard and maize are the major crops. The district is considered as flood prone having sandy loam soil. The 75% area is under rainfed and only 25% cropped area is covered by tube well irrigation. About 12546 ha area is under mustard crop and aphid and saw fly are the major pest of mustard in the district. The major cropping pattern are Sali Rice-Mustard-Summer Pulses and Sali Rice-Mustard-Jute. The occurrence of flood and sometimes drought in summer are the major constraints with respect to agriculture. The Mayong block of district were selected for project activities.

Jorhat: This district comprises of 192862 ha area, having 8 blocks. Total cropped area of the district is 102839.2 ha and rice, paddy, pea, pulse, cabbage, cauliflower, brinjal and mustard are the major crops. The district is considered as flood prone having sandy loam soil. The 91% area is under rainfed and only 9% cropped area is covered by tube well irrigation. About 9507 ha area is under mustard crop and aphid and saw fly are the major pest of mustard in the district. The major cropping pattern are paddy- vegetables-vegetables, paddy-potato-vegetables, paddy-pulse-paddy-mustard. The occurrence of flood and sometimes drought in summer are the major constraints with respect to agriculture. The Kaliapani, Majuli, Ujani block of district were selected for project activities.

Sonitpur: This district comprises of 271729 ha area, having 7 blocks/cluster. Total cropped area of the district is 112281 ha and rice, maize, pulses, jute, sugarcane, potato and mustard are the major crops. The soil is clay loam and sandy loam. The 91 % area is under rainfed and only 9% cropped area is covered by tube well irrigation. About 15501 ha area is under mustard crop and aphid and

saw fly are the major pest of mustard in the district. The major cropping pattern are rice-mustard, rice-vegetables, mustard-kharif vegetables. The occurrence of flood, soil erosion, non-adoption of line transplanting are the major constraints with respect to agriculture. The Gabhoru, Balipara, Bihaguri, Chaiduar and Dhekiajuli clusters of district were selected for project activities.

Sivasagar: This district comprises of 1598.85 Km^2 area, having 5 blocks/ clusters. Total cropped area of the district is 1, 16,579 ha and rice, maize, pulses, jute, sugarcane, potato and mustard are the major crops. The district is considered as alluvial soil, clay loam and sandy loam soil. About 2,750 ha area is under mustard crop and aphid and saw fly are the major pest of mustard in the district. The major cropping pattern are rice-mustard, rice-vegetables, mustard-kharif vegetables. The occurrences of water stress, early shower during harvesting, dense foggy during the month of November are the major constraints with respect to agriculture. The Demow and Gaurisagar clusters of district were selected for project activities.

Darrang: This district comprises of 158500 ha area, having 6 blocks/clusters. Total cropped area of the district is 73619 ha and paddy, maize, vegetable and mustard are the major crops. The district is considered as sandy loam and clay loam soil. About 15447 ha area is under mustard crop and aphid, white rust and saw fly are the major pest and disease of mustard. The major cropping patterns are sali paddy–maize-vegetable, sali paddy- mustard. Late sowing of sali paddy, laggard to new technology and flood are the major constraints with respect to agriculture. The Bechimari, Sipajhar and Pachim Mangaldai clusters of district were selected for project activities.

Golaghat: This district comprises of 3502 Km^2 area, having 8 blocks/clusters. Total cropped area of the district is 2, 28 325 ha and paddy, banana, pineapple, ginger, chilli tomato, sugarcane, potato, rapeseed-mustard, pea, lentil, green gram, maize and vegetable are the major crops. The district is considered as sandy loam and clay loam soil. About 13450 ha area is under mustard crop and aphid, white rust and saw fly are the major pest and disease of mustard in the district. The major cropping patterns are sali rice-rabi vegetables / rapeseed-mustard / black grams, sali rice-summer paddy and summer paddy-black gram / rapeseed-mustard / rabi vegetables. The occurrences of flood and water stress, attack of insect pests such as aphid, early shower during harvesting, non-availability of fertilizers and chemicals during peak seasons etc. are the major constraints with respect to agriculture. The Bokakhat, Kakodonga and Podumoni clusters of district were selected for project activities.

Dhubri: This district comprises 2,36,126 ha. area, having 11 blocks/ cluster. Total cropped area of the district is 2,30,536 ha and paddy, kharif vegetables, black gram, maize, jute, potato, rapeseed-mustard, and pea are the major crops. The district is considered as sandy loam and clay loam. About 23471 ha area is under mustard crop. The major cropping patterns are mustard –boro paddy, sali paddy-rapeseed /mustard/ rabi vegetables/ rice-pumpkin/potato/mustard. The occurrences of flood and water stress, attack of insect pests such as aphids, powdery mildew, early shower during harvesting, non-availability of fertilizers and chemicals during peak seasons etc. are the major constraints with respect to agriculture. The Gauripur, Rupshi, Agomani, Chapar- Salkocha and

Mahamaya clusters of district were selected for project activities.

1.4 Weather

Assam is well known for its diverse sub-Himalayan agro-climatic conditions which is suitable for the growth of varieties of crops across the districts.

Weather parameters play major role in determining the crop growth, development and yield because weather strongly influences the physical expression of genetic potential of the crop. Any significant deviation of this parameter from the optimum value become detrimental for the crop productivity. Weather has direct effect on growth and development of plants. All the physio-chemical and biological activities of the plants are governed by the weather variables prevailing in the area. In case of rapeseed-mustard, maximum temperature plays an important role for germination of crop in late October to second week of November. If the maximum temperature during this period remains low (27-35ºC), the germination of the seed is not affected.

1.4.1. Upper Brahmaputra Valley Zone (UBVZ).

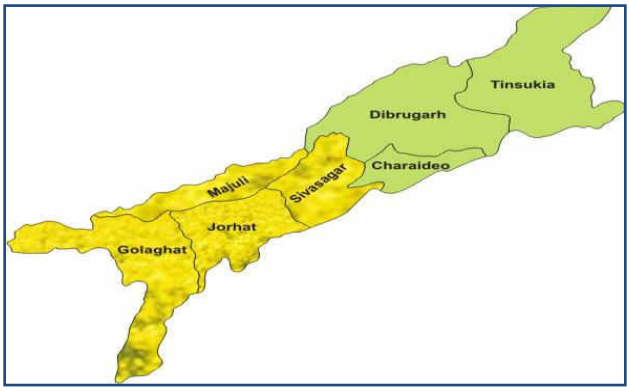


Figure 2 shows the monthly maximum minimum temperature and rain fall in the Upper Brahmaputra Valley Zone (UBVZ). The analysis of the temperature profile in the zone shows that the maximum temperature ranged from 23.5 to 32 ºC and minimum temperature from 10.4 to 24ºC. The minimum rain fall 2.6 mm and maximum 270 mm was recorded in the months February and June respectively.

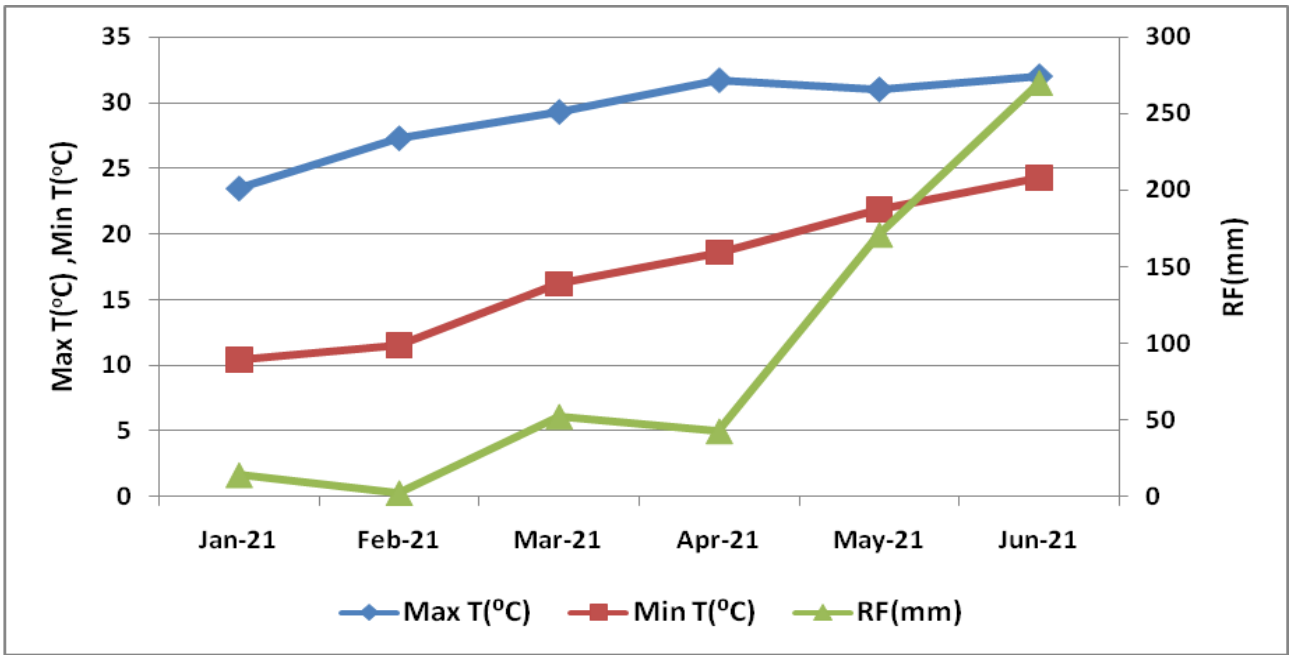


Fig 2: Maximum & Minimum temperature and rainfall in UBVZ

1.4.2. Central Brahmaputra Valley Zone (CBVZ).

Figure 3 shows the monthly maximum, minimum temperature and rainfall in the Central Brahmaputra Valley Zone (CBVZ). The analysis of the temperature profile in the zone shows that the maximum temperature ranged from 23.2 to 32.9 °C and minimum from 9.5 to 21.2 °C. The minimum rainfall 4.4 mm and maximum 245 mm was recorded in the months February and June, respectively.

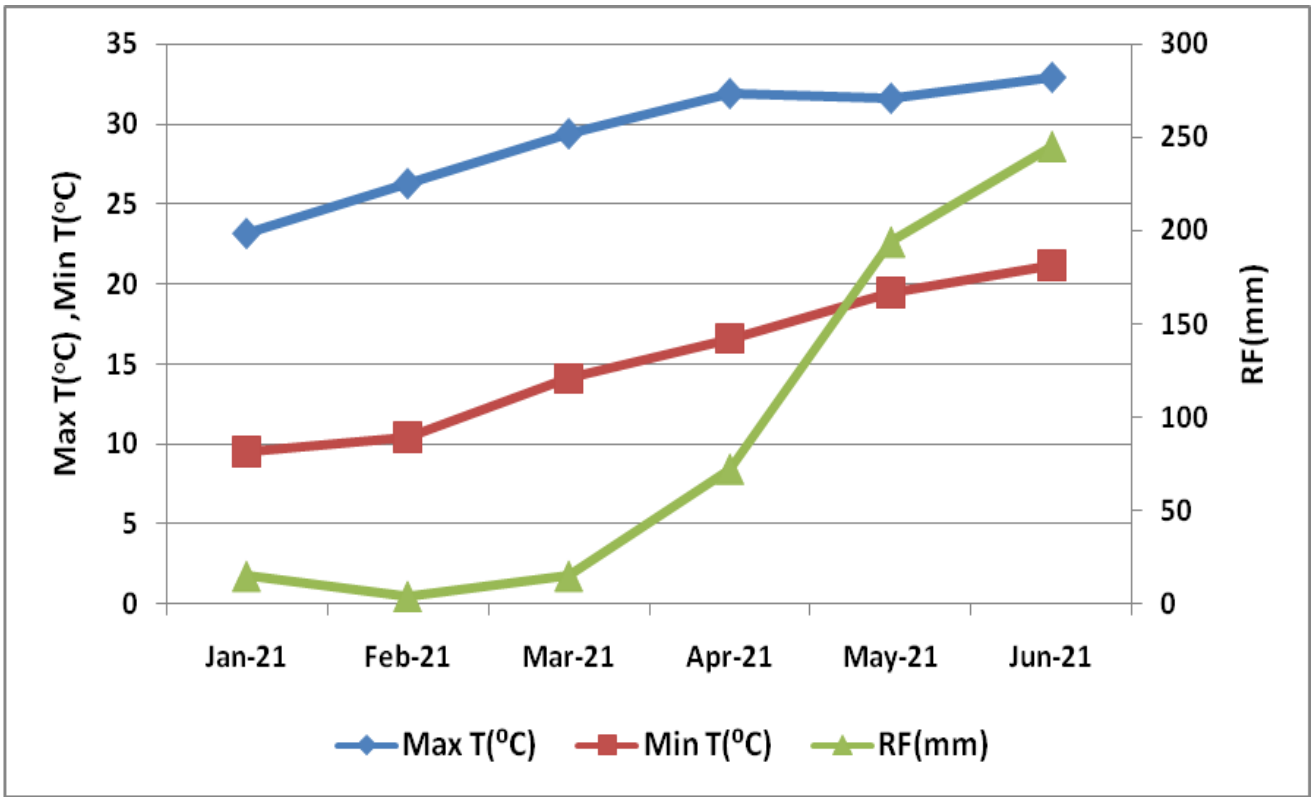
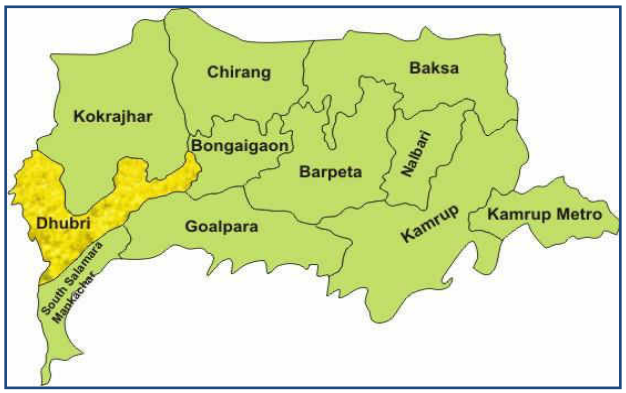


Fig 3: Maximum & Minimum temperature and rainfall in CBVZ

1.4.3. Lower Brahmaputra Valley Zone (LBVZ).

Figure 4 shows the monthly maximum, minimum temperature and rainfall in the Lower Brahmaputra Valley Zone (LBVZ). The analysis of the temperature profile in the zone shows that the maximum temperature ranged from 23.3 to 31.5 °C and minimum from 10.2 to 24.6 °C. The minimum rainfall almost no rain and maximum 245 mm was recorded in the months February and June respectively in the zone.



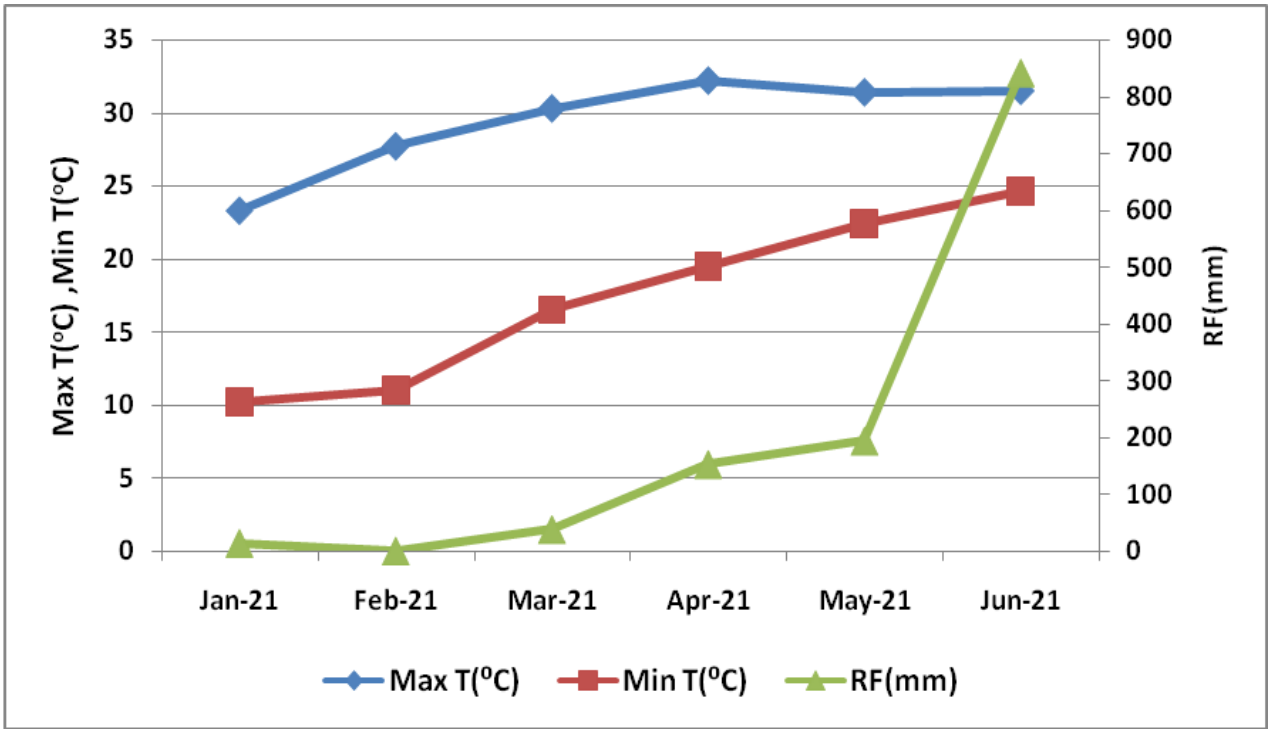


Fig 4: Maximum & Minimum Temperature and Rain fall in LBVZ

1.4.4. North Bank Plain Zone (NBPZ).

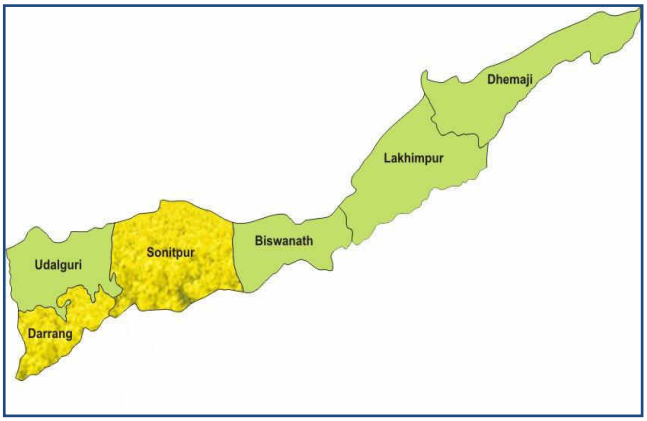


Figure 5 shows the monthly maximum minimum temperature and rain fall in the North Bank Plain Zone (NBPZ). The analysis of the temperature profile in the zone shows that the maximum temperature ranged from 23.2 to 32.0 ºC and minimum temperature from 8.7 to 23.2 ºC. It can be seen that the NBPZ gets highest rainfall (459 mm) in June followed by 138mm in July. The minimum rain fall 1.4 mm received in month of February.

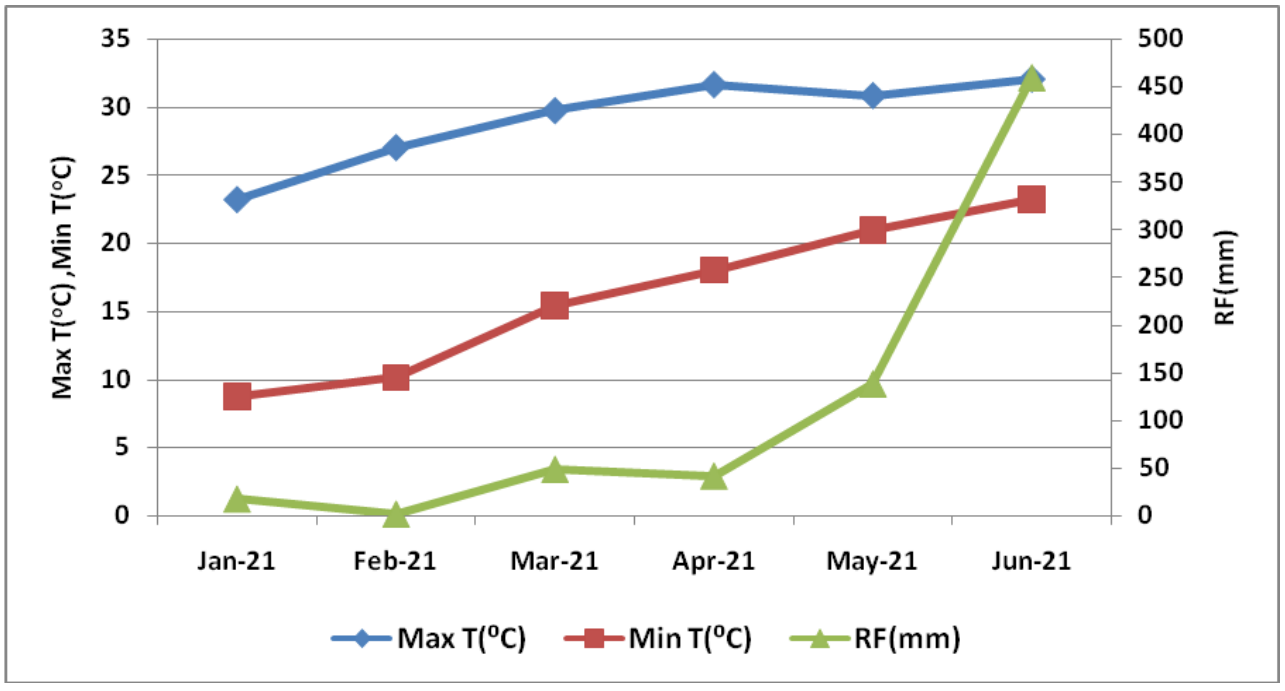
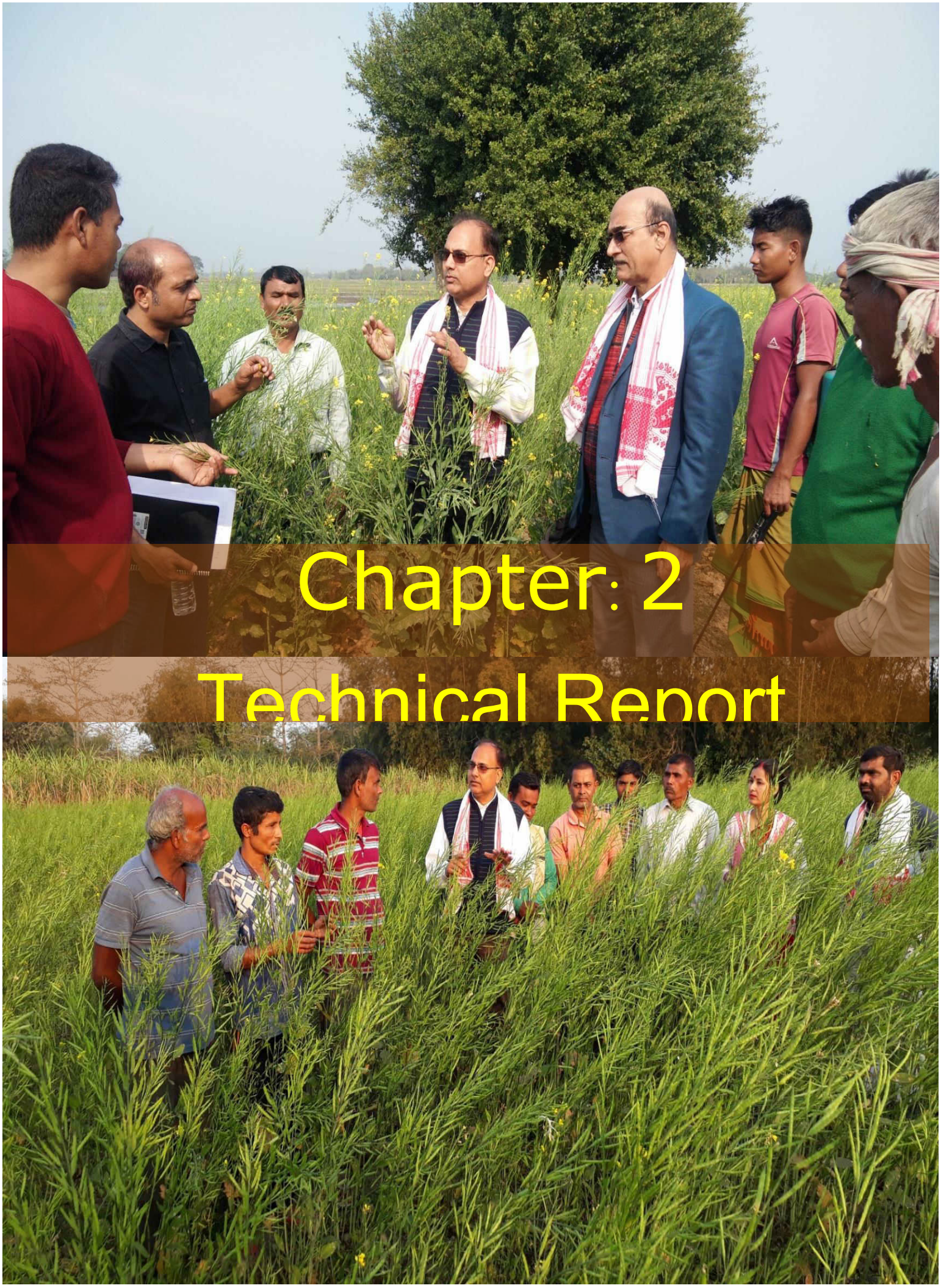


Fig 5: Maximum & Minimum Temperature and Rain fall in NBPZ

In general, higher sunshine hours, maximum temperature (> 30 °C) and lower temperature (<14 °C) during flowering and pod development stage of the crop were favorable for mustard crop.

The average temperature in January and February months in all zones was about 11 ^{o}C which suited for pod formation and resulted good yield in all zones.



Chapter: 2
Technical Report

2. PROGRESS OF THE PERIOD JANUARY- JUNE 2021

2.1 Crop demonstrations: Crop demonstration is method for motivating farmers for adoption of new varieties and techniques by showing their distinctly superior results. Crop demonstration shows the advantages and applicability of a newly recommended practice in farmer's own situation. Under the project, mustard crop demonstrations were organized on small plots of 0.25 ha area along with 0.05 ha. of control plot to provide practical learning situation and show the production potential of newly released varieties and crop management and protection practices of rapeseed-mustard to farmers, extension personnel and all other stakeholders at farmers' field.

The selection of the sites for conducting demonstrations was done by ATMA personnel of respective districts in consultation with concerned stakeholders and Research Associates of the project. Keeping in view that it should be easily accessable to farmers of neighboring villages and extension workers coming from different parts of the district. Identification of beneficiaries for demonstration was carried out by the implementing agency as per the requirement/aptitude of the farmers to conduct the demonstrations. Preference for demonstration was given to the socio-economically backward / small/ marginal / ST / SC / OBC farmers. The selected demonstrating farmers were progressive one with lead and easily approachable by other farmers & extension workers. During 2020-21, 20 mustard crop demonstrations in each of the selected 22 clusters were approved. Accordingly a total of 440 mustard crop demonstrations in 79 selected villages of 22 clusters of seven selected districts were laid out (Table 1). Alongwith mustard crop demonstrations, 20 minikit demonstrations in each of the selected clusters were also laid out. The minikit demonstrations accelerate informal dissemination of scientific cultivation of mustard from farmer to farmer through the introduction, exposure, experience, for acceptance of new varieties. These minikits helped farmers and other stakeholders to grow, observe and experience the performance of the introduced variety and develop learning for self and the associated community. This intended to create awareness in the region and thereby producing demand and a market for the variety for the future. This will also make seeds available in the next season.

Table 2: Progress of crop demonstrations during crop season 2020-21

SN	Activities	Target	Achieved
1.	Climate resilient production demonstrations	440	440

Based on the climatic situation, cultivation of rapeseed-mustard, prevailing cropping pattern and resources, these demonstrations were conducted with three improved varieties of Indian mustard viz. NRCHB-101 (224), PM-28 (116) and DRMR-150-35 (79) and one variety of toria, viz. TS-38 (21) along with crop management and protection technologies like line sowing, proper seed rate, seed treatment, proper plant population, thinning, weeding, intercultural operations, management of pest and diseases, etc. against the control plot. The seed of these improved varieties were supplied by ICAR-DRMR to DAOs of seven selected APART mustard districts. The seed was made available to them timely. The seed of demonstrated variety along with required fertilizers and need based

fungicides/pesticides were given to selected farmers for crop demonstration along with seed alone for control plot. These demonstrated were succesfuly harvested during February-March 2021.The details of components of demonstrated technology against the control plot or farmers practice is given in Table 3 and district wise details of varieties in mustard crop demonstrations are given in Table 4.

Table 3: Components of demonstrated technology against the control plot

Components of demonstrated technology	**Prevailing farmers practices against demonstrated technology**
Improved varieties (NRCHB-101/PM-28/DRMR-150-35/TS-38)	Improved varieties (NRCHB-101/PM-28/DRMR-150-35/TS-38)
Proper seed rate	Higher seed rate
Balanced use of fertilizers	Imbalance use of fertilizers
Line sowing	Broadcasting
Proper spacing	No proper spacing
Thinning/Weeding	No thinning/Weeding
Proper plant protection measures	Generally not used plant protection measures

Table 4: Distribution of varieties in successful crop demonstrations.

S. No.	**District (No. of Demo)**	**NRCHB- 101 (No. of Demo)**	**PM- 28 (No. of Demo)**	**DRMR 150-35 (No. of Demo)**	**TS-38 (No. of Demo)**
1	Dhubri (100)	46	21	33	-
2	Sonitpur (100)	43	34	23	-
3	Darrang (60)	28	15	10	7
4	Golagat (60)	34	16	-	10
5	Jorhat (60)	41	15	-	4
6	Sibsagar* (39)	20	10	9	-

7	Morigaon (20)	12	5	3	-
Total	**439**	**224**	**116**	**78**	**21**

* *One demonstration in Majumelia village of Demow cluster of Sivsagar was faifed due to poor germination*

The high temperature in the month of October and late withdrawal of monsoon (up to last week of October to first week of November at some places) caused delay in sowing of the crops at some places. The sowing time spread from November 5, 2020 to December 4, 2020 and harvesting period spread from February 20, 2021 to April 3, 2021. The broadcasting method of sowing of mustard was prevailing in the Assam. The line sowing of mustard has several advantages, therefore, effort was done for line sowing method for conducting mustard crop demonstrations. For the first time, in more than 60% demonstrations, line sowing was followed with our efforts. The mild infestation of mustard sawfly, flee beetle and bihar hairy caterpillar at vegetative growth and mustard aphid at flowering stage and Alterneria blight and stem rot diseases was observed in at many locations. However no major loss was observed due to diseases and pests.

Cluster wise information for crop demonstrations: The demonstrations were laid out in 79 selected villages of 22 clusters in seven selected districts, identified by APART for mustard cultivation (Table 5).

Table 5: The cluster and village wise details of varieties in mustard crop demonstrations

SN	District	Cluster	Village	No. of demo	No. of demo on varieties			
					NRCHB -101	***PM -28***	***DRMR - 150-35***	***TS -38***
1	**Dhubri**	Gauripur	Tisterpar	7	3	2	2	-
			Kismat Hasdaha -II	6	2	2	2	-
			Madhusoulmari-1	3	3	0	-	-
			Khudimari- II	5	0	2	3	-
		Rupshi	East Gaikhowa-II	6	2	2	2	-
			Sukatikhata	7	2	2	3	-
			Chapgarh-I	4	0	2	2	-
			Rowa-I	4	0	0	4	-
			Tiamari-I	3	3	0	-	-
		Agomani	Kherbari-I	9	4	1	4	-
			Jinkata	2	0	1	1	-
			Dighaltari	5	4	0	1	-
		Chaper	Simlabari	12	4	4	4	-

SN	District	Cluster	Village	No. of demo	No. of demo on varieties			
					NRCHB -101	***PM -28***	***DRMR - 150-35***	***TS -38***
		Salkocha	Lalkura	3	3	0	-	-
			Dhirerchar	5	5	0	-	-
			Sildanga	2	1	1	-	-
		Mahamaya	Patakata-II	7	0	2	5	-
			Dalaneralga-II	3	3	0	-	-
			Joharmura	7	7	0	-	-
2	**Sonitpur**	Dhekiajuli	Ansaipur	13	4	6	3	-
			Gorpara Pathar	6	2	2	2	-
			Gabharupar	1	0	1	-	-
		Bihaguri	Bhalukekhowa	10	4	5	1	-
			Bapubheti	10	2	3	5	-
		Gabharu	Da Parbatia Leng Chuburi	7	2	3	2	-
			Boga Bora Cuburi	11	4	5	2	-
			Da Beseria	2	0	1	1	-
		Balipara	Roumari	10	1	8	1	
			Sotai Milanpur	9	3	0	6	-
			Parmaighuti	1	1	0	-	-
		Chaiduar	Borjohabari	10	10	0	-	-
			Bakoridoloni	10	10	0	-	-
3	**Darrang**	Sipajhar	Basachuba	5	0	2	2	1
			Jayantipur	3	1	2	-	-
			Titkuchi	2	1	0	1	-
			Sanowa	5	0	0	1	4
			Halda	5	1	1	1	2
		Bachimari	No. 1 Bargarakhuti	6	4	2	-	-
			Nagaon	4	2	2	-	-
			Dalgaon	1	0	1	-	-
			Baruajhar	3	2	0	1	-
			No. 2 Barjhar	6	2	0	4	-
		Pachim-Mangaldai	Chamuapara	7	6	1	-	-
			Niz Rangamati	3	2	1	-	-
			Bartheker Abari	2	1	1	-	-

SN	District	Cluster	Village	No. of demo	No. of demo on varieties			
					NRCHB -101	***PM -28***	***DRMR - 150-35***	***TS -38***
			Gariapara	2	1	1	-	-
			Manitari	6	5	1	-	-
4	**Golaghat**	Podumoni	Kathkothia	7	7	0	-	-
			Da-chamua	7	0	4	-	3
			Kuwaripather	6	0	3	-	3
		Kakodonga	Dhimaji Miri	7	7	0	-	-
			Natun Chapori	7	7	0	-	-
			Shiristika	5	0	5	-	-
			Khongia Gaon	1	0	1	-	-
		Bokakhat	Japoripather	7	4	1	-	2
			Difflopather	7	5	1	-	1
			Lukhrakhonia	6	4	1	-	1
5	**Jorhat**	Kaliapani	Duliya Gaon	4	4	0	-	-
			Koiboitro Gaon	4	3	1	-	-
			Bhokot Gaon	7	4	3	-	-
			Kumar Gaon	4	3	0	-	1
			Japong Gaon	8	3	1	-	3
		Majuli	Mohkina	4	2	2	-	-
			Milanmadhupur	4	1	3	-	-
			Borbari	4	4	0	-	-
			Rowmora	4	4	0	-	-
		Ujani Majuli	Borbil	4	2	2	-	-
			Mudoibill	3	4	0	-	-
			Major Deori	5	2	3	-	-
			Chiram Deori	5	5	0	-	-
6	**Sivasagar**	Demow	Majumelia*	6	4	1*	1	-
			Gorukhuti	7	3	2	2	-
			Khanikar Gaon	6	3	3	-	-
		Gaurisagar	Namdongia Bongali	7	4	1	2	-
			Deogharia	7	5	1	1	-
			Decial	6	1	2	3	-
7	**Morigaon**	Mayong	Sativeti	7	4	2	1	-

SN	District	Cluster	Village	No. of demo	No. of demo on varieties			
					NRCHB -101	***PM -28***	***DRMR - 150-35***	***TS -38***
			Botabori	7	2	3	2	-
			Hatimuria	6	6	0	-	-
	Total			**439**	**224**	**116**	**78**	**21**

* One demonstration in Majumelia village of Demow cluster of Sivsagar was faifed due to poor germination.

Regular visits and monitoring of the crop demonstrations and minikit demonstrations were done by ICAR-DRMR experts, Research Associates and ATMA personnel to educate and motivate the farmers to adopt crop management practices like thinning, intercultural operations, weeding, applying irrigation, management of insects and diseases etc. The summary of crop demonstrations is presented in Table 6.

Table 6: Summary of crop demonstrations organized by ICAR-DRMR during 2020-21

SN	Activity	Target (No.)	Achieved (No.)	Beneficiaries (No.)	Beneficiaries (No.)						
					Gender		Social Category				Total
					Male	Female	Gen	OBC	SC	ST	
1	Crop Demonstration	440	440*	440*	337*	103	168	188	25	59	440*

2.1.1 Performance of crop demonstrations conducted on rapeseed-mustard during 2020-21

The Crop demonstrations included whole package technology components like use of improved variety, balanced use of fertilizers, micronutrients, proper spacing, weeding/thinning, need based plant protection and other cultural practices in comparison to farmers' practices of crop cultivation. A total of 440 crop demonstrations were conducted in 22 clusters of seven districts of Assam under irrigated and rainfed situations during 2020-21. Twenty demonstrations were conducted in each of the selected 22 clusters. Out of 440 demonstrations were conducted, 260 in three districts viz., Sonitpur (100), Dhubri (100), Darrang (60) under irrigated condition and 179 crop demonstrations in four districts viz. Golaghat (60), Jorhat (60), Sivsagar (40) under rainfed condition. The three varieties namely NRCHB-101 (224), PM-28 (116) and DRMR-150-35 (78) of Indian mustard and TS-38 (21) of toria were used in crop demonstration at different locations. Twenty one demonstrations on toria and 418 on Indian mustard were conducted. One demonstration in Sivsagar failed due to poor germination. Finally a total of 439 crop demonstrations were suuessfully organized in 22 clusters of seven districts of Assam.

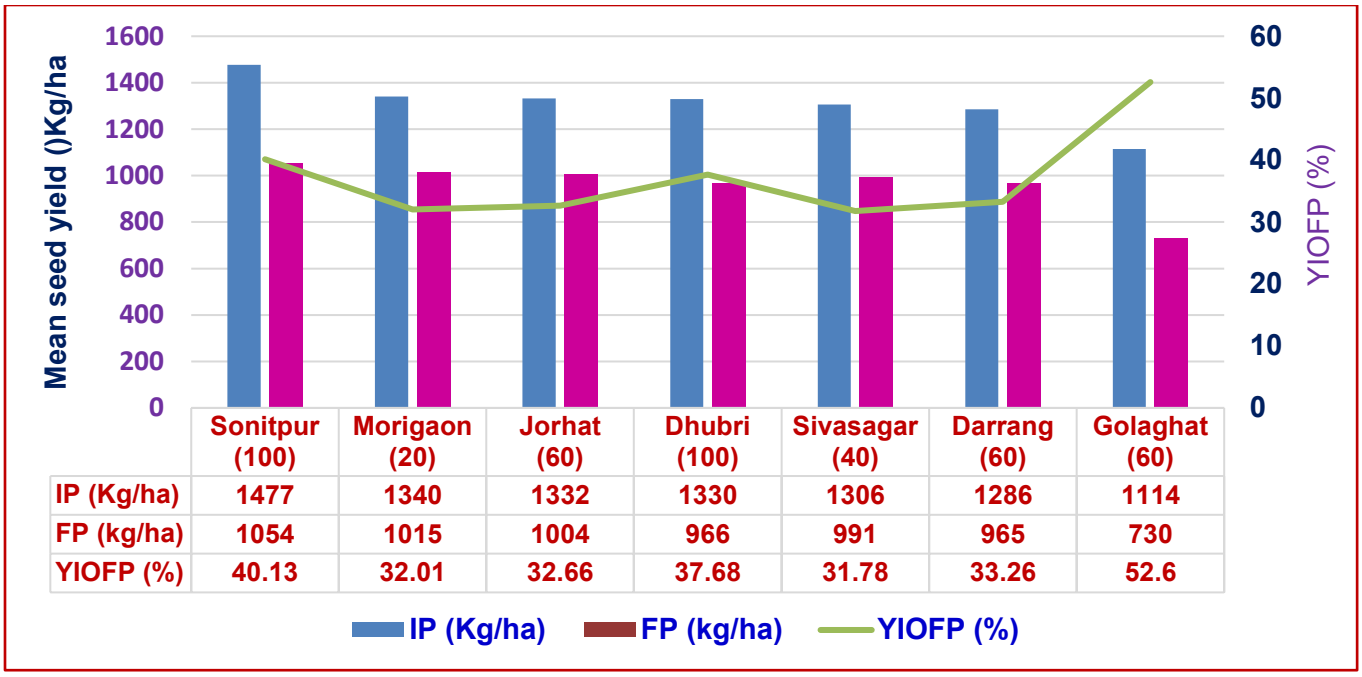
2.1.2. Performance of crop demonstrations in different districts.

The performance of crop demonstrations conducted in different districts were analysed and presented in Table 7. The results included the mean seed yield (kg/ha) for both, the improved plot (IP) with improved technology and the farmers' plot (FP) with farmers' practice, Besides yield superiority of improved technology (%), cost of cultivation (CoC), gross monetary return (GMR) and additional net monetary return (ANMR) in Rs/ha from the IP and benefit: cost (B:C) ratio for both the IP and FP. These were calculated as follows:

1. $\text{YIOFP}\ (\%) = \dfrac{\text{Yield of IP} - \text{Yield of FP}}{\text{Yield of FP}}\ \text{x}\ 100$
2. $\text{ANMR} = [\text{GMR (IP)} - \text{GMR(FP)}] - [\text{CoC (IP)} - \text{CoC (FP)}]$
3. $\text{B: C ratio} = \dfrac{\text{GMR}}{\text{CoC}}$
4. $\text{GMR} = \text{Seed Yield x Market price of produce}$

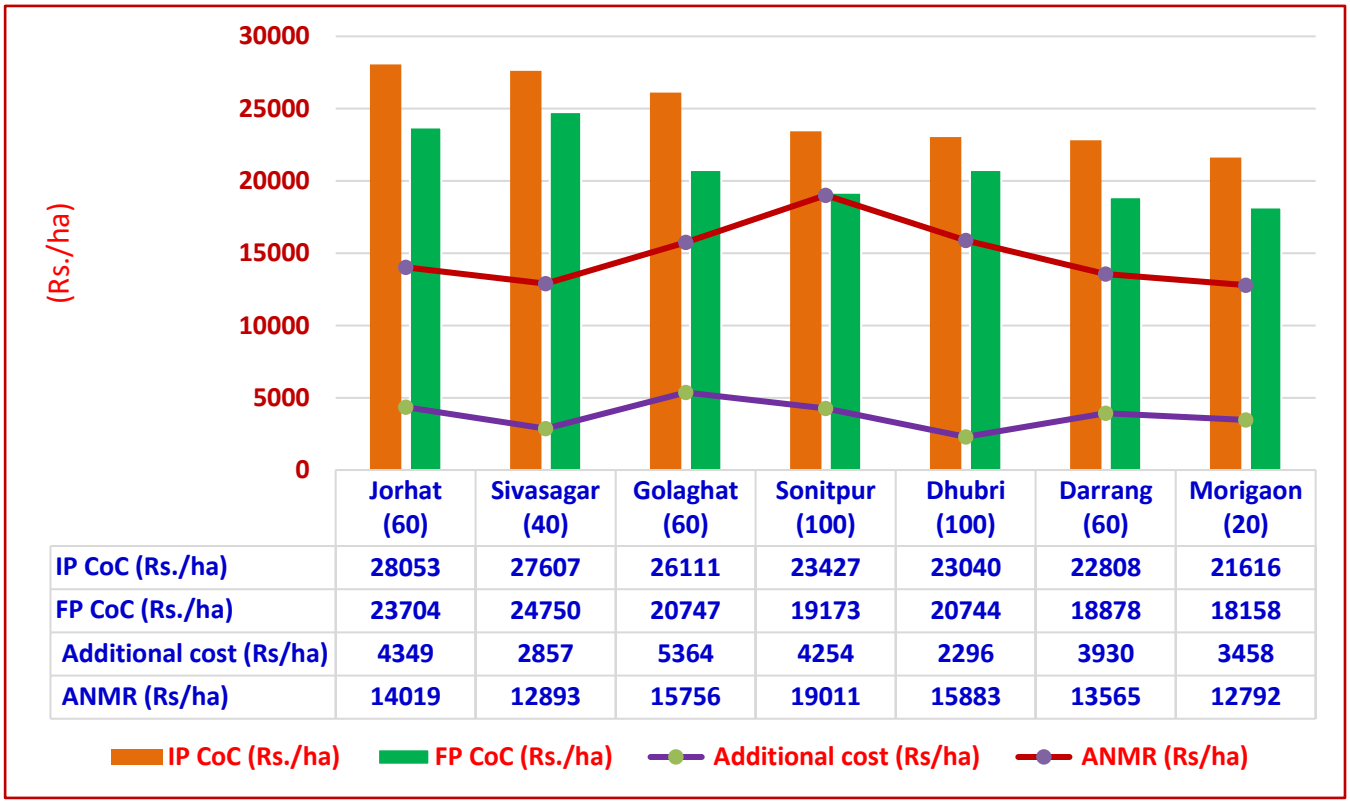
The mean seed yield from IP ranged from 1114 (Golaghat) to 1477 kg/ha (Sonitpur), whereas from FP ranged from 730 (Golaghat) to 1054 kg/ha (Sonitpur). The yield increase due to IP ranged from 31.8% in Sivsagar to 52.6% (Golaghat) (Fig.6). The cost of cultivation of IP ranged from Rs. 22808 (Darrang) to Rs 28053 /ha (Jorhat), while for FP it ranged from Rs. 18158 (Morigaon) to Rs 24750 /ha (Sivsagar). The maximum additional cost Rs. 5364/ha for IP incurred (Golaghat), while minimum Rs. 2296/ha (Dhubri). The maximum ANMR (Rs 19011 /ha) was reported due to the improved practices (Sonitpur), while minimum was (Morigaon) (Rs 12792 /ha). All IP had positive ANMR (Fig. 7).The Gross Monetary Return for IP ranged from Rs. 61270 (Jorhat) to Rs 81235 /ha (Sonitpur), while for FP it ranged from Rs. 40150 (Golaghat) to Rs. 57970 (Sonitpur) (Fig.8). The B:C

ration for IP ranged from 2.34 (Golaghat) to 3.46 (Sonitpur), while for FP it ranged from 1.32 (Dhubri) to 3.02 (Sonitpur) (Fig.9). The higher gross monetary return (GMR) and B:C ratio of demonstrated technology and positive additional net monetary return (ANMR) in all districts evidently show that demonstrated technology of rapeseed-mustard during 2020-21 was economically viable and profitable for the farmers of Assam.



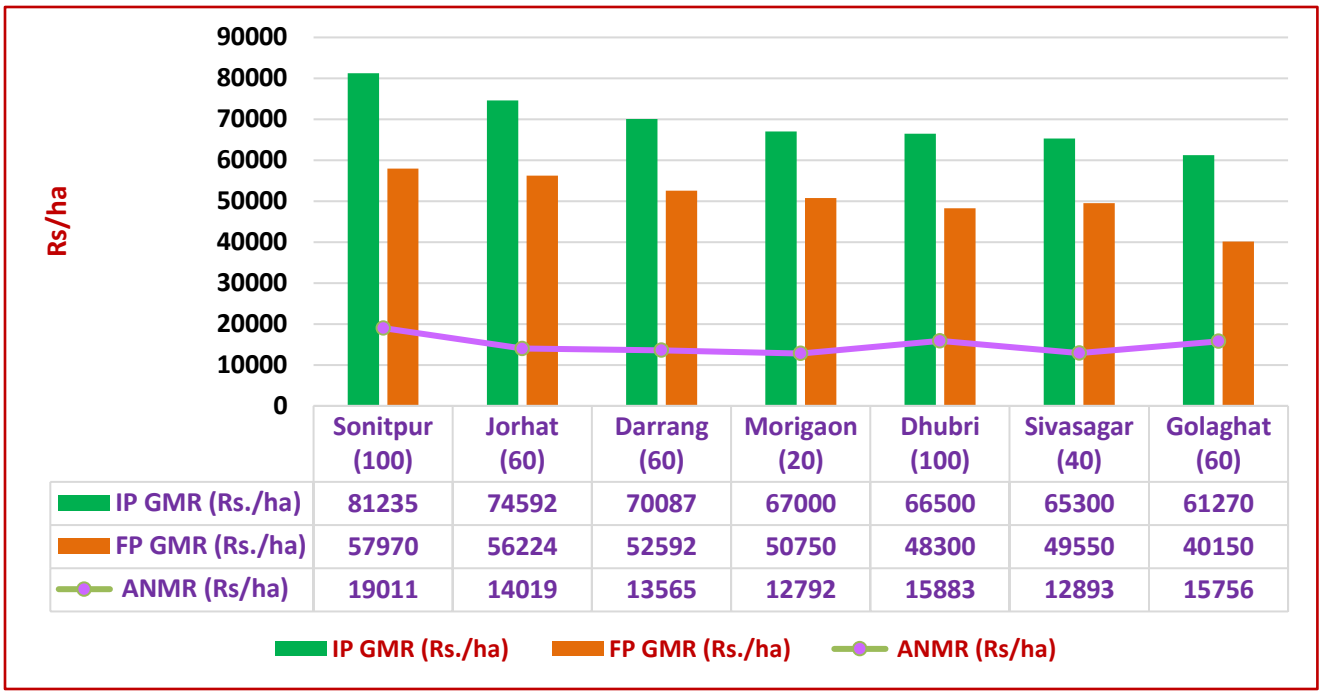
	Sonitpur (100)	Morigaon (20)	Jorhat (60)	Dhubri (100)	Sivasagar (40)	Darrang (60)	Golaghat (60)
IP (Kg/ha)	1477	1340	1332	1330	1306	1286	1114
FP (kg/ha)	1054	1015	1004	966	991	965	730
YIOFP (%)	40.13	32.01	32.66	37.68	31.78	33.26	52.6

Fig. 6: Performance of IP demonstrations against the FP demonstrations in different districts



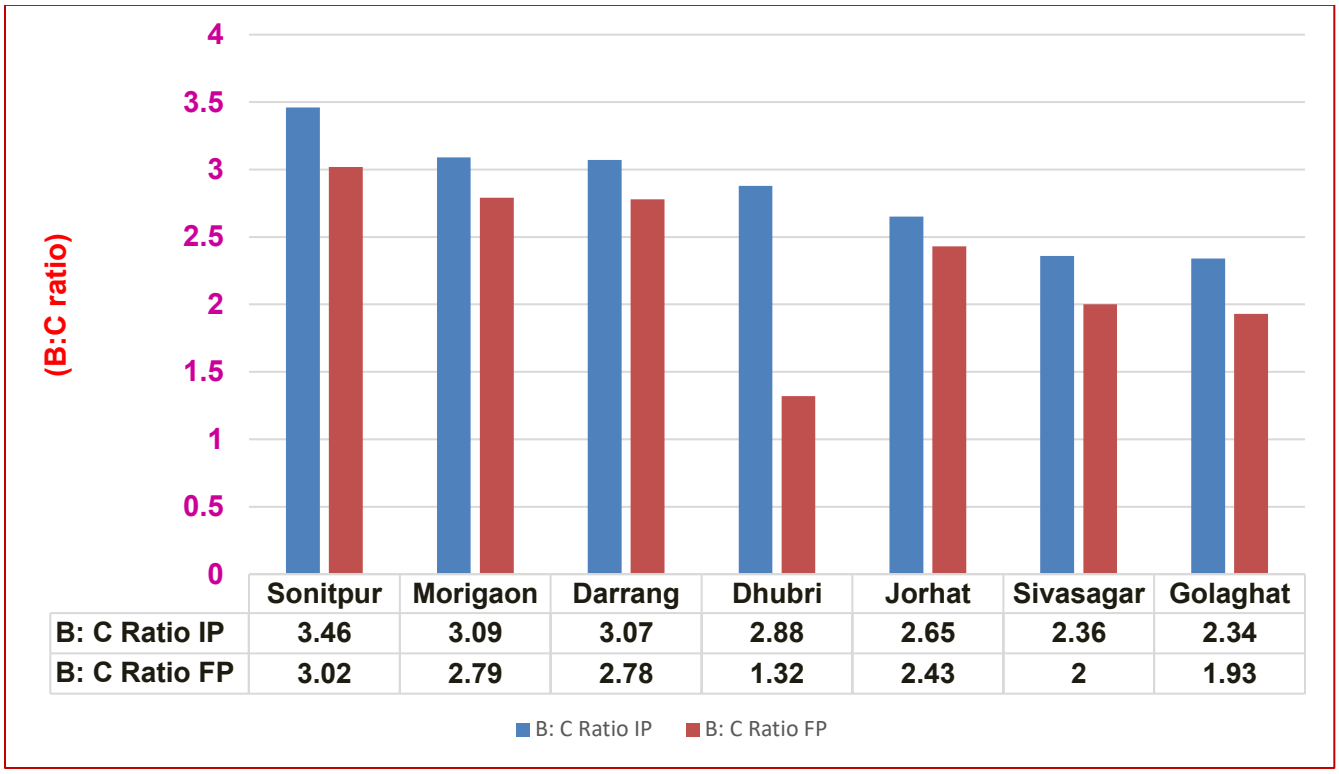
	Jorhat (60)	Sivasagar (40)	Golaghat (60)	Sonitpur (100)	Dhubri (100)	Darrang (60)	Morigaon (20)
IP CoC (Rs./ha)	28053	27607	26111	23427	23040	22808	21616
FP CoC (Rs./ha)	23704	24750	20747	19173	20744	18878	18158
Additional cost (Rs/ha)	4349	2857	5364	4254	2296	3930	3458
ANMR (Rs/ha)	14019	12893	15756	19011	15883	13565	12792

Fig. 7: Cost of cultivation incurred in IP and FP and ANMR in different districts



	Sonitpur (100)	Jorhat (60)	Darrang (60)	Morigaon (20)	Dhubri (100)	Sivasagar (40)	Golaghat (60)
IP GMR (Rs./ha)	81235	74592	70087	67000	66500	65300	61270
FP GMR (Rs./ha)	57970	56224	52592	50750	48300	49550	40150
ANMR (Rs/ha)	19011	14019	13565	12792	15883	12893	15756

Fig 8: Gross monetary return realized from IP and FP and ANMR in different districts



	Sonitpur	Morigaon	Darrang	Dhubri	Jorhat	Sivasagar	Golaghat
B: C Ratio IP	3.46	3.09	3.07	2.88	2.65	2.36	2.34
B: C Ratio FP	3.02	2.79	2.78	1.32	2.43	2	1.93

Fig 9: Benefit: Cost ratio realized from IP and FP in different districts

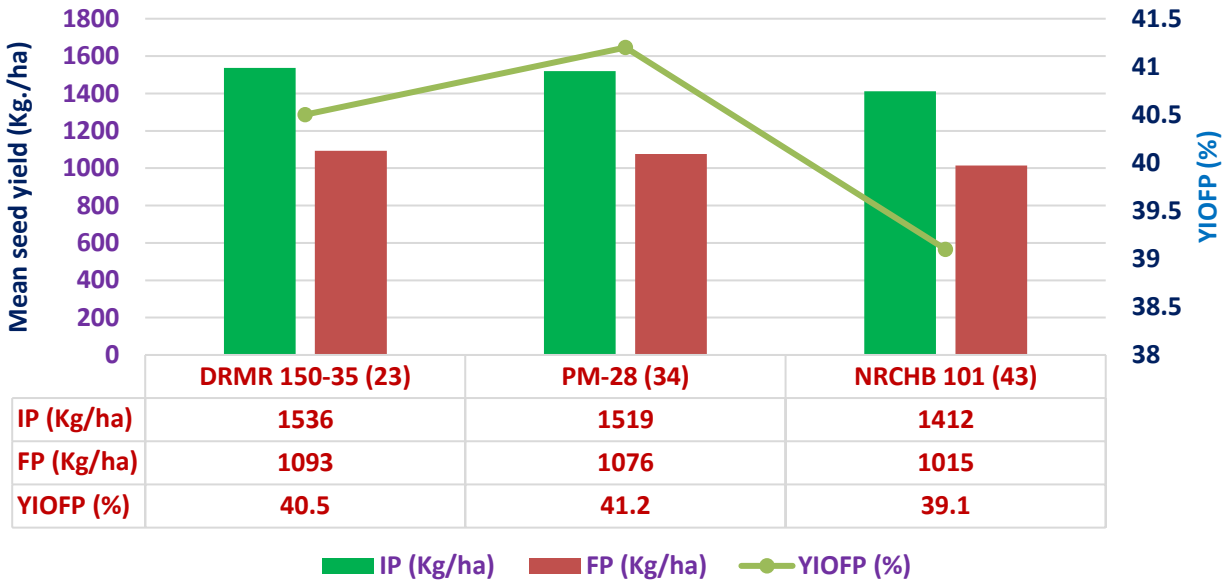
2.1.3. Performance of crop demonstrations in Sonitpur

In Sonitpur, 100 demonstrations were conducted in 13 villages of five clusters viz. Chaiduar, Gabhoru, Dhekiajuli, Bihaguri and Balipara with Indian mustard varieties NRCHB-101 (43), PM-28 (34) and DRMR-150-35 (23) of under irrigated condition. The prevailing cropping pattern was rice – mustard–pumpkin/rabi vegtables and rice- mustard-maize. The sowing time spread from November 7, 2020 to December 2, 2020 and harvesting period spread from March 6, 2021 to April 3, 2021. The infestation of mustard sawfly and bihar hairy caterpillar at vegetative growth and mustard aphid at flowering stage was observed.

The demonstrated improved technology (IP) in 100 demonstrations gave an average seed yield of 1477 kg/ha against 1054 kg/ha in FP with a yield improvement of 40.1% (Table 7). The cost of cultivation of Rs. 23427/ha in IP against the Rs. 19173/ha in FP was recorded that fetched Rs. 81235 /ha in IP against the Rs. 57970/ha in FP. An ANMR of Rs. 19011 /ha was realized against the additional cost of Rs. 4254 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (3.46) than that of FP (3.02) clearly indicates that demonstrated technology in sonitpur district was economically viable and profitable.

The variety-wise analysis (Fig. 10) shows that IP demonstrations with DRMR-150-35 recorded highest average seed yield of 1536 kg/ha with yield improvement of 40.5% against the additional cost of cultivation of Rs. 4605/ha, while demonstrations with PM-28 recorded an average seed yield of 1519 kg/ha with highest yield improvement of 41.2%. The IP demonstrations with NRCHB-101 had an average seed yield of 1412 kg/ha against 1015 kg/ha in FP with a yield improvement of 39.1%. The maximum ANMR (Rs 20329 /ha) was reported from PM-28 variety, while minimum (Rs. 17598 /ha) was from NRCHB-101 variety. The cost of cultivation in IP ranged from Rs. 23070 /ha to Rs. 24265 /ha, while in FP it ranged from Rs. 18833 /ha to Rs. 19660 /ha with NRCHB-

Fig. 10: Performance of different varieties in Sonitpur



	DRMR 150-35 (23)	PM-28 (34)	NRCHB 101 (43)
IP (Kg/ha)	1536	1519	1412
FP (Kg/ha)	1093	1076	1015
YIOFP (%)	40.5	41.2	39.1

101 and DRMR-150-35 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

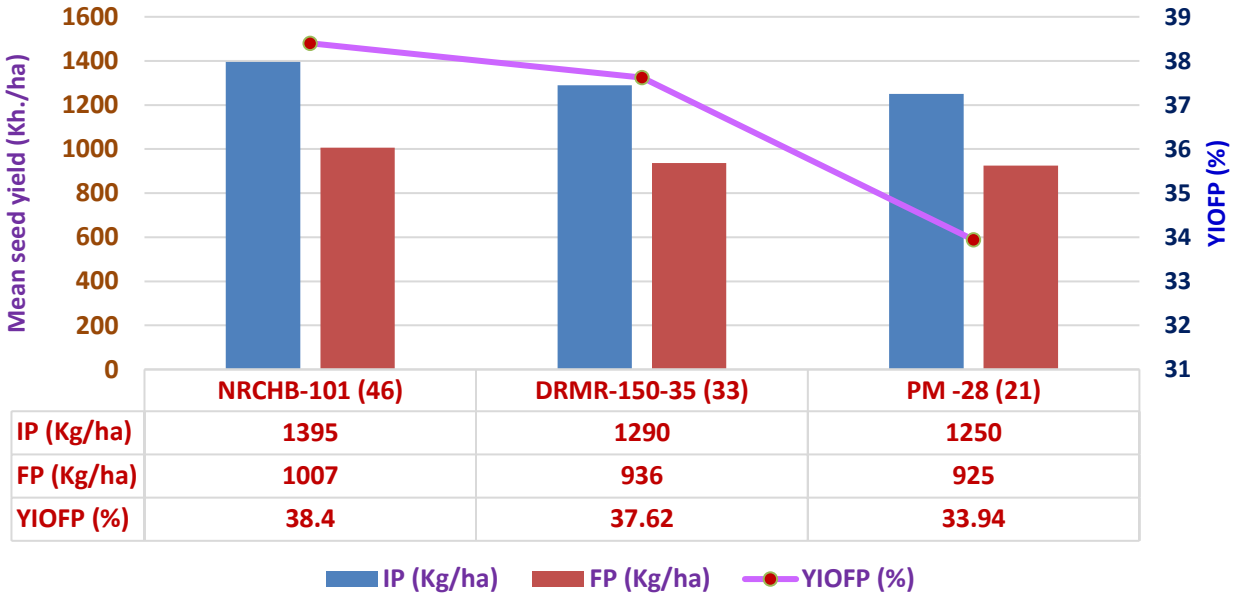
2.1.4. Performance of crop demonstrations in Dhubri

In Dhubri, 100 demonstrations were conducted in 20 villages of five clusters viz. Rupshi, Mahamaya, Gauripur, Agomani and Chapar-Salkocha with varieties NRCHB-101 (46), DRMR-150-35 (33) and PM-28 (21) of Indian mustard under irrigated condition. The prevailing cropping pattern was mustard – jute-winter paddy and rice-pumpkin-potato-mustard. The sowing time spread from Nov.5, 2020 to Nov. 21, 2020 and harvesting period spread from March 3, 2021 to March 21, 2021. The infestation of mustard sawfly at vegetative growth and mustard aphid at flowering stage was observed.

The demonstrated improved technology (IP) in 100 demonstrations gave an average seed yield of 1330 kg/ha against 966 kg/ha in FP with a yield improvement of 37.7% (Table 1). The cost of cultivation of Rs. 23040/ha in IP against the Rs. 20744/ha in FP was recorded that fetched Rs. 66500 /ha in IP against the Rs. 48300/ha in FP. An ANMR of Rs. 15883 /ha was realized against the additional cost of Rs. 2296 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (2.88) than that of FP (1.32) clearly indicates that demonstrated technology in Dhubri district was economically viable and profitable.

The variety-wise analysis (Fig. 11) shows that IP demonstrations with NRCHB-101 recorded highest average seed yield of 1395 kg/ha with highest yield improvement of 38.4% against the additional cost of cultivation of Rs. 2135/ha, while demonstrations with DRMR-150-35 recorded an average seed yield of 1290 kg/ha with a yield improvement of 37.6%. The IP demonstrations with PM-28 had an average seed yield of 1250kg/ha against 925 kg/ha in FP with a yield improvement of 33.9%. The maximum ANMR (Rs 17284 /ha) was reported from NRCHB-101 variety, while minimum (Rs. 13823 /ha) was from PM-28. The cost of cultivation in IP ranged from Rs. 22822/ha to Rs. 23226/ha, while in FP it ranged from Rs. 20421/ha to Rs. 21091/ha with PM-28 and NRCHB-101 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

Fig. 11: Performance of different varieties in Dhubri



	NRCHB-101 (46)	DRMR-150-35 (33)	PM -28 (21)
IP (Kg/ha)	1395	1290	1250
FP (Kg/ha)	1007	936	925
YIOFP (%)	38.4	37.62	33.94

2.1.5. Performance of crop demonstrations in Darrang

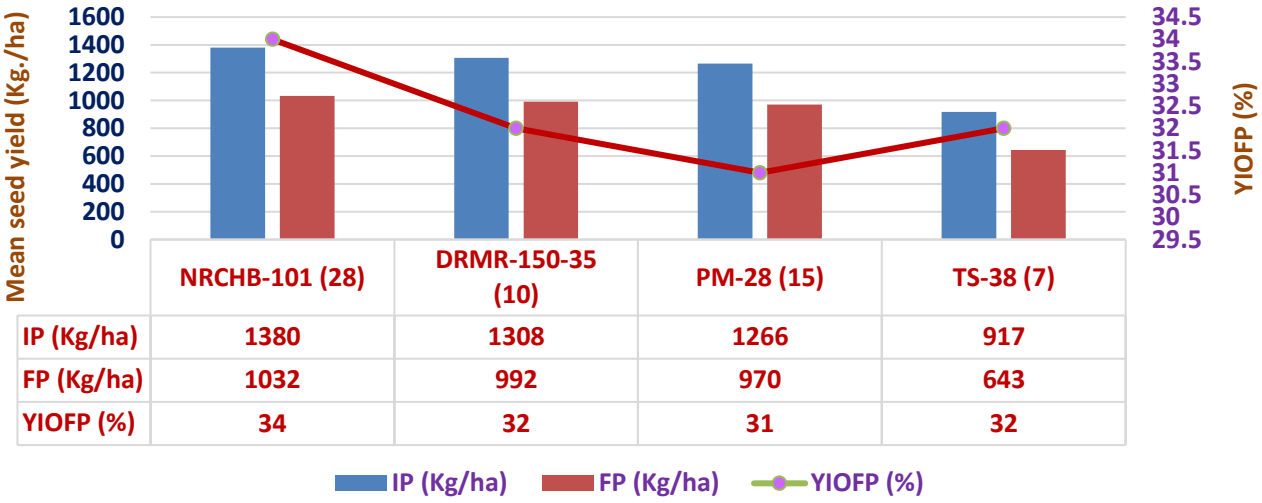
In Darrang, 53 demonstrations were conducted in 15 villages of three clusters viz. Bachimari, Sipajhar and Pachim Mangaldai with Indian mustard varieties NRCHB-101 (28), PM-28 (15) and DRMR-150-35 (10) and 7 demonstrations with TS-38 (7) variety of toria under irrigated condition. The prevailing cropping pattern was vegetable/sali paddy- maize/potato and boro paddy/vegetable-maize/sesame. The sowing time spread from Nov.7, 2020 to Nov. 26, 2020 and harvesting period spread from Feb. 25 2021 to March 20, 2021. The infestation of mustard sawfly at vegetative growth and mustard aphid at flowering stage was observed in Darrang. Alterneria blight also appeared on 70-80 days old crop at some locations.

The demonstrated improved technology (IP) in 60 demonstrations gave an average seed yield of 1286 kg/ha against 965 kg/ha in FP with a yield improvement of 33.3% (Table 1). The cost of cultivation of Rs. 22808/ha in IP against the Rs. 18878/ha in FP was recorded that fetched Rs. 70087/ha in IP against the Rs. 52592/ha in FP. An ANMR of Rs. 13565 /ha was realized against the additional cost of Rs. 3930 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (3.07) than that of FP (2.78) clearly indicates that demonstrated technology in Darrang district was economically viable and profitable.

The variety-wise analysis (Fig. 12) shows that IP demonstrations with NRCHB-101 recorded highest average seed yield of 1380 kg/ha with highest yield improvement of 34.0% against the additional cost of cultivation of Rs. 4426/ha, while demonstrations with DRMR-150-35 recorded an average seed yield of 1308 kg/ha with a yield improvement of 32.0%. The IP demonstrations with PM-28 had an average seed yield of 1266 kg/ha against 970 kg/ha in FP with a yield improvement of 31.0%. The maximum ANMR (Rs 14712 /ha) was reported from NRCHB-101 variety, while minimum (Rs. 12677 /ha) was from PM-28 variety. The cost of cultivation in IP ranged from Rs. 22125/ha to Rs. 23720/ha, while in FP it ranged from Rs. 18431/ha to Rs. 19294/ha with DRMR-150-35 and NRCHB-101 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

The TS-38 variety of toria was demonstrated at 7 locations in Darrang district under rainfed condition. The IP demonstrations had an average seed yield of 917 kg/ha against 643 kg/ha in FP with a yield improvement of 32.0% and ANMR of Rs. 10695/ha.

Fig. 12: Performance of different varieties in Darrang



	NRCHB-101 (28)	DRMR-150-35 (10)	PM-28 (15)	TS-38 (7)
IP (Kg/ha)	1380	1308	1266	917
FP (Kg/ha)	1032	992	970	643
YIOFP (%)	34	32	31	32

2.1.6. Performance of crop demonstrations in Jorhat

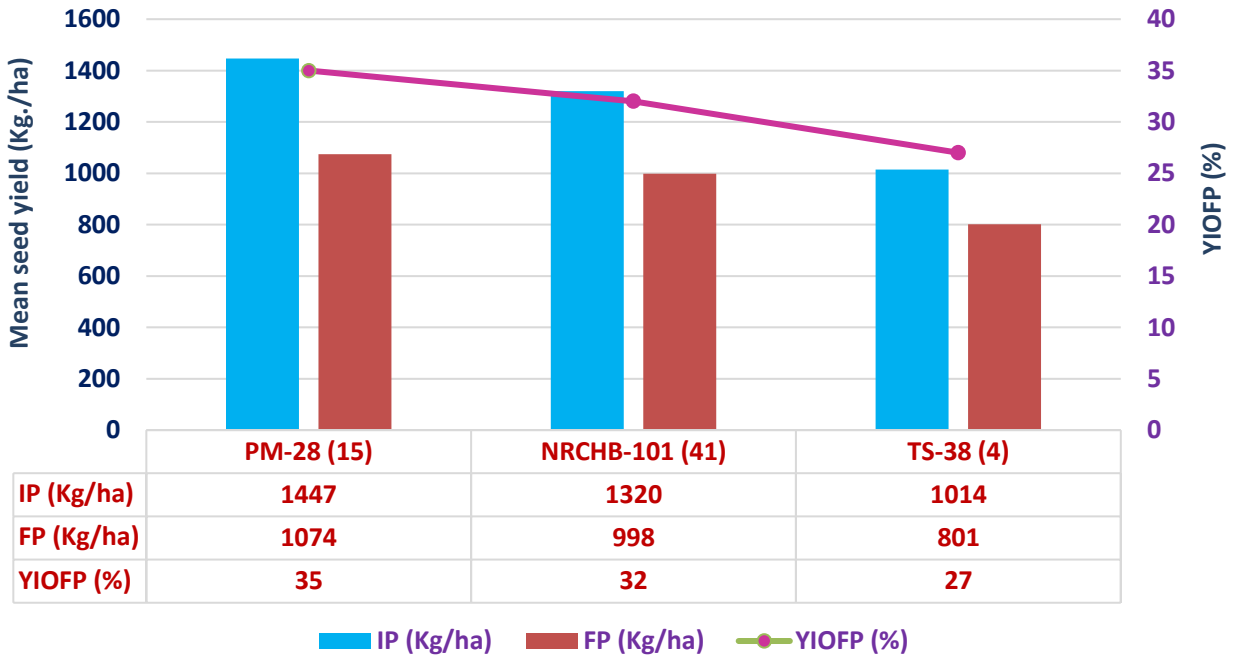
In Jorhat, 60 demonstrations were conducted in 13 villages of three clusters viz. Kaliapani, Ujani Majuli and Majuli with NRCHB-101 (41) and PM-28 (15) varieties of Indian mustard and TS-38 (4) of toria variety under rainfed condition. The prevailing cropping pattern was mustard–boro rice and sali rice-M. The sowing time spread from Nov.8, 2020 to Nov. 28, 2020 and harvesting period spread from Feb. 20, 2021 to March 18, 2021. The infestation of flea beetle, mustard sawfly at vegetative growth and mustard aphid at flowering stage was observed in Jorhat.

The demonstrated improved technology (IP) in 60 demonstrations in Jorhat gave an average seed yield of 1332 kg/ha against 1004 kg/ha in FP with a yield improvement of 32.7% (Table 1). The cost of cultivation of Rs. 28053/ha in IP against the Rs. 23704/ha in FP was recorded that fetched Rs. 74592 /ha in IP against the Rs. 56224/ha in FP. An ANMR of Rs. 14019 /ha was realized against the additional cost of Rs. 4349 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (2.65) than that of FP (2.43) clearly indicates that demonstrated technology in Jorhat district was economically viable and profitable.

The variety-wise analysis (Fig. 13) shows that IP demonstrations with PM-28 recorded highest average seed yield of 1447 kg/ha with highest yield improvement of 35.0% and highest ANMR of Rs 16718 /ha, while demonstrations with NRCHB-101 recorded an average seed yield of 1320 kg/ha with a yield improvement of 32.0% and an ANMR of Rs 13971/ha. The cost of cultivation in IP ranged from Rs. 27711/ha to Rs. 29933/ha, while in FP it ranged from Rs. 23419/ha to Rs. 25333/ha with NRCHB-101 and PM-28 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

The TS-38 variety of toria was demonstrated at 4 locations in Jorhat district under rainfed condition. The IP demonstrations had an average seed yield of 1014 kg/ha against 801 kg/ha in FP

Fig. 13: Performance of different varieties in Jorhat



	PM-28 (15)	NRCHB-101 (41)	TS-38 (4)
IP (Kg/ha)	1447	1320	1014
FP (Kg/ha)	1074	998	801
YIOFP (%)	35	32	27

with a yield improvement of 27.0% and ANMR of Rs. 6675/ha.

2.1.7. Performance of crop demonstrations in Golaghat

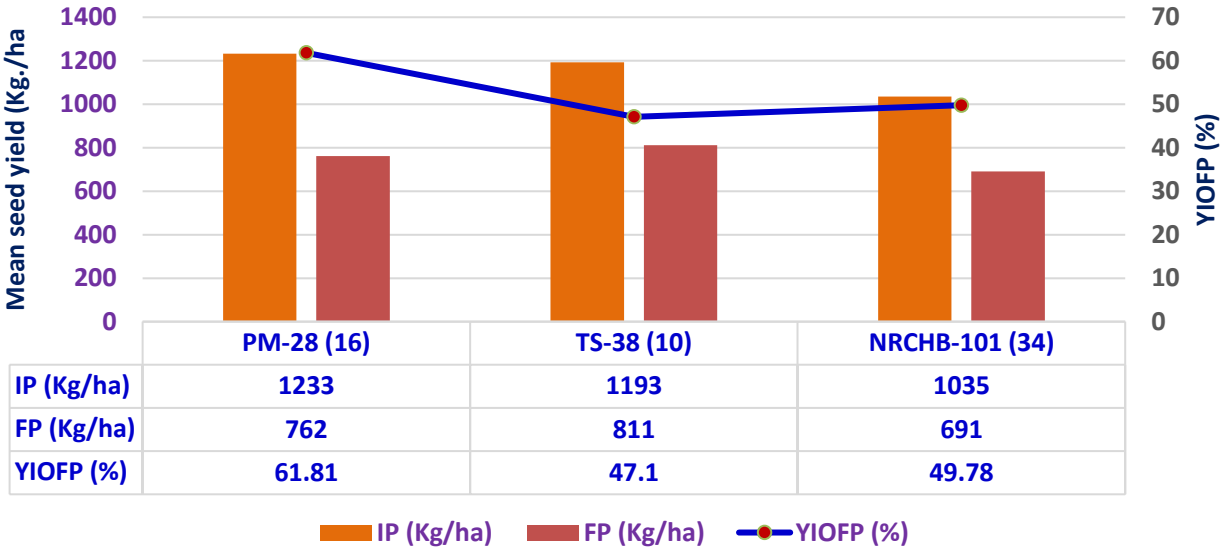
In Golaghat, 60 demonstrations were conducted in 9 villages of three clusters viz. Podumoni, Bokakhat and Kakodonga with NRCHB-101 (34) and PM-28 (16) varieties of Indian mustard and TS-38 (10) variety of toria under rainfed condition. The prevailing cropping pattern was Ahu paddy – rapeseed / mustard / potato / rabi vegetables, summer vegetables-rapeseed / mustard / potato / rabi vegetables, ahu paddy-sali paddy and sali paddy-fallow. The sowing time spread from Nov.15, 2020 to Dec. 4, 2020 and harvesting period spread from Feb. 23, 2021 to March 29, 2021. No severe infestation of insect-pest & diseases was observed in entire cropping season. The mild attack of mustard sawfly at seedling stage of crop growth was noticed in most of the demonstration plots. At flowering and pod development stage, mild attack of mustard aphid was observed at some locations. No disease symptom was noticed in the crops.

The demonstrated improved technology (IP) gave an average seed yield of 1114 kg/ha against 730 kg/ha in FP with a yield improvement of 52.6% (Table 1). The cost of cultivation of Rs. 26111/ha in IP against the Rs. 20747/ha in FP was recorded that fetched Rs. 61270 /ha in IP against the Rs. 40150/ha in FP. An ANMR of Rs. 15756 /ha was realized against the additional cost of Rs. 5364 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (2.34) than that of FP (1.93) clearly indicates that demonstrated technology in Golaghat district is economically viable and profitable.

The variety-wise analysis (Fig. 14) shows that IP demonstrations with PM-28 recorded highest average seed yield of 1233 kg/ha with highest yield improvement of 61.8% and highest ANMR of Rs 20598 /ha, while demonstrations with NRCHB-101 recorded an average seed yield of 1035 kg/ha with a yield improvement of 49.8% and an ANMR of Rs 13351/ha. The cost of cultivation in IP ranged from Rs. 25265/ha to Rs. 269125/ha, while in FP it ranged from Rs. 19696/ha to Rs. 21605/ha with NRCHB-101 and PM-28 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

The TS-38 variety of toria was demonstrated at 10 locations in Golaghat district under rainfed condition. The IP demonstrations had an average seed yield of 1193 kg/ha against 811 kg/ha in FP with a yield improvement of 47.1% and ANMR of Rs. 16250/ha.

Fig. 14: Performance of different varieties in Golaghat



	PM-28 (16)	TS-38 (10)	NRCHB-101 (34)
IP (Kg/ha)	1233	1193	1035
FP (Kg/ha)	762	811	691
YIOFP (%)	61.81	47.1	49.78

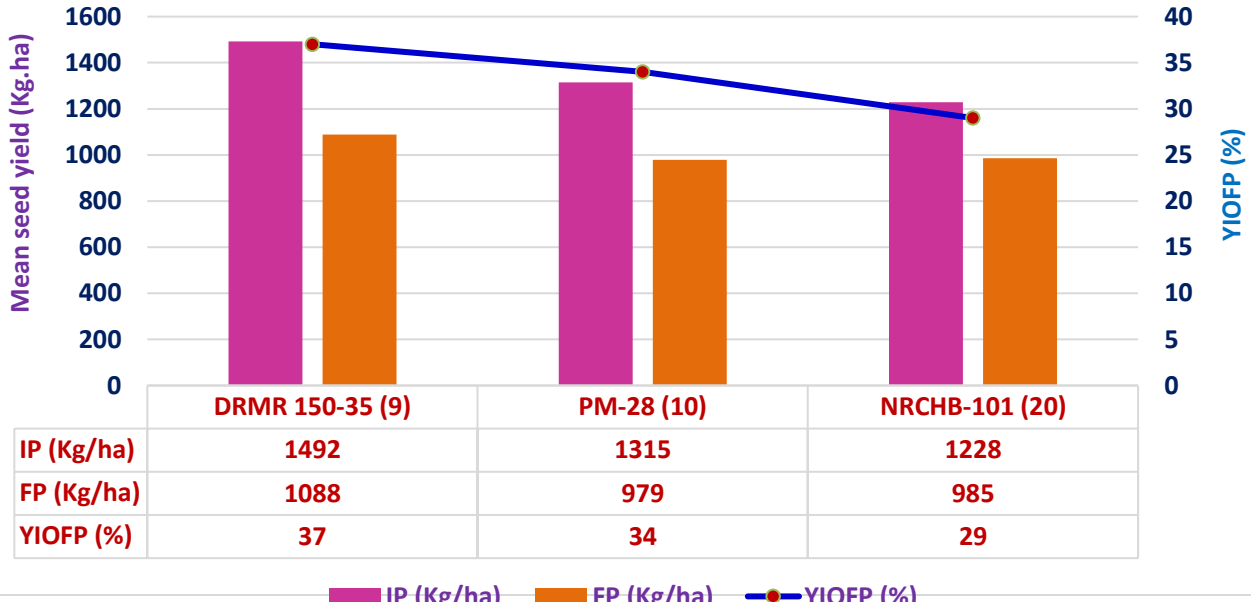
2.1.8. Performance of crop demonstrations in Sivasagar

In Sivsagar, 39 demonstrations were conducted successfully in 6 villages of two clusters viz. Gaurisagar and Demow with NRCHB-101(20), PM-28 (10) and DRMR-150-35 (9) varieties of Indian mustard under rainfed condition. The prevailing cropping pattern was rice-mustard, rice-vegetables, mustard-kharif vegetables. Mustard- summer black gram/green gram. The sowing time spread from November10, 2020 to November 20, 2020 and harvesting period spread from February 28, 2021 to March 20, 2021. The infestation of flea beetle, mustard sawfly at vegetative growth and mustard aphid at flowering stage was observed.

The demonstrated improved technology (IP) in 39 demonstrations in Sivsagar gave an average seed yield of 1306 kg/ha against 991 kg/ha in FP with a yield improvement of 31.8% (Table 1). The cost of cultivation of Rs. 27607/ha in IP against the Rs. 24750/ha in FP was recorded that fetched Rs. 65300 /ha in IP against the Rs. 49550/ha in FP. An ANMR of Rs. 12893 /ha was realized against the additional cost of Rs. 2857 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (2.36) than that of FP (2.00) clearly indicates that demonstrated technology in Sivsagar district is economically viable and profitable.

The variety-wise analysis (Fig. 15) shows that IP demonstrations with DRMR-150-35 recorded highest average seed yield of 1492 kg/ha with highest yield improvement of 37.0% against the additional cost of cultivation of Rs. 2878/ha, while demonstrations with PM-28 recorded an average seed yield of 1315 kg/ha with a yield improvement of 34.0%. The IP demonstrations with NRCHB101 had an average seed yield of 1228 kg/ha against 985 kg/ha in FP with a yield improvement of 29.0%. The maximum ANMR (Rs 17325 /ha) was reported from DRMR-150-35 variety, while minimum (Rs. 10454 /ha) was from NRCHB-101. The cost of cultivation in IP ranged from Rs. 26852/ha to Rs. 29371/ha, while in FP it ranged from Rs. 24116/ha to Rs. 26493/ha with NRCHB-101 and DRMR-150-35 varieties, respectively. All demonstrated varieties had higher B:C

Fig. 15: Performance of different varieties in Sivsagar



	DRMR 150-35 (9)	PM-28 (10)	NRCHB-101 (20)
IP (Kg/ha)	1492	1315	1228
FP (Kg/ha)	1088	979	985
YIOFP (%)	37	34	29

ratio than that of FP.

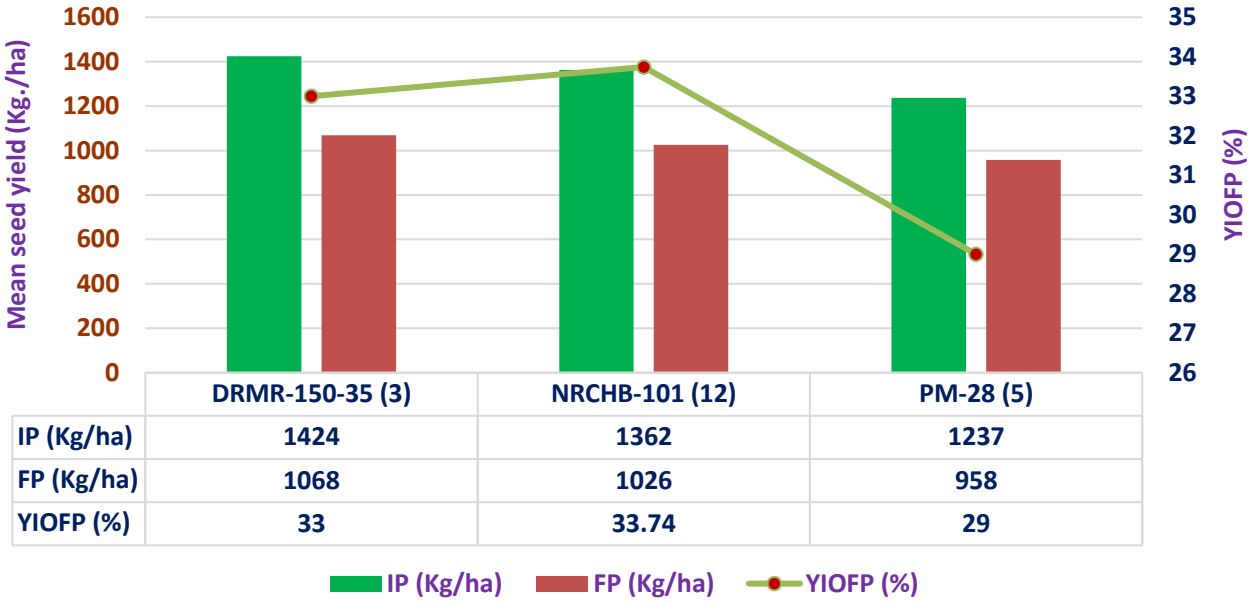
2.1.9. Performance of crop demonstrations in Morigaon

In Morigaon, 20 demonstrations were conducted in 3 villages of one cluster viz. Mayong with NRCHB-101 (12), PM-28 (5) and DRMR-150-35 (3) and varieties of Indian mustard under rainfed condition. The prevailing cropping pattern was sali paddy- maize / potato and boro paddy / vegetable-maize / seasme. The sowing time spread from November 6, 2020 to November 15, 2020 and harvesting period spread from February 28 2021 to March 14, 2021. The infestation of mustard sawfly at vegetative growth and mustard aphid at flowering stage was observed in Morigaon.

The demonstrated improved technology (IP) in 20 demonstrations gave an average seed yield of 1340 kg/ha against 1015 kg/ha in FP with a yield improvement of 32.01% (Table 1). The cost of cultivation of Rs. 21616/ha in IP against the Rs. 18158/ha in FP was recorded that fetched Rs. 67000 /ha in IP against the Rs. 50750/ha in FP. An ANMR of Rs. 12792 /ha was realized against the additional cost of Rs. 3458 /ha incurred due to demonstrated technology and the higher B:C ratio of IP (3.09) than that of FP (2.79) clearly indicates that demonstrated technology in Morigaon district is economically viable and profitable.

The variety-wise analysis (Fig. 16) shows that IP demonstrations with DRMR-150-35 recorded highest average seed yield of 1424 kg/ha with yield improvement of 33.0% against the additional cost of cultivation of Rs. 3948/ha, while demonstrations with NRCHB-101 recorded an average seed yield of 1362 kg/ha with highest yield improvement of 33.7%. The IP demonstrations with PM-28 had an average seed yield of 1237 kg/ha against 958 kg/ha in FP with a yield improvement of 29.0%. The maximum ANMR (Rs 13868 /ha) was reported from DRMR-150-35 variety, while minimum (Rs. 10130 /ha) from PM-28. The cost of cultivation in IP ranged from Rs. 21252 /ha to Rs. 22249/ha, while in FP it ranged from Rs. 18077 /ha to Rs. 18301/ha with NRCHB-101 and DRMR-150-35 varieties, respectively. All demonstrated varieties had higher B:C ratio than that of FP.

Fig. 16: Performance of different varieties in Morigaon



	DRMR-150-35 (3)	NRCHB-101 (12)	PM-28 (5)
IP (Kg/ha)	1424	1362	1237
FP (Kg/ha)	1068	1026	958
YIOFP (%)	33	33.74	29

2.1.10. Comparison of the Performance of improved varieties in different districts

A total of 3 improved varieties of Indian mustard namely, NRCHB101, PM-28 and DRMR-150-35 of Indian mustard and one of toria namely, TS-38 were used in crop demonstrations conducted in 79 villages covering 22 clusters of seven districts of Assam under irrigated and rainfed condition. Table 8 shows the varietal performance in different districts.

Improved variety NRCHB-101 (Fig.17) was demonstrated in 224 demonstrations in seven districts viz. Dhubri (46), Sonitpur (43), Jorhat (41), Golaghat (34), Darrang (28), Sivsagar (20) and Morigaon (12). The variety in IP recorded highest average yield of 1412 kg/ha with a yield improvement of 39.1% over local (FP) practice in 43 demonstrations in Sonitpur followed by average seed yield of 1380 kg/ha with a yield improvement of 34.0% in 46 demonstrations in Dhubri. The minimum average yield of 1035 kg/ha was recorded in 20 demonstrations in Sivsagar. The maximum yield improvement of 49.8% with NRCHB-101 was recorded in Golaghat, while minimum of 29.0% was recorded in Sivsagar. The maximum ANMR (Rs 17598 /ha) was reported from Sonitpur, while minimum (Rs. 10454 /ha) was in Sivsagar. All IP with NRCHB-101 had positive ANMR. The higher B:C ratio for demonstrations was realized. The highest B:C ratio of IP (3.36) was realized in Sonitpur.

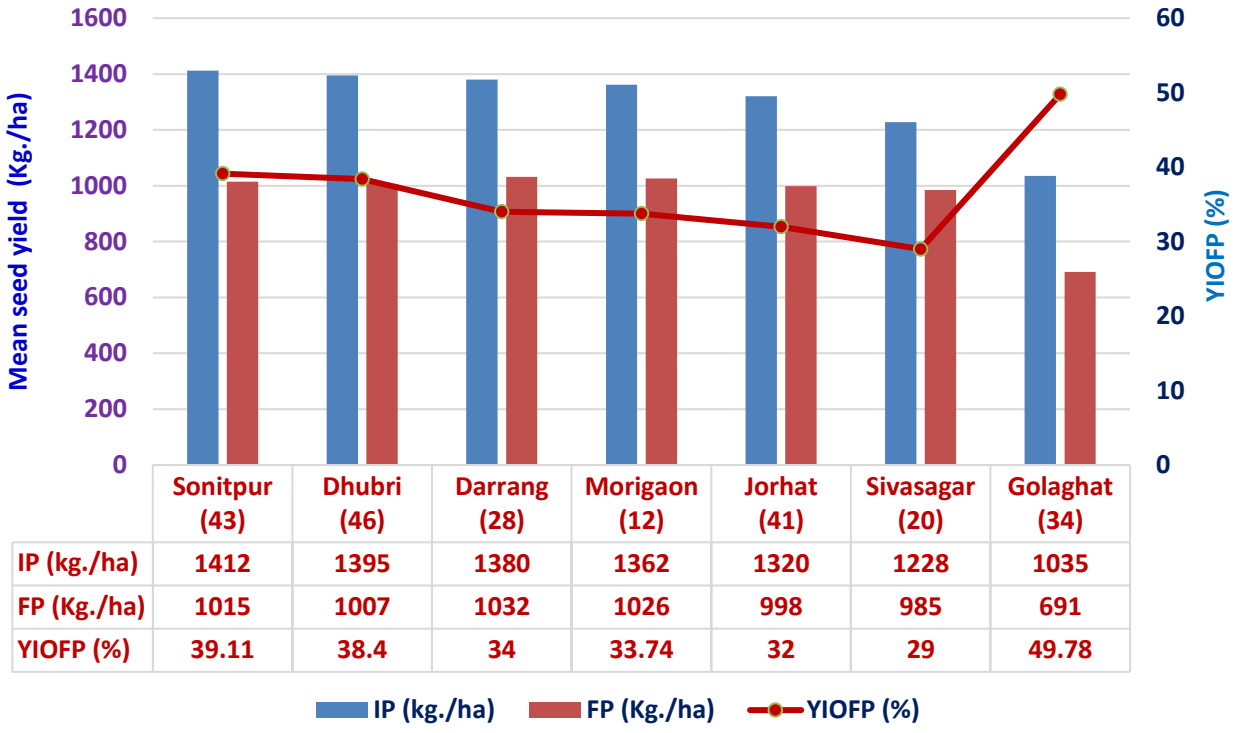
Improved variety PM-28 (Fig.18) was demonstrated in 116 demonstrations across seven districts viz. Sonitpur (34), Dhubri (21), Golaghat (16), Jorhat (15), Darrang (15), Sivsagar (10) and Morigaon (5). The variety in IP recorded highest average yield of 1519 kg/ha with a yield improvement of 41.2% over local practice in 34 demonstrations in Sonitpur followed by average seed yield of 1447 kg/ha with a yield improvement of 35.0% in 15 demonstrations in Jorhat. The minimum average yield of 1233 kg/ha was recorded in 16 demonstrations in Golaghat. The maximum yield improvement of 61.8% with PM-28 was recorded in Golaghat, while minimum of 29.0% was recorded

in Morigaon. The maximum ANMR (Rs 20329 /ha) was reported from Sonitpur, while minimum (Rs. 10130 /ha) was in Morigaon. All IP with PM-28 had positive ANMR. The higher B:C ratio for demonstrations was realized. The highest B:C ratio of IP (3.58) was realized in Sonitpur.

Improved variety DRMR-150-35 (Fig. 19) was demonstrated in 78 demonstrations across five districts viz. Dhubri (33), Sonitpur (23), Darrang (10), Sivsagar (9) and Morigaon (3). The variety in IP recorded highest average yield of 1536 kg/ha with a yield improvement of 40.5% over local (FP) practice in 23 demonstrations in Sonitpur followed by average seed yield of 1492 kg/ha with a yield improvement of 37.0% in 9 demonstrations in Sivasagar. The minimum average yield of 1290 kg/ha was recorded in 33 demonstrations in Dhubri. The maximum yield improvement of 40.5% with DRMR-150-35 was recorded in Sonitpur, while minimum of 32.0% was recorded in Darrang. The maximum ANMR (Rs 19760 /ha) was reported from Sonitpur, while minimum (Rs. 13691 /ha) was in Darrang. All IP with DRMR-150-35 had positive ANMR. The higher B:C ratio for demonstrations was realized. The highest B:C ratio of IP (3.48) was realized in Sonitpur.

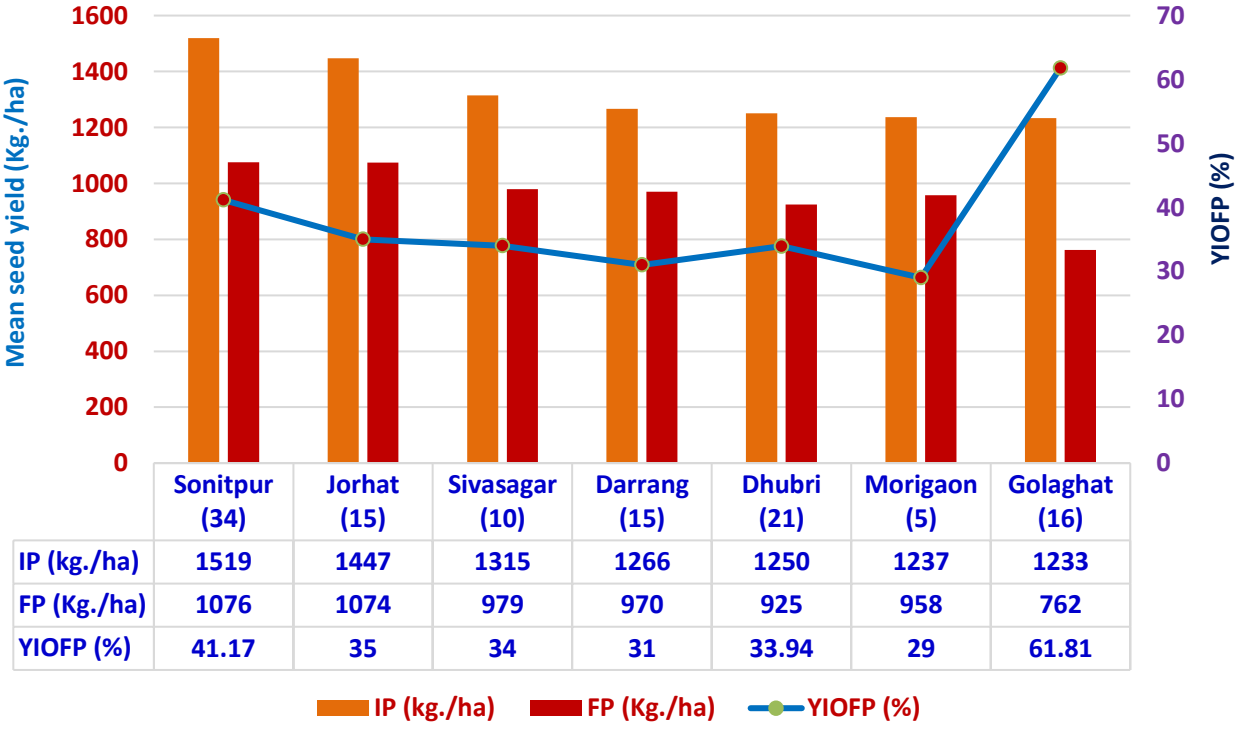
The TS-38 variety of toria (Fig. 20) was demonstrated in 21 demonstrations across three districts viz. Golaghat (10), Darrang (7), Jorhat (4) which, in IP, recorded highest yield improvement of 47.1% with mean seed yield of 1193 kg/ha in Golaghat followed by 32.0% with mean seed yield of 917 kg/ha in Darrang and 27.0% with mean seed yield of 1014 kg/ha in Jorhat over FP. The ANMR ranged from Rs. 6675 to Rs. 16250 /ha in Jorhat and Darrang, respectively. The higher B:C ratio for all improved varieties in all the districts was realized. The highest B:C ratio of IP (2.36) was realized in Golaghat.

Fig. 17: Performance of NRCHB-101 in different districts



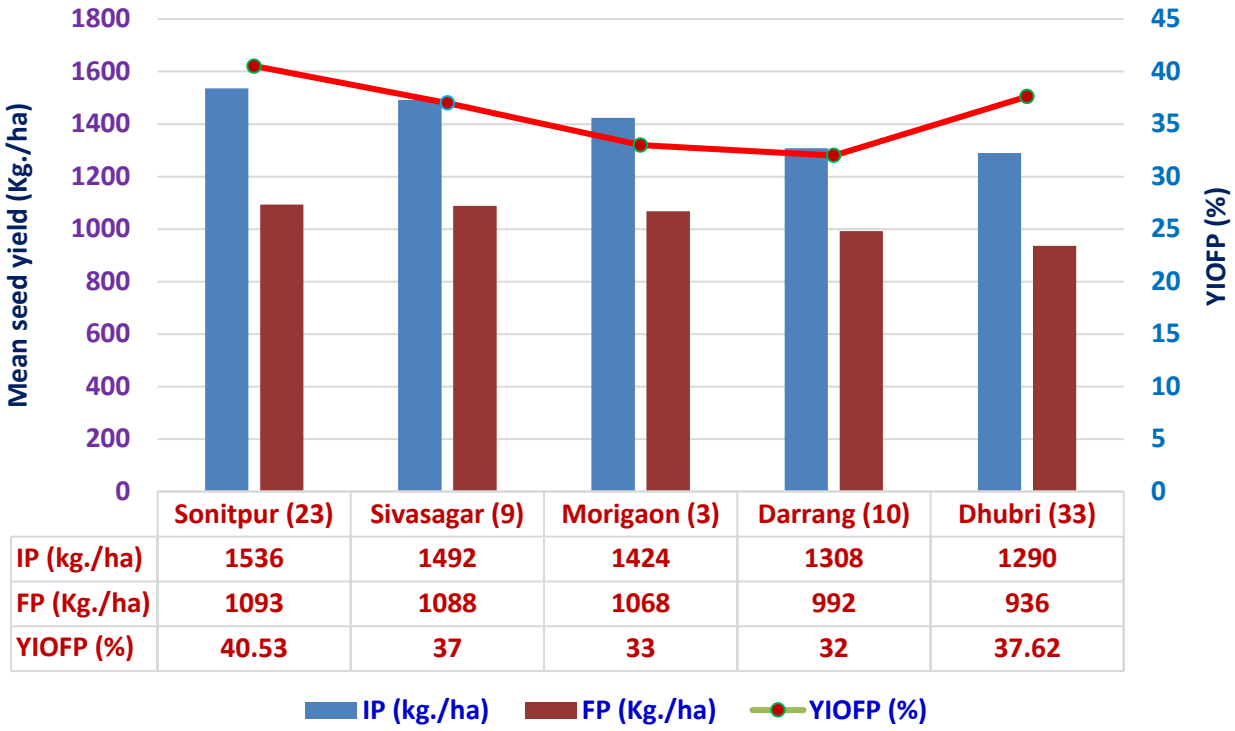
	Sonitpur (43)	Dhubri (46)	Darrang (28)	Morigaon (12)	Jorhat (41)	Sivasagar (20)	Golaghat (34)
IP (kg./ha)	1412	1395	1380	1362	1320	1228	1035
FP (Kg./ha)	1015	1007	1032	1026	998	985	691
YIOFP (%)	39.11	38.4	34	33.74	32	29	49.78

Fig. 18: Performance of PM-28 in different districts



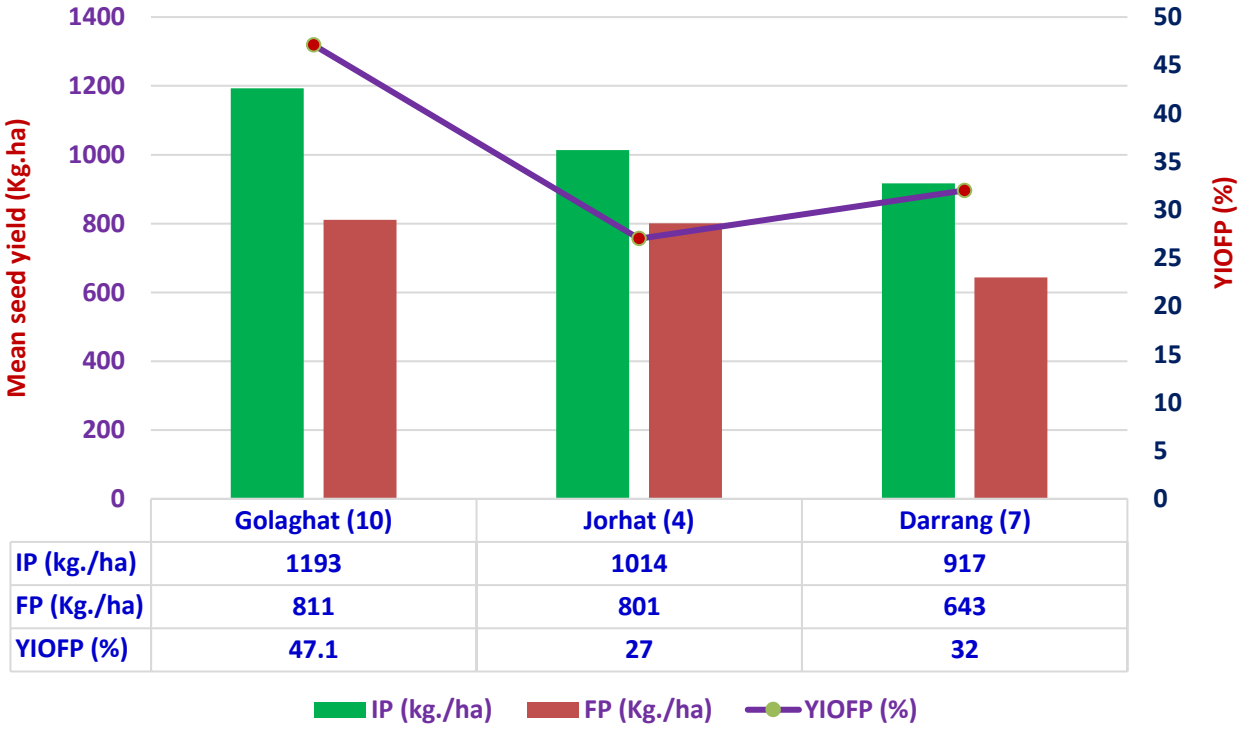
	Sonitpur (34)	Jorhat (15)	Sivasagar (10)	Darrang (15)	Dhubri (21)	Morigaon (5)	Golaghat (16)
IP (kg./ha)	1519	1447	1315	1266	1250	1237	1233
FP (Kg./ha)	1076	1074	979	970	925	958	762
YIOFP (%)	41.17	35	34	31	33.94	29	61.81

Fig. 19: Performance of DRMR-150-35 in different districts



	Sonitpur (23)	Sivasagar (9)	Morigaon (3)	Darrang (10)	Dhubri (33)
IP (kg./ha)	1536	1492	1424	1308	1290
FP (Kg./ha)	1093	1088	1068	992	936
YIOFP (%)	40.53	37	33	32	37.62

Fig. 20: Performance of TS-38 in different districts



	Golaghat (10)	Jorhat (4)	Darrang (7)
IP (kg./ha)	1193	1014	917
FP (Kg./ha)	811	801	643
YIOFP (%)	47.1	27	32

2.1.11. Overall performance of improved varieties in IP against the FP across the districts.

The figure 21 shows the overall performance of improved practices (IP) including all the varieties against the farmers' practices (FP) across the seven districts. In overall demonstrations (439), the IP had the average seed yield of 1327 kg./ha against the 963 kg./ha (FP) with an yield improvement of 37.8% across the seven districts.

The average cost of cultivation of Rs. 24542/ha in IP of seevn districts against the Rs. 20774/ha in FP was recorded. An ANMR of Rs. 15524 /ha was realized against the additional cost of Rs. 3768 /ha incurred due to demonstrated technology (Fig. 22).

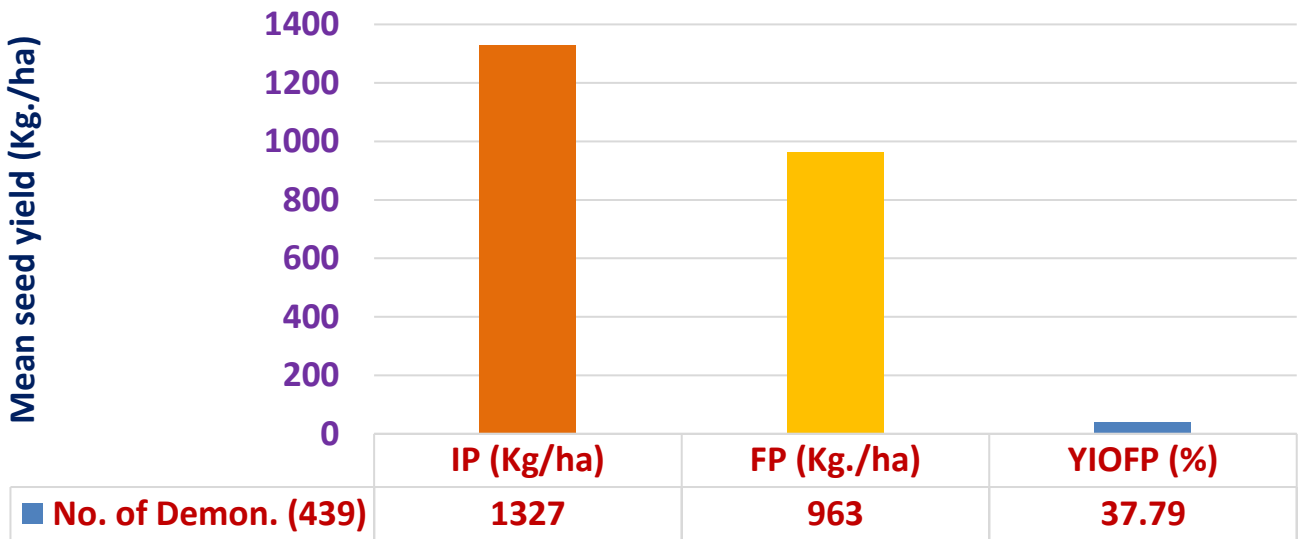
The figure 23 shows the overall performance of different improved varieties in IP against the FP across the districts. Improved variety DRMR-150-35 was demonstrated in 78 demonstrations across five districts viz. Dhubri (33), Sonitpur (23), Darrang (10), Sivsagar (9) and Morigaon (3). In overall demonstrations (78), the variety in IP recorded average yield of 1393 kg/ha with a yield improvement of 37.6% over farmers' practices (FP) across the five districts.

Improved variety PM-28 was demonstrated in 116 demonstrations across seven districts viz., Sonitpur (34), Dhubri (21), Golaghat (16), Jorhat (15), Darrang (15), Sivsagar (10) and Morigaon (5). In overall demonstrations (116), the variety in IP recorded average yield of 1359 kg/ha with a yield improvement of 38.9% over local practice (FP) across the seven districts.

Improved variety NRCHB-101 was demonstrated in 224 demonstrations in seven districts viz., Dhubri (46), Sonitpur (43), Jorhat (41), Golaghat (34), Darrang (28), Sivsagar (20) and Morigaon (12). In overall demonstrations (224), the variety in IP recorded average yield of 1412 kg/ha with a yield improvement of 39.1% over local practice (FP) across the seven districts.

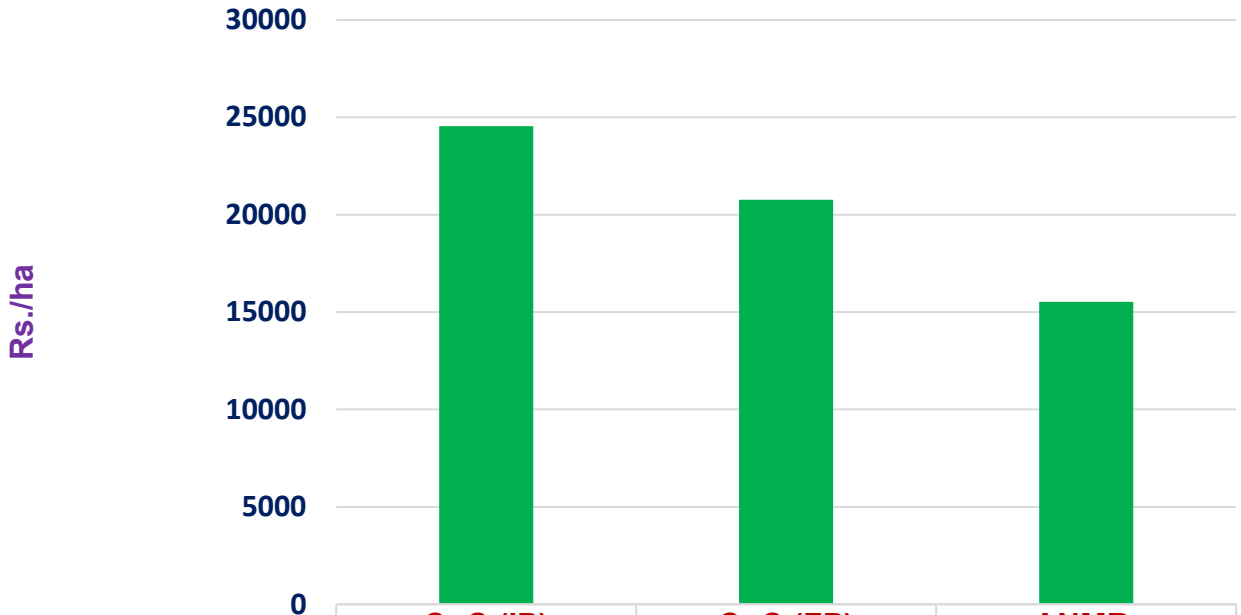
The TS-38 variety of toria was demonstrated in 21 demonstrations across three districts viz. Golaghat (10), Darrang (7), Jorhat (4). In overall demonstrations (21), the variety in IP recorded average yield of 1067 kg/ha with a yield improvement of 41.7% over local practice (FP) across the

Fig. 21: Overall performance of IP against FP across seven districts of Assam



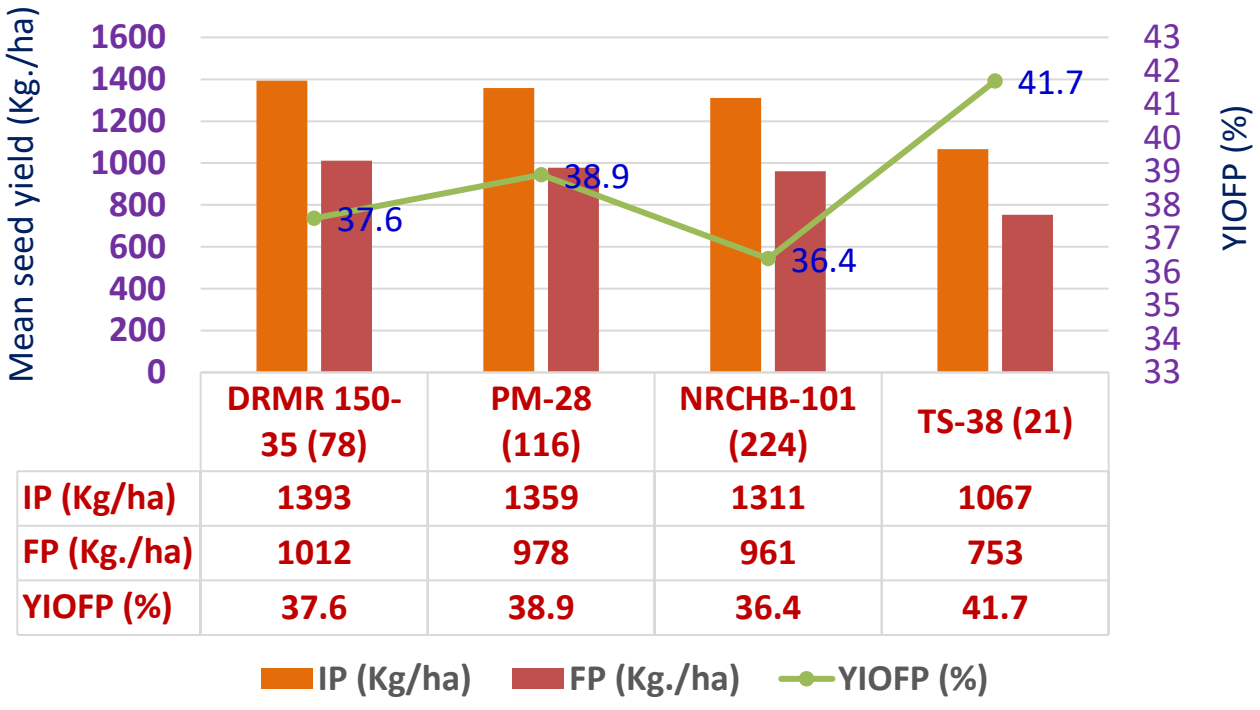
three districts.

Fig. 22 Overall CoC and ANMR across the seven districts of Assam



	CoC (IP)	CoC (FP)	ANMR
No. of Demons (439)	24542	20774	15524

Fig. 23: Overall performance of different varieties across the seven districts of Assam



	DRMR 150-35 (78)	PM-28 (116)	NRCHB-101 (224)	TS-38 (21)
IP (Kg/ha)	1393	1359	1311	1067
FP (Kg./ha)	1012	978	961	753
YIOFP (%)	37.6	38.9	36.4	41.7

Table 7: District-wise performance of crop demonstrations on rapeseed-mustard conducted during 2020-21

District	Clusters	Varieties	Situations	No. of CD	Mean yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
Sonitpur	Chaiduar Gabhoru Dhekiajuli Bihaguri Balipara	NRCHB-101 PM-28 DRMR -150-35	Irrigated	100	1477 (1070-1700)	1054 (800-1220)	40.1	23427	19173	81235	57970	19011	3.46	3.02
Dhubri	Rupshi Mahamaya Gauripur Agomani Chapar-Salkocha	NRCHB-101 PM-28 DRMR -150-35	Irrigated	100	1330 (750-1720)	966 (640-1270)	37.7	23040	20744	66500	48300	15883	2.88	2.32
Darrang	Bachimari Sipajhar Pachim Mangaldai	NRCHB-101 PM-28 DRMR -150-35 TS-38	Irrigated	60	1286 (781-1535)	965 (504-1155)	33.3	22808	18878	70087	52592	13565	3.07	2.78
Jorhat	Kaliapani Ujani Majuli Majuli	NRCHB-101 PM-28 TS-38	Rainfed	60	1332 (920-1620)	1004 (700-1170)	32.7	28053	23704	74592	56224	14019	2.65	2.43
Golaghat	Podumoni Bokakhat Kakodonga	NRCHB-101 PM-28 TS-38	Rainfed	60	1114 (788-1724)	730 (600-1040)	52.6	26111	20747	61270	40150	15756	2.34	1.93
Sivasagar	Gaurisagar Demow,	NRCHB-101 PM-28 DRMR -150-35	Rainfed	39	1306 (950-1640)	991 (800-1190)	31.8	27607	24750	65300	49550	12893	2.36	2.00
Morigaon	Mayong	NRCHB-101 PM-28 DRMR -150-35	Rainfed	20	1340 (1121-1569)	1015 (912-1098)	32.0	21616	18158	67000	50750	12792	3.09	2.79

Table 8: Variety-wise performance of crop demonstrations on rapeseed-mustard conducted during 2020-21

District	Clusters	Varieties	Situations	No. of CD	Mean yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
Mustard														
Sonitpur	Chaiduar Gabhoru Dhekiajuli Bihaguri Balipara	NRCHB-101	Irrigated	43	1412 (1070-1650)	1015 (800-1160)	39.1	23070	18833	77660	55825	17598	3.36	2.96
Sonitpur	Gabhoru Dhekiajuli Bihaguri Balipara	PM-28	Irrigated	34	1519 (1280-1680)	1076 (940-1220)	41.2	23311	19275	83545	59180	20329	3.58	3.07
Sonitpur	Gabhoru Dhekiajuli Bihaguri Balipara	DRMR -150-35	Irrigated	23	1536 (1232-1700)	1093 (1000-1200)	40.5	24265	19660	84480	60115	19760	3.48	3.05
Dhubri	Rupshi Mahamaya Gauripur Agomani Chapar-Salkocha	NRCHB -101	Irrigated	46	1395 (750-1720)	1007 (640-1270)	38.4	23226	21091	69763	50345	17284	2.99	2.38
Dhubri	Rupshi Mahamaya Gauripur Agomani Chapar-Salkocha	DRMR -150-35	Irrigated	33	1290 (975-1650)	936 (765-1175)	37.6	22920	20465	64506	46809	15242	2.81	2.28
Dhubri	Rupshi Mahamaya Gauripur Agomani Chapar-Salkocha	PM -28	Irrigated	21	1250 (940-1690)	925 (740-1190)	33.9	22822	20421	62486	46262	13823	2.72	2.26
Darrang	Bachimari Sipajhar Pachim Mangaldai	NRCHB-101	Irrigated	28	1380 (985-1535)	1032 (725-1155)	34.0	23720	19294	75914	56776	14712	3.26	2.96

Darrang	Bachimari Sipajhar Pachim Mangaldai	PM-28	Irrigated	15	1266 (947-1343)	970 (740-1055)	31.0	22337	18745	69626	53357	12677	3.12	2.86
Darrang	Bachimari Sipajhar	DRMR -150-35	Irrigated	10	1308 (976-1455)	992 (840-1120)	32.0	22125	18431	71935	54549	13691	3.24	2.97
Jorhat	Kaliapani Ujani Majuli Majuli	NRCHB-101	Rainfed	41	1320 (1120-1492)	998 (910-1120)	32.0	27711	23419	74088	55825	13971	2.66	2.38
Jorhat	Kaliapani Ujani Majuli Majuli	PM-28	Rainfed	15	1447 (1340-1620)	1074 (990-1170)	35.0	29933	25333	82268	60950	16718	2.75	2.41
Golaghat	Podumoni Bokakhat Kakodonga	NRCHB-101	Rainfed	34	1035 (788-1236)	691 (600-780)	49.8	25265	19696	56925	38005	13351	2.25	1.92
Golaghat	Podumoni Bokakhat Kakodonga	PM-28	Rainfed	16	1233 (1086-1724)	762 (600-1040)	61.8	26912	21605	67815	41910	20598	2.51	1.93
Sivasagar	Gaurisagar Demow,	NRCHB-101	Rainfed	20	1228 (950-1285)	985 (600-1042)	29.0	26852	24116	60880	47690	10454	2.26	1.97
Sivasagar	Gaurisagar Demow,	PM-28	Rainfed	10	1315 (1100-1471)	979 (800-1017)	34.0	27531	24449	65743	48942	13719	2.38	2.00
Sivasagar	Gaurisagar Demow,	DRMR -150-35	Rainfed	9	1492 (1359-1640)	1088 (1000-1190)	37.0	29371	26493	74622	54419	17325	2.54	2.05
Morigaon	Mayong	NRCHB-101-	Rainfed	12	1362 (1203-1569	1026 (940-1098)	33.7	21252	18077	68108	51304	13629	3.21	2.84
Morigaon	Mayong	PM-28	Rainfed	5	1237 (1121-1337)	958 (912-1028)	29.0	22111	18271	61860	47890	10130	2.80	2.62
Morigaon	Mayong	DRMR -150-35	Rainfed	3	1424 (1389-1424)	1068 (1020-1094)	33.0	22249	18301	71217	53400	13868	3.21	2.92
Toria														
Golaghat	Podumoni Bokakhat	TS-38	Rainfed	10	1193 (1052-1352)	811 (680-900)	47.1	27704	22944	65615	44605	16250	2.36	1.94
Darrang	Sipajhar	TS-38	Irrigaed	7	917 (781-1062)	643 (504-725)	32.0	21143	18138	45850	32150	10695	2.16	1.77
Jorhat	Kaliapani	TS-38	Rainfed	4	1014 (920-1067)	801 (700-903)	27.0	24500	20500	50713	40038	6675	2.07	1.95

Glimpses of monitoring of Crop Demonstrations by Experts in Golaghat

Glimpses of monitoring of Crop Demonstrations by Experts in Sivsagar

Glimpses of monitoring of Crop Demonstrations by Experts in Jorhat

Glimpses of monitoring of Crop Demonstrations by Experts in Morigaon






Glimpses of monitoring of Crop Demonstrations by Experts in Darrang

Glimpses of monitoring of Crop Demonstrations by Experts in Sonitpur and Morigaon

2.2 Field days organized during 2020-21

Field day is one of the group extension teaching methods used in Extension Services in order to disseminate information and stimulate adoption of improved agriculture technology by farmers. Field day is a method of motivating the farmers to adopt a new practice by showing what has actually been achieved by applying the practice under field condition. Field days are arranged to demonstrate new technologies in front of a large manageable group of interested farmers. Through this activity farm experts, extension workers and farmers are involved and learn from each other. The field days found to contribute in promoting the adoption of improved agricultural technologies. Farmers get the opportunity to see the performance of demonstrated new varieties and technologies in real field situation and learn new information about the demonstrated technology components. Keeping in view the importance of field days, two field days in each selected clusters of seven districts were organized.

A total of 44 field days were organizeds in 22 clusters of seven selected districts at maturity stage during February-March 2021 at the demonstrated fields of selected farmers under the project. The extension officers, ATM, BTM, Research Associates and farmers of the villages participated in these field days. Farmers got the opportunity to see the impact of new mustard varieties and technologies in real field situation and learnt about the applicability of the demonstrated mustard technologies/ practices in their own situation. They were motivated to adopt the improved mustard technologies and practices by showing its performance and profitability under field conditions. These helped in removing the doubts, superstitions and unfavourable attitude of the farmers about the scientific technologies of mustard cultivation. Interaction of farmers with extension personnel helped them in understand the importance of proper land preparation, timely sowing, selection of suitable varieties, proper sowing method, spacing, inter-culture operations, insect- disease management and proper harvesting of rapeseed- mustard crop. A total of 1363 farmers and farm women participated in these 44 field days. The summary and detail information of field days are presented in Table 9 and Table 10, respectively.

Table 9: Summary of Field Days organized during 2020-21

SN	Activity	Target (No.)	Achieved (No.)	Beneficiaries (No.)	Beneficiaries (No.)						
					Gender		Social Category				Total
					Male	Female	Gen	OBC	SC	ST	
1	Field days	44	44	1363	792	571	486	591	137	149	1363

Table 10: Details of Field Days organized during 2020-21

SN	District	Cluster	Cluster Name	No.	Date	Place	Participants/Beneficiaries (No.)						Total
							Gender		Social Category				
							Male	Female	Gen	OBC	SC	ST	
1	Dhubri	1	Mahamaya	1	20-02-21	Patakata -II	18	20	25	13	-	-	38
				2	22-02-2021	Dalaneralga - II	17	14	19	12	-	-	31
		2	Agomani	1	10-03-2021	Kherbari - I	18	10	12	16	-	-	28
				2	12-03-2021	Kherbari - I	26	11	23	14	-	-	37
		3	Chapar-Salkocha	1	21-02-2021	Simlabari	16	19	18	17	-	-	35
				2	24-02-2021	Lalkura	24	15	27	12	-	-	39
		4	Gauripur	1	25-02-2021	Madhusoulmari -I	20	12	16	08	05	03	32
				2	28-02-2021	Tisterpar	21	13	18	10	04	02	34
		5	Rupshi	1	11-03-2021	Chapgarh - I	21	09	14	08	07	01	30
				2	13-03-2021	Chapgarh - I	17	09	15	06	03	02	26
2	Sonitpur	1	Balipara	1	21-2-2021	Sotai Milanpur	20	10	04	06	08	12	30
				2	22-02-221	Roumari	17	13	07	08	08	07	30
		2	Gabharu	1	13-02-2021	Parbatia	16	09	09	13	03	-	25
				2	17-02-2021	Beseria	18	07	08	10	07	-	25
		3	Dhekiajuli	1	03-03-2021	Chennimari	17	13	10	07	08	05	30
				2	08-03-2021	Ansaipur	18	12	-	12	08	10	30
		4	Bihaguri	1	27-03-2021	Bapubheti	16	09	02	17	04	02	25
				2	09-03-2021	Bhalukekhowa	24	07	04	22	02	03	31
		5	Chaiduar	1	06-03-2021	Borjohabari	20	05	03	20	02	-	25
				2	08-03-2021	Bakoridoloni	18	06	03	18	03	-	24
3	Jorhat	1	Majuli	1	20-02-2021	Mahkhina	11	19	09	07	-	14	30
				2	05-03-2021	Milanmadhupur	12	9	5	11	-	5	21
		2	UjaniMajuli	1	20-02-2021	Borbil	13	32	02	42	01	-	45
				2	05-03-2021	Major Deori Gaon	02	13	-	-	-	15	15
		3	Kaliapani	1	27-02-2021	Japong Gaon	16	25	02	-	06	33	41
				2	01-03-2021	Kumar Gaon	12	13	-	25	-	-	25
4	Galaghat	1	Podumoni	1	26-02-2021	Kuwaripayher	13	09	07	14	-	01	22

				2	02-03-2021	Da-chamua	21	14	06	28	-	01	35
		2	Kakodonga	1	05-03-2021	Dhemaji Miri	20	18	08	-	29	01	38
				2	08-03-2021	Natun Chapori	29	12	38	-	-	03	41
		3	Bokakhat	1	17-03-2021	Japoripathaer	22	14	24	11	-	01	36
				2	18-03-2021	Lukhrakhonia	20	15	09	25	-	01	35
5	Sivsagar	1	Gaurisagar	1	02-03-2021	Deogharia	30	04	-	30	04	-	34
				2	09-03-2021	Namdonga Bongali	24	08	-	32	-	-	32
		2	Demow	1	08-03-2021	Khanikar gaon	15	20	-	35	-	-	35
				2	09-03-2021	Gorukhuti	30	03	-	30	-	03	33
6	Darrang	1	Sipajhar	1	06-02-2021	Titkhushi	14	21	20	15	-	-	35
				2	18-02-2021	Lowjan	12	23	21	14	-	-	35
		2	Bachimari	1	19-02-2021	Barjhar	30	05	10	10	15	-	35
				2	20-02-2021	Barghara	26	09	30	-	05	-	35
		3	Pachim Mangaldai	1	22-02-2021	Gariapara	07	28	35	-	-	-	35
				2	23-02-2021	Jaberikuschi	11	24	22	08	05	-	35
7	Morigaon	1	Mayoung	1	07-02-2021	Botabari	16	04	-	-	-	20	20
				2	02-02-2021	Hatimuria	04	06	01	05	-	04	10
	Total						**792**	**571**	**486**	**591**	**137**	**149**	**1363**


MUSTARD DEMONSTRATION
UNDER
ICAR-DRMR-APART PROGRAMME
YEAR : 2020-21
Name of Farmer : NURJAHAN BIBI
Village : Madhusoolmari Pt-I
AGO Club : Madhusoolmari
Cluster Block : Gauripur
Variety : NRCHB-101
Area : 0.25 Ha
Conducted by ATMA, Department of Agriculture, Dhubri, Assam

Glimpses of Field Day-I: Dhubri

Glimpses of Field Day-II: Dhubri

Glimpses of Field Day-I: Sonitpur

Glimpses of Field Day-II: Sonitpur

Glimpses of Field Day-I: Darrang

Glimpses of Field Day-II: Darrang

Glimpses of Field Day-I: Golaghat

Glimpses of Field Day-II: Golaghat


ICAR-DRMR-APART Programme
Rapeseed-Mustard Crop Demonstration 2020-21


FIELD DAY
ON
"RAPESEED-MUSTARD CROP DEMONSTRATION"
UNDER
"ICAR-DRMR- APART PROGRAMME,2020-21"
GOLAGHAT DISTRICT, ASSAM

Glimpses of Field Day-I: Sivasagar

Glimpses of Field Day-II Sivasagar

Glimpses of Field Day: Morigaon

Glimpses of Field Day-I: Jorhat

Glimpses of Field Day-II Jorhat

2.3. Post-harvest technology demonstrations of rapeseed-mustard conducted during 2020-21

Post-harvest technology is an inter-disciplinary science and technique applied to agriculture produce after harvest for its protection, conservation, processing, packaging, distribution, and utilization to meet the food and nutritional requirements of the people in relation to their needs. After being harvested, the mustard under goes a series of post-harvest operations such as threshing, cleaning, transportation and storage management.

Proper handling, packaging, transportation and storage reduces the post-harvest losses in mustard. The technology has become a necessity to improve the food safety and strengthen nation's food security. The technology helps to boost export of agricultural commodities in the form of preserved and value added products.

Keeping in view the importance of post-harvest management of mustard, it was planned that ICAR-DRMR would support to APART in organizing at least one PHT (Post-Harvest Technology) demonstration training in each selected cluster with its post-harvest expertise. As per approved activities, a total of 22 PHT demonstration trainings were organized in 22 clusters of seven selected districts during February-March 2021. Farmers were demonstrated the post-harvest techniques and activities through these trainings. The following aspects were covered during these trainings to impart the knowledge and skill of post-harvest techniques to the participants.

Threshing: Farmers were trained about threshing which should be done when moisture content in seed is between 15-20%. When crop is very dry (6-12 % moisture), it will be tuff to minimize the post-harvest losses. Make bundles of the harvested plants and stalk them in the sun drying for 7-8 days before threshing. Threshing should be done either treading by bullocks or running of tractor over the dried plants or using threshers. Seeds should be separated from chaffs by winnowing.

Importance of Storage: Good storage facilities are important to the farmers all over the world. It helps to ensure household and community food security until the next harvest and commodities for sale can be held back so farmers can avoid being forced to sell at low prices in the glut that often follows a harvest. Though considerable losses occur in the field, both before and during harvest, the greatest losses are noticed during storage. Farmers were trained as how to minimize losses during storage.

i). **Loss in quantity:** Farmers were imparted knowledge about weight or quantitative losses. Insects, rodents, etc. feeds on the product causing weight loss. These weight losses are not always apparent. For example, some insects eat only the centres of grain kernels so, even though the volume of grain may appear to remain the same, there can be considerable weight loss.

ii). **Loss in quality:** Losses of this type can be nutritional, chemical, through contamination with toxic molds or foreign matter. Pests that selectively eat a part of the food-stuff (such as the nutritious

germ of the grain) can reduce the value of the food-stuff as a whole. Farmers were trained to reduce the qualitative losses.

Storage management: Neat and clean seeds should be stored at appropriate moisture content. An adverse effect observed when seeds of mustard are stored in hot weather with high moisture content. For safe and long viability storage, mustard seeds should be dried at appropriate moisture. For safe storage, moisture content of seeds should be 8%. This can be achieved by sun drying of the threshed seed for approximately one week.

Principles of Storage: In order to reduce the amount of losses, the environment in the storage needs to be controlled so as to lower the possibility of:

- Biological damage by insects, rodents and micro-organisms.
- Chemical damage through rancidity development and flavour changes, etc.
- Physical damage through crushing, breaking, etc.

Good storage thus involves controlling the factors like temperature, moisture, light, pests and hygiene.

i). Temperature

The temperature within a store is affected by the sun, the cooling effect of radiation from the store, outside air temperature, heat generated by the respiration of both the store material and any insect pest present.

ii) Moisture

All micro-organisms, including molds, require moisture to survive and multiply. If the moisture content in a product that is to be stored is low, micro-organisms will be unable to grow, provided that the moisture inside the storage structure is also kept low. Moisture should therefore, be pre- vented from entering the store.

Precautions for safe storage:

1. Storage facility should be far away from mustard field and it should be neat and clean.
2. Transport vehicles used in mustard transportation such as bullock, truck and tractor trolley etc. should be insect free before storage of mustard seeds.
3. Seeds should be sun dried in the day and in the evening it should be fill in the bags.
4. Packing bags used in should be dried, new and insect free.
5. All cracks and holes in roof and floor should be closed with the cement and flat the floor in storage house.
6. Holes of rats should be closed with the cement in storage house.
7. New seed should not be mixed with old seeds because old seed may have infestation of insects.
8. Insect and disease affected seeds should not be stored.

9. Inspection should be repeated time to time in storage.

Precautions before oil extraction:

- Seed should be neat and clean before oil extraction process.
- Seed should be properly dried.
- There should be no straw and other materials in the seed.

Oil packaging and storage

Use clean, dry containers to pack and store oils. Sealed glass or plastic bottles are adequate for small quantities. Colored containers in a dark box help increase shelf life. Steel or plastic tanks work well for large quantities. The shelf life of oil is usually 6 to 12 months if it is properly packed and kept away from heat and sunlight. A total of 545 farmers and farm women participated in PHT demonstration trainings. The summary and detail information of PHT demonstrations are presented in Table 11&12, respectively.

Table 11: Summary of PHT demonstrations under ICAR-DRMR-APART project during 2020-21

SN	Activity	Target (No.)	Achieved (No.)	Beneficiaries (No.)	Beneficiaries (No.)						
					Gender		Social Category				Total
					Male	Female	Gen	OBC	SC	ST	
1	PHT Demon.	22	22	545	318	227	236	190	29	90	**545**

Table 12: Detail of of PHM demonstrations organized during 2020-21

SN	District	Cluster	Cluster Name	Date	Place	Participants/Beneficiaries (No.)						Total
						Gender		Social Category				
						Male	Female	Gen	OBC	SC	ST	
1	Dhubri	1	Mahamaya	06-02-2021	Patakata-II	17	11	20	8	-	-	28
		2	Agomani	29-01-2021	Kherbari-I	12	9	14	7	-	-	21
		3	Chapar-Salkocha	31-01-2021	Simlabari	18	6	19	5	-	-	24
		4	Rupshi	06-02-2021	Sukhatikhata	16	7	14	6	2	1	23
		5	Gauripur	08-02-2021	Madhusoulmari-I	15	10	12	8	3	2	25
2	Sonitpur	1	Balipara	09-04-2021	BRC, Balipara	12	8	8	4	2	6	20
		2	Gabharu	07-04-2021	Mazgaon Training Hall	13	7	9	7	4	-	20
		3	Dhekiajuli	08-04-2021	BRC, Dhekiajuli	11	9	8	6	2	4	20
		4	Bihaguri	08-04-2021	BRC, Bihaguri	13	7	7	8	3	2	20
		5	Chaiduar	12-04-2021	BRC, Chaiduar	14	6	12	5	3	-	20
3	Jorhat	1	Majuli	08-04-2021	Mohkina Gaon	28	7	20	10	2	3	35
		2	UjaniMajuli	08-04-2021	Major Deori	3	27	-	2	-	28	30
		3	Kaliapani	12-04-2021	Japong Gaon	15	14	-	-	-	29	29
4	Galaghat	1	Podumoni	02-03-2021	Da-Chamua	12	8	-	20	-	-	20
		2	Kakodonga	08-03-2021	Natun Chapori	14	6	20	-	-	-	20
		3	Bokakhat	30-03-2021	Japoripather	13	8	2	17	2	-	21
5	Sivsagar	1	Gaurisagar	20-04-2021	Namdongia Bongali	9	12	1	15	-	5	21
		2	Demow	22-04-2021	Gorukhuti	16	7	-	23	-	-	23
6	Darrang	1	Sipajhar	12-02-2021	Titkushi	14	21	20	15	-	-	35
		2	Bachimari	25-02-	Barujhar	25	5	11	13	6	-	30

				2021								
		3	Pachim Mangaldai	24-02-2021	Gariapara	14	26	35	5	-	-	40
7	Morigaon	1	Mayoung	30-01-2021	Botabari	14	6	4	6	-	10	20
	Total					**318**	**227**	**236**	**190**	**29**	**90**	**545**

Glimpses of Post Harvest Management Demonstrations: Dhubri

Glimpses of Post Harvest Management Demonstrations: Sonitpur

Glimpses of Post Harvest Management Demonstrations: Darrang

Glimpses of Post Harvest Management Demonstrations: Golaghat

Glimpses of Post Harvest Management Demonstrations: Jorhat

Glimpses of Post Harvest Management Demonstrations: Morigaon

Glimpses of Post Harvest Management Demonstrations: Sivasagar

2.4. Exposure Visit-cum-Training Programme of Master trainiers/ Extension Personnel and Progressive Farmers to RARS, Shillongani, Nagaon

Exposure visit is one of the important extension tools to reinforce the confidence of the extension personnel and farmers in new technology, methods, etc. Exposure visits enable farmers from different regions to interact with and learn from each other, allowing them to view practical examples of successful adoption of scientific technology in different farming situation. It motivates farmers by showing what others have been able to achieve. As per the approved activity under ICAR-DRMR-APART programme, one Exposure visit-cum-training of progressive farmers (No. 20) and one exposure visit-cum-training of Master trainiers/ extension personnel (No: 20) to ICAR-DRMR were to be organized during 2020-21. Since covid-19 situation was prevailing in the country, therefore, keeping in view the safety of the participants, it was decided to organize aforesaid visits this year at one of the coordinating centres under All India Coordinated Research Project on Rapeseed-Mustard (AICRP-RM) at RARS, Shillongani, Nagaon, Assam, working under ICAR-DRMR. The rapeseed-mustard research experimental trials of plant breeding, agronomy, disease and insect management, crop cafeteria, latest varieties, front line demonstrations, etc. were shown during the exposure visit-cum-training of progressive farmers and Master trainiers/ extension personnel organized simultaneously at RARS, Shillongani, Nagaon during 9-10th February 2021. For these visits, field level extension workers and farmers were nominated by respective DAOs from selected clusters of Jorhat, Sivasagar, Golaghat, Morigaon, Sonitpur, Darrang and Dhubri districts of Assam. The programme of exposure visit was designed in such a way that experts from ICAR-DRMR and RARS, Shillongani provided technical knowledge and exposure of latest technological advances in rapeseed-mustard to the participants. Alongwith the lectures, participants were made to visit experimental field/trials of variety development, insect-pest and disease management, agronomical practices, seed production programme, etc at the research farm of RARS, Shillongani. The participants also visited Krishi Vigyan Kendra (KVK) where they got the opportunity to interact with KVK experts and see the different agricultural implements and their uses in farming.

The participants also visited FLDs sites in the nearby villages and interacted with farmers. On 10th Feb. 2021, they participated in farmer's fair organized by ICAR-DRMR at RARS, Shillongani. They understood the gap in technology adoption and explore the feasibility in adoption of new practices in their own situations. Since "seeing is believing", the exposure visit provided better knowledge and understanding of technology, methods and improved the skills of the extension personnel/ master trainers and farmers on scientific production and protection technology of rapeseed-mustard. It exposed them to a new and different situation which would help in changing their outlook and extend their mental horizon. Detailed training schedule is presented in Table 13 .

Table 13: Schedule of Exposure Visit-cum-Training Schedule of Master trainers / Extension Personnel and Progressive Farmers

Date	Time	Topics	Speakers
9-2-2021	9:30 AM-10:00 AM	Registration of the participants	Staff of RARS
	10:00 AM-10:15 AM	Inaugural programme	All participants and resource persons
	10:15 AM-10:45 AM	Status of rapeseed-mustard in Assam	Dr. PC Sharma Incharge, RARS,
	10:45 AM-11:30 AM	Scope and challenges of rapeseed-mustard production in Assam	Dr. G.N. Hazarika Resident Consultant
	11:30 AM-12:15 PM	Integrated agro production technology of rapeseed-mustard.	Dr. Ashok Kr. Sharma PS, ICAR-DRMR
	12:15 PM-1:00 PM	Important rapeseed-mustard varieties for Assam	Dr. PK Dev Choudhary PS, RARS
	1:00 PM-2:00 PM	**Lunch break**	
	2:00 PM-3:00 PM	Use of ICT for enhancing rapeseed-mustard production.	Dr. Vinod Kumar PS, ICAR-DRMR
	3:00 PM-4:30 PM	Field visit of experimental trials of RARS and FLDs	All resource persons
	4:30 PM-5:30 PM	Field visit of KVK, Shillongani	Dr. Niranjan Deka PS & Head, KVK
10-2-2021	9:15 AM-10:00 AM	Integrated disease management in rapeseed-mustard	Dr. Ranjana Chakarborty Jr. Scientist, RARS
	10:00 AM-10:45 AM	Integrated insect-pest management in rapeseed-mustard	Dr. B.K. Bora PS, RARS
	10:45 AM-11:30 AM	Integrated nutrient management in rapeseed-mustard	Dr. Ashok Kr. Sharma PS, ICAR-DRMR
	11:30 AM -12:15 PM	Strategies to enhance rapeseed-mustard production in Assam	Dr. P. K. Rai Director, ICAR-DRMR
	12:15 PM -1:30 PM	Participation in framers' fair	All participants
	1:30 PM-2:30 PM	**Lunch break**	-
	2:30 PM-3:15 PM	Data collection and analysis methods	Dr. Vinod Kumar PS, ICAR-DRMR
	3:15 PM-4:00 PM	Problems of farmers and their scientific solution	Dr. G.N. Hazarika Resident Consultant
	4:00 PM-5:00 PM	Question-Answer and Valedictory session	Participants and Resource persons

Participants of the exposure visit-cum-training programme:

Field and middle level agricultural extension officials from the State Department of Agriculture, Govt. of Assam like BTM/ATM/AEA and Research Associates of ICAR-DRMR-APART

Project and selected progressive farmers from all the APART mustard clusters of the districts, viz. Jorhat, Sivsagar, Sonitpur, Darrang, Dhubri, Golaghat and Morigaon participated in this two days exposure-cum-training programme. A total of 20 master trainers/extension personnel including research associates and 24 farmers from seven selected districts participated in the exposure visit-cum-training programme. Table 14 and 15 shows the detailed list of the master trainers and farmer participants

Table 14: List of Master Trainers participated in Exposure Visit-cum-Training Programme organized by ICAR-DRMR during February 9-10, 2021

SN	Name of Participants	Designation	Place of posting	District	Mobile Number
1	Sankar Nath	BTM	Sipajhar Dev. Block	Darrang	9854636670
2	Dr. Tarunkr Saikia	BTM	Pachim Mld, Dev, Block, Darrang	Darrang	9365226653
3	Nitul Kalita	BTM	Bechimari, Darrang	Darrang	9707010490
4	Sanjib Saikia	A.E.A.	Sub Division Agrilculture Office, Sarupather,	Golaghat	9707870599
5	Mousam Jyoti Dutta	ATM	CSS-ATMA, Office of the Convenor East Dev. Block, Podumoni	Golaghat	8876266664
6	Madhav Jyoti Pegu	ATM	Viani Majuli	Jorhat	8638688071
7	Lalit Taid	AEA	Nakachari	Jorhat	9101071992
8	Pabitra Deuri	BTM	Mayong Block	Morigaon	9954031402
9	Chintu Moni Borah	ATM	Mayong Block	Morigaon	6001288428
10	Nur Alom Sarkar	ATM	Bilasipara Dev. Block	Dhubri	7896414386
11	Afsar Ali Khan	ATM	Birsing Jatura Dev. Block	Dhubri	8402873518
12	Saiful Islam	ATM	Golakganj Dev. Block	Dhubri	7002774026
13	Padmanath Doley	BTM	Bihaguri	Sonitpur	7002213734
14	Priyanka Saikia	BTM	Demow	Sivasagar	8474052005
15	Ujjal Jyoti Sarmah	AEA	Gaurisagar, ADO Circle	Sivasagar	9706061862
16	Dr. Hadi Husain Khan	Research Associate	DAO,Officer, Dhubri	Dhubri	9956140977
17	Dr. Bandhan Subba	Research Associate	Golaghat, Assam	Golaghat	8101455138
18	Dr. Priyanka Sharma	Research Associate	Sonitpur DAO	Sonitpur	7060559326
19	Dr. Vipin Kr. Sharma	Research Associate	Darrang	Darrang	9821865266
20	Dr. Brajesh Kr. Mishra	Research Associate	Morigaon	Morigaon	9838554884

Table 15: List of farmers participated in Exposure Visit-cum-Training Programme organized by ICAR-DRMR during February 9-10, 2021

SN	Name of Participants	Category	Village	Cluster	District	Mobile Number
1.	Lalchan Ali	Gen.	Patakata Pt-II	Mahamaya	Dhubri	6001038938
2.	Hazrat Ali	Gen.	Dalaner Agla Pt-II	Mahamaya	Dhubri	8812949835
3.	Julfikar Alom	Gen.	Lalkura	Chapar	Dhubri	9074695696
4.	Delowar Hussain	Gen.	Kherbari Pt-II	Agomani	Dhubri	9746543429
5.	Faruk Hussain	Gen.	Kherbari Pt-I	Agomani	Dhubri	9957141325
6.	Seiim Malik	Gen.	Chapgar pt-I	Rupshi	Dhubri	9957936028
7.	Pradip Bora	Gen	Hatimura	Mayong	Morigaon	7577012772
8.	Rabidhar Gogoi	OBC	Ghoramari	Balipara	Sonitpur	8723822510
9.	Bhabakanta Nath	OBC	Bogabora Chuburi, Besseria	Gabhoru	Sonitpur	9678668401
10.	Pabitra Sharma	Gen.	Rangajan	Balipara,	Sonitpur	6002131117
11.	Srikhagen Nath	OBC	Bhaluke Khowa	Bihaguri	Sonitpur	9706923596
12.	Raju Gogoi	OBC	Bokotha 2 No, Konwar Gaon, PO Khamun	Demow	Sivasagar	6001355473
13.	Jajneswar Borah	OBC	Namdongia Bongali	Gaurisagar	Sivasagar	6000178516
14.	Mfidul Gerwammi	Gen.	Gariapara	Darrang	Darrang	6003118391
15.	Ramen Kakat	Gen.	Titkuchi	Sipajhar	Darrang	9365249860
16.	Mont Ghosh	OBC	2 No. Darrang	Bichimari	Darrang	9957330246
17.	Bubul Hazarika	Gen.	Demaji Kaibartta, P.O-Dergaon	Kakodarg	Golaghat	9613359445
18.	Lalit Chetry	OBC	Da-chamua, P.0-Borpatherua	Podumoni	Golaghat	8638617754
19.	Madhab	OBC	Diffloopather P.O-	Bokakhat	Golaghat	9101639526

	Chetri		Barjuri			
20.	Paban Senapati	MOBC	Borbil	Ujani Majuli	Jorhat	8471990910
21.	Jintu Moni Devi	Gen.	Mohkina	Majuli	Jorhat	9101542171
22.	Debika Narah	ST	Jopong gaon	Kaliapani	Jorhat	9365916596
23.	Ranjit taye	ST	Jopong gaon	Kaliapani	Jorhat	6003328009
24.	Madhab Narah	ST	Japong	Kaliapani	Jorhat	9365916596

Output of the exposure visit:

The capacity development of Master trainers and farmers in Assam will strengthen the rapeseed-mustard technology dissemination process and builds strong institutional capacity for sustaining the cost-effective technology delivery system. The availability of these trained personnel will ensure that the sustainable dissemination of rapeseed-mustard technology to the large number of farmers even after the exit of the project. The summary of exposure visit-cum-training programme presented in Table 16.

Table 16: Summary of Exposure Visit-cum-Training Programme of Master trainers/ Extension Personnel and Progressive Farmers organized during 9-10 Feb. 2021

SN	Activity	Target (No.)	Achieved (No.)	Beneficiaries (No.)	Districts covered (No.)
1	Exposure visit-cum-training programme of master trainers	01	01	20	Jorhat, Sivsagar, Sonitpur, Darrang, Dhubri, Golaghat, Morigaon
2	Exposure visit-cum-training programme of master trainers	01	01	24	


प्रदर्शनमूलक भ्रमण
Exposure Visit of Master Trainers
under
ICAR-DRMR-APART PROJECT

Glimpses of Interaction with experts during Exposure-Visit-cum-Training programme Organized Feb. 9-10, 2021

Glimpses of Interaction with experts during Exposure-Visit-cum-Training programme organized during Feb. 9-10, 2021

Glimpses of visit of participants to agriculture machinery and KVK, Nagaon during Exposure-Visit-cum-Training programme organized during Feb. 9-10, 2021

Glimpses of visit of participants to research fields during Exposure-Visit-cum-Training programme organized during Feb. 9-10, 2021






Glimpses of Participants of Exposure-Visit-cum-Training programme organized during Feb. 9-10, 2021

Glimpses of Participants of Exposure-Visit-Cum-Training programme organized during Feb. 9-10, 2021

2.5. Farmer Fair organized on February 10, 2021

Farmers' fairs are playing a pivotal role for dissemination of agricultural and allied sectors information with the objective to create awareness and to educate the farming community. Farmers' fair is an attempt to communicate and demonstrate the latest technologies developed by the Research Institutions, State Agricultural Universities (SAUs), private agencies etc. Keeping in view the importance of farmer fair, ICAR-DRMR organized a farmer fair at RARS, Shillongani, Nagoan, Assam on February 10, 2021 under mustard value chain of ICAR-DRMR-APART project. The fair was inaugurated by Dr. P.K. Rai, Director, ICAR-DRMR, Bharatpur, Rajasthan and chaired by Dr. G.N. Hazarika, Resident Consultant and former Director of Research (Agri), Assam Agricultural University, Assam.

Addressing the farmers, Dr. P.K. Rai said that Government and ICAR-DRMR is doing its all-out efforts to increase the production and productivity of oilseed crops in the state and urged the farmers to utilize the rice-fallow areas through adoption of suitable varieties and scientific technology of rapeseed-mustard to make the state self-sufficient in oilseed production. He emphasised the need for better coordination among all departments/ agencies viz., Research Institutes, Agriculture University, KVKs, departments of agriculture, seed agencies, NGOs, etc. to make the farming community aware of scientific production technology for doubling the farming income. He appreciated the efforts of the Department of Agriculture, Govt. of Assam for dissemination of rapeseed-mustard technology among the farmers across the state and stressed for value addition of mustard oil.

On this occasion, chairman of the function, Dr. G.N. Hazarika said that Assam has vast availability of natural resources and fertile lands that offering ample scope to promote rapeseed-mustard cultivation in the state. There is an urgent need to motivate the farmers to adopt improved varieties and scientific production and protection technologies of rapeseed-mustard in the state. He also emphasized need to promote agro-based industries in the state so as to improve the overall economy.

The other dignitaries from different organizations namely Mr. Madhurum Patiri, Nodal Officer, APART; Dr. P.K. Mahanta, Agri Advisor, APART; Dr. Ashok Kumar Sharma, Team Leader, ICAR-DRMR-APART project; Dr. Kalyan Pathak, Principal Scientist, Directorate of Research (Agri), AAU, Jorhat; Mr. Raosahab Bendre Ag. Specialist, APART; Dr. PC Sharma, Incharge, RARS Shilongani; Dr. Vinod Kumar, Dr. Arun Kumar, Pr. Scientist, ICAR-DRMR also expressed their views and urged the farmers for adoption of scientific technology of rapeseed-mustard in the state for overall improvement of rapeseed-mustard productivity.

The fair also provided opportunities for the farmers to share their experiences with the gathering and improve their knowledge by "Seeing is believing" principle by visiting the different stalls, experimental farms, Kisan Ghosties, etc.

About 10 exhibition stalls from different institutes and departments/ NGOs were also organized on the occasion. More than 250 farmers, farm women and extension personnel from Dhubri, Darrang, Golaghat, Nagaon, Jorhat, Majuli, Sivsagar, Sonitpur, Hojai, Nalbari, etc. districts participated in the fair. The summary of participants of farmer's fair is presented in Table 17.

Table 17: Summary of participants of farmer's fair organized on February 10, 2021

SN	Activity	Target (No.)	Achieved (No.)	Beneficiaries (No.)	Beneficiaries (No.)						
					Gender		Social Category				Total
					Male	Female	Gen	OBC	SC	ST	
1	Farmer's fair	200	238	238	206	32	64	82	53	39	**238**

Glimpses of farmers' fair

Inauguration of exhibition at farmer's fair by Director, ICAR-DRMR and other dignitaries

Inauguration of exhibition at farmer's fair by Director, ICAR-DRMR and other dignitaries

Glimpses of farmers' fair

Lighting of lamp at farmers' fair by Sh. Madhurum Patri, Nodal Officer, Agri-APART

Addressing the gathering by Director, ICAR-DRMR

Glimpses of farmers' fair

Addressing the gathering by dignitaries

Glimpses of farmers' fair

Release of publication in farmer's fair

Visiting the Exhibition stalls by dignitaries and farmers

2.6. Publication of Technical Bulletin on "Best management practices of rapeseed-mustard technologies for Assam" during 2020-21

To reach a large number of people quickly and simultaneously at a low cost and provide accurate, motivating, credible and distortion free information, different types of publications like technical bulletin, folders, and pamphlets were developed and distributed to the farmers. It will provide support to other extension methods and facilitate use at convenience and will serve as a future reference.

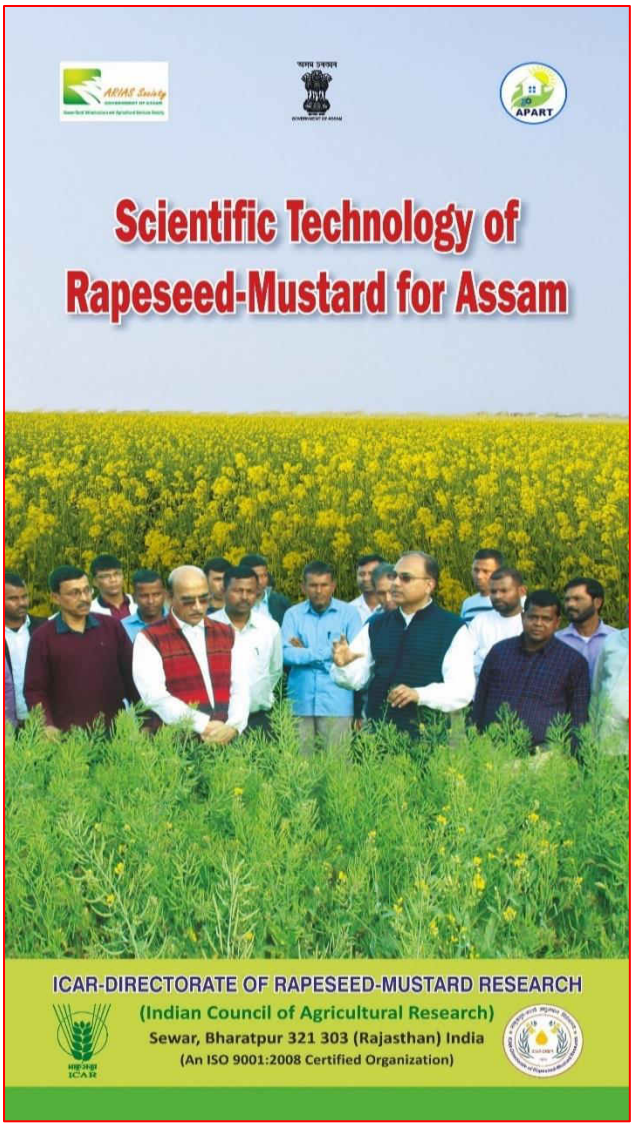
ICAR-Directorate of Rapeseed-Mustard Research has signed a MoU with the Director of Agriculture, Government of Assam on April 28, 2020 for a project on "Consultancy services for technical advisory support for augmenting rapeseed-mustard production in Assam for sustainable livelihood security" through APART. ICAR-DRMR is working as knowledge partner and providing expertise to support the Directorate of Agriculture, Govt. of Assam. ICAR-DRMR is providing technical backstopping, arranging human resources, creating awareness and capacity building of all stakeholders about improved varieties and scientific cultivation of rapeseed-mustard under the project.

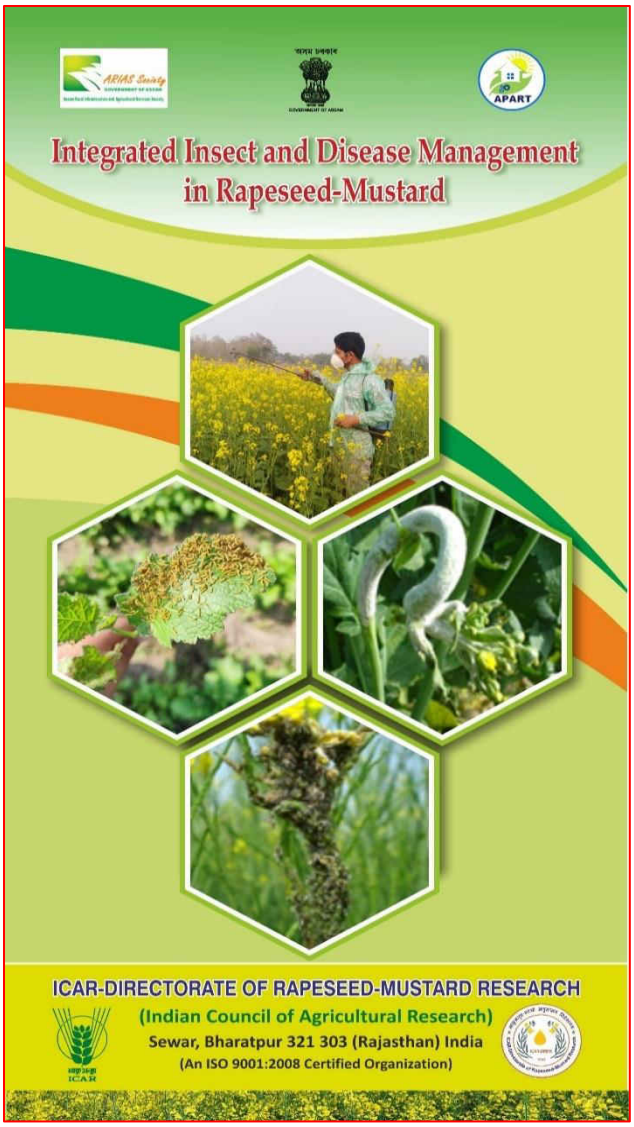
The need for state specific strategic road map for enhancing rapeseed-mustard crop productivity is increasingly being felt since the production constraints are usually state specific. In view of that ICAR-DRMR has developed and published this state specific document on "**Best management practices of rapeseed-mustard technologies for Assam**" in the form of technical bulletin that will help the agricultural officials and farmers of the state to focus on the specific requirements and activities needed to address the production constraints to achieve higher productivity of rapeseed mustard.

ICAR-DRMR has developed the publication in English (Master copy) and that will be translated into local languages by OPIU-Agriculture for printing of multiple copies and distribution to farmers will by District ATMAs.

2.7 Publication of technical folders during 2020-21.

The simple and actionable farmer-friendly extension material in the form of two **technical folders on "Scientific technology of rapeseed-mustard for Assam" and "Integrated insect and disease management in rapeseed-mustard"** in English and one **on "Improved production technology of mustard" in Assamese language were** developed by ICAR-DRMR (master copy) and translation into local languages will be the done by OPIU-Agriculture. Printing of multiple copies and distribution to farmers will be the done by District ATMAs. They are handy that will provide opportunity to farmers and extension workers for reading, learning and/or referring. They are the best method for dissemination of information or a message. They save time and resources in dissemination of information to a large group of people. They can be used at any age. More efficient than oral languages.





সৰিয়হৰ অধিক উৎপাদনৰ বাবে উন্নত কৃষি পদ্ধতি

সৰিয়হ ভাৰতবৰ্ষৰ অন্যতম গুৰুত্বপূৰ্ণ তৈলবীজ শস্য, যিহেতু সৰিয়হৰ পৰা উৎপাদিত তেল ব্যৱহাৰ আমাৰ দৈনন্দিন জীৱনত অপৰিহাৰ্য। সৰিয়হ উৎপাদন ক্ষেত্ৰত সমগ্ৰ বিশ্বৰ ভিতৰত ভাৰতবৰ্ষৰ স্থান চীন আৰু কানাডাৰ পাছতেই তৃতীয়, যি বিশ্বৰ মুঠ উৎপাদনৰ প্ৰায় ১২ শতাংশ। ভাৰতবৰ্ষত সৰিয়হ খেতি ৰাজস্থান ৰাজ্যত সৰ্বমুঠ ৩.৪ নিযুত টনেৰে সৰ্বাধিক, য'ত ০.১৯ টন উৎপাদনৰে অসমৰ স্থান অষ্টম (বৰ্ষ ২০১৭-১৮)। তদুপৰি সৰিয়হ খেতিত অতিশয় কম পানীৰ দৰকাৰ হয় (৮০-২৪০ মি.মি.), গতিকে সৰিয়হৰ খেতি বৰষুণৰ ওপৰত নিৰ্ভৰশীল কৃষিৰ লগত খাপ খায় পৰে। সাধাৰণতে অসমত দুই প্ৰকাৰৰ সৰিয়হ খেতি কৰা যায়- লাই সৰিয়হ বা ওখ (দীৰ্ঘমাদী) আৰু চাপৰ সৰিয়হ বা ৰাই (হস্ৰম্যাদী) ৰূপেও জনাজাত, যাৰ ভিতৰত সৰিয়হৰ জাতসমূহ সদ্যে প্ৰচলিত। ভাৰতবৰ্ষত সৰিয়হ উৎপাদনৰ হাৰ ১৫১১ কেজি প্ৰতি হেক্টৰ যি আন্তঃৰাষ্ট্ৰীয় হাৰতকৈ (২২১০ প্ৰতি হেক্টৰ) বহু কম, যাৰ বাবে ভাৰতবৰ্ষত সদায় চাহিদা অনুযায়ী বিশ্বৰ অনান্যা দেশৰ পৰা আমদানী কৰিব লগা হয়। অসমত উৎপাদনৰ হাৰ অতিশয় কম, মাত্ৰ ৬৬০ কেজি প্ৰতি হেক্টৰ। গতিকে বিভিন্ন উন্নত কৃষি প্ৰযুক্তি যেনে- উন্নত কৃষি পদ্ধতি, ৰাসায়নিক সাৰ, উন্নত জাত বীজ, উন্নত কীটনাশক প্ৰযুক্তি আদিৰ ব্যৱহাৰৰ দ্বাৰা সৰিয়হৰ উৎপাদন অধিক কৰাৰ থল আছে। সৰিয়হৰ অধিক উৎপাদনৰ দিশত কৰিবলগীয়া কৃষিৰ্য্যৰ সম্পৰ্কে তলত উল্লেখ কৰা হ'ল-

সুবীজৰ বৈশিষ্ট আৰু বিশুদ্ধতা ঃ সাধাৰণতে কোনা এবিধ শস্যৰ বীজৰ লগত অন্য কোনা জাতৰ বীজ মিহলি নোহোৱা বীজকে সুবীজ বোলা হয়। তদুপৰি বীজবোৰ পৰিস্কাৰ পৰিচন্ন, ধূলি-বালি তথা পতান আৰু অপতৃণৰ বীজ নথকা হ'ব লাগে। বীজ পতঙ্গ তথা ৰোগমুক্ত হ'ব লাগে আৰু বীজৰ আৰ্দ্রতা কম হ'ব লাগে।

উন্নত অনুমোদিত জাতসমূহ ঃ অধিক উৎপাদনৰ বাবে অনুমোদিত উন্নত জাঁত নিৰ্বাচন কৰিব লাগে আৰু তেনেবিলাক জাত হৈছে-

জাত	শস্যকাল (দিন)	গড় উৎপাদন (কুঃ/বিঘা	তেলৰ পৰিমাণ (%)
টি এচ-৩৬ TS-36 (ৰাই)	৯০-৯৫	১.৩-১.৬	৩৮-৪০
টি এচ-৩৮ TS-38 (ৰাই)	৯০-৯৫	১.৩-১.৬	৩৮-৪০
এন আৰ চি এইচ বি-১০১ NRCHB 101 (লাই)	১১০-১২০	১.৮-২.০	৪০-৪২
পি এম-২৮ PM-28 (লাই)	১০০-১২৫	২.৫-২.৬	৪০-৪২
ডি আৰ এম আৰ ১৫০-৩৫ DRMR 150-35 (লাই)	১১০-১২০	২.১-২.৮	৩৮-৪০

কৃষি পদ্ধতি ঃ

- যিকোনো বালিচহীয়া মাটিত সৰিয়হ খেতি ভাল হয়।
- খেতি পথাৰডবা সুন্দৰকৈ ৪-৬ বাৰ চাহ কৰি মৈ মাৰি সমান কৰি ল'ব লাগে।


এন আৰ চি এইচ বি-১০১


পি এম-২৮


টি এছ-৩৮


টি এছ-৩৬

3. Workforce involved in the assignment:

In APART, ICAR-DRMR has appointed the key and non-key experts to take care of the project activities during the period. The list of ICAR-DRMR staff engaged in the project and locally appointed staff are given in Tables 18 and 19.

Table 18: Client's ICAR-DRMR staff engaged

SN	Name of Experts	Key or Non-Key	Designation in ICAR-DRMR	Designation in APART	Place of deployment	Date of availability for work in the assignment
1	Dr. P.K. Rai	Key	Director	Chief Advisor	Bharatpur	In place
2	Dr. Ashok Kumar Sharma	Key	Principal Scientist (Ag. Extension)	Team Leader	Bharatpur	In place
3	Dr. Harvir Singh	Key	Scientist (Agronomy)	Expert	Bharatpur	In place
4	Dr. Pankaj Sharma/	Non-key	Pr. Scientist (Plant Pathology)	Expert	Bharatpur	In place
5	Dr. Vinod Kumar/	Non-key	Pr. Scientist (Comp. Appl.)	Expert	Bharatpur	In place
6	Dr. Arun Kumar	Non-key	Pr. Scientist, (Plant Breeding)	Expert	Bharatpur	In place
7	Dr. Narpat Singh	Non-key	Research Associate	Research Associate	Bharatpur	In place
8	Ms. Anita	Non-key	Data entry Operator	Data entry Operator	Bharatpur	In place

Table 19: Client's local staff engaged

SN	Name of Experts	Key or Non-Key	Designation in ICAR-DRMR	Designation in APART	Place of deployment	Date of availability for work in the assignment
1	Dr. G.N. Hazarika	Key	Resident Consultant	Resident Consultant	Jorhat	In place
2	Dr. Brijish Mishra	Non-key	Research Associate	Research Associate	Morigaon	Up to 31st March 2021
3	Dr. Vipin Kumar	Non-key	Research Associate	Research Associate	Darrang	In place
4	Dr. Bandhan Subha	Non-key	Research Associate	Research Associate	Golaghat	In place
5	Dr.Hadi Hussain	Non-key	Research Associate	Research Associate	Dhubri	In place
6	Dr. Priyakshi Buragohain	Non-key	Research Associate	Research Associate	Sivsagar	In place
7	Dr. Rimi Deuri	Non-key	Research Associate	Research Associate	Jorhat	Up to 31st March 2021
8	Dr. Priyanka Sharma	Non-key	Research Associate	Research Associate	Sonitpur	In place
9	Ms. Seema Vishnu Bhand	Non-key	Accountant	Accountant	Guwahati	In place

4. Consultants Invoice and payment by the client:

Table 20. Invoice details

SN	Invoice No. and Date	Date of submission of invoice to OPIU	Date of clarification sought by OPIU, If any	Date of replies given by the consultant, if any	Date of payment by OPIU
1	ICAR-DRMR/APART/2019-20/4 dated 14-5-2020 Rs. 4312527.00	17-6-2020	NA	NA	5-10-2020
2	ICAR-DRMR / TAD / APART / 2020-21 / 86 dated 2-2-2021 Rs. 3881275.00	2-2-2021	NA	NA	20.5-2021

3	ICAR-DRMR/TAD/APART / 2020-21 / 118 dated 28-6-2021 Rs. 3018765.00	28-6-2021	NA	NA	15-7-2021

5. Contractual issues (if any) and changes desired

Table 21. Contractual issues and changes desired

SN	Issues	Changes desired
1.	TA allowances for Research Associates	A large number of crop demonstrations are to be conducting under the project. These crop demonstrations needs to be monitored and supervised regularly by ICAR-DRMR staff/ Research Associates for timely advice and motivation to the farmers and effective implementation of the programme. Therefore, additional TA allowances are required for Research Associates deployed under the project.

6. Work plan for the next six months

Table 22: Month-wise work-plan

SN	Month wise activities	Nos.
July 2021		
1	Awareness meetings	44
2	Base line survey	-
August 2021		
1	Awareness meetings	22
2	Base line survey	-
September 2021		
1	Selection of locations for demonstrations	660
2	Selection of beneficiaries	660
3	Working out the seed distribution plan	11
October 2021		
1	Training of the farmers	01
2	Training of Master trainers	01
3	Distribution of seeds, fertilizers and other required inputs	660
4	Organization of technical trainings	22
November 2021		
1	Sowing of crop demonstrations	660

2	Organization of technical trainings	22
December 2021		
1	Organization of technical trainings	22
2	Development of website/mobile app	01
3	Workshop of stakeholders	01
4	Training of the farmers	01
5	Training of Master trainers	01
6	Monitoring of crop demonstrations	660

7. Summary of the overall progress

The achievements and results of the period under report are summarised in the Table 23, below.

Table 23. Summary of the progress

No.	Deliverables/ Activity	Unit	Target vis-a-vis Achievement (physical & financial) (Target as given in the Payment Schedule provided in the contract agreement) from Jan-June 2021				Total	
			Physical (Number) 2020-21		Financial (Rs. in lakh) 2020-21		Physical (No.)	Financial (Rs. in lakh)
			Target	Achievement	Target	Achievement		
1	Field days	No.	44	44	3.08	3.08	3.08	3.08
2	PHM demonstrations	No.	22	22	4.40	4.40	22	4.40
3	Exposure visit-cum-training of progressive farmers	No.	1	1	2.18	2.18	1	2.18
4	exposure visit-cum-training of extension personnel	No.	1	1	3.74	3.74	1	3.74
5	Publication of Technical bulletin	No.	01	01	0.71	0.71	1	0.7
6	Publication of technical folders	No.	02	02	0.19	0.19	2	0.19

Annexure-I

1. List of beneficiary farmers of crop demonstrations conducted in Chaiduar cluster of Sonitpur district of Assam during 2020-21

Name of Cluster: Chaiduar, Sonitpur														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Man Bahadur Pradhan / Lt. Nar Bd. Pradhan Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 6003355734*	NRCHB - 101	Rainfed	NRCHB-101	1500	1020	47.1	23442	18983	81000	55080	21461	3.45	2.90
2	Dipjyoti Baruah / Tanka Baruah Village:Borjohabari GP: Bakoridoloni, Chaiduar *Ph. 9606831527*	NRCHB - 101	Rainfed	NRCHB-101	1380	1040	32.7	24694	19229	74520	56160	12895	3.01	2.92
3	Khemraj Powdel / Madhab Powdel, Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 7019842967*	NRCHB - 101	Rainfed	NRCHB-101	1260	960	31.3	22982	19466	68040	51840	12684	2.96	2.66
4	Bindu Devi / ChandralalSamlagai Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 9365539647*	NRCHB - 101	Rainfed	NRCHB-101	1420	1000	42.0	23428	18394	76680	54000	17646	3.27	2.93
5	Naramaya Sharma / Nilakantha Sharma Village:Borjohabari GP: Bakoridoloni, Chaiduar *Ph. 9954957929*	NRCHB - 101-	Rainfed	NRCHB-101	1380	1080	27.8	23168	18229	74520	58320	11261	3.21	3.19

6	Dhan Maya Sharma / Subhash Sharma Village:Borjohabari GP: Bakoridoloni, Chaiduar *Ph. 8474003435*	NRCHB - 101	Rainfed	NRCHB-101	1420	1040	36.5	22642	18183	76680	56160	16061	3.38	3.08
7	Lila Bd. Chetry / Lt. Harka Bd. Chetry Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 8761026245*	NRCHB - 101	Rainfed	NRCHB -101	1500	1120	33.9	22082	18455	81000	60480	16893	3.66	3.27
8	LokBahadur Pradhan / Lt. Nar Bd. Pradhan Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 6003614883*	NRCHB - 101	Rainfed	NRCHB-101	1460	1000	46.0	23168	18229	78840	54000	19901	3.40	2.96
9	JanardanDhakal /Lt. JaganathDhakal Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 6900054049*	NRCHB - 101	Rainfed	NRCHB-101	1540	1100	40.0	24828	19161	83160	59400	18093	3.34	3.10
10	Goman Sing Pradhan Nar Bd. Pradhan Village:Borjohabari GP: Bakoridoloni,Chaiduar *Ph. 6003449514*	NRCHB - 101	Rainfed	NRCHB -101	1460	1020	43.1	24578	19241	78840	55080	18423	3.20	2.86
11	Ganesh Pradhan /Dhan Bd. Pradhan Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7896437677*	NRCHB - 101	Rainfed	NRCHB-101	1420	1080	31.5	22513	18141	76680	58320	13988	3.40	3.21

12	Shanti Thapa / DipakThapa Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7005845107*	NRCHB - 101	Rainfed	NRCHB-101	1580	1160	36.2	23568	18121	85320	62640	17233	3.62	3.45
13	Madhu Pradhan / Mohem Pradhan, Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 9365763475*	NRCHB - 101	Rainfed	NRCHB-101	1500	1020	47.1	22702	19257	81000	55080	22475	3.56	2.86
14	BishnulalChetry / Jangha Bd. Chetry Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 8723860028*	NRCHB - 101	Rainfed	NRCHB-101	1380	1040	32.7	23878	18461	74520	56160	12943	3.12	3.04
15	Lekhnath Mishra / Taranidhi Mishra Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 9613285098*	NRCHB - 101	Rainfed	NRCHB-101	1260	960	31.3	23168	18229	68040	51840	11261	2.93	2.84
16	ManojThapa / Janga Bd. Thapa Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7577986336*	NRCHB - 101	Rainfed	NRCHB-101	1420	1000	42.0	22668	18195	76680	54000	18207	3.38	2.96
17	JaganathChetry / BuddhimanChetry Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7896437677*	NRCHB - 101	Rainfed	NRCHB-101	1380	1080	27.8	23317	18694	74520	58320	11577	3.19	3.11

18	Puspa Devi Pradhan / Pradip Pradhan Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 8876442295*	NRCHB - 101	Rainfed	NRCHB-101	1340	1040	28.8	23568	18721	72360	56160	11353	3.07	2.99
19	Renuka Pradhan / Ratan Pradhan Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7896437677*	NRCHB - 101	Rainfed	NRCHB-101	1500	1120	33.9	23173	18169	81000	60480	15516	3.49	3.32
20	Karna Bd. Newar / Purna Bd. Newar Village:Bakoridoloni GP: Bakoridoloni,Chaiduar *Ph. 7896437677*	NRCHB - 101	Rainfed	NRCHB-101	1460	1000	46.0	23768	18441	78840	54000	19513	3.31	2.92

2. List of beneficiary farmers of crop demonstrations conducted in Balipara cluster of Sonitpur district of Assam during 2020-21

Name of cluster: Balipara, Sonitpur														
SN	**Name and address of farmers with phone**	**Variety in IP**	**Situation**	**Variety in FP**	**Yield (kg /ha)**		**YIOFP (%)**	**COC (Rs/ha)**		**GMR (Rs/ha)**		**ANMR (Rs/ha)**	**B: C Ratio**	
					IP	**FP**		**IP**	**FP**	**IP**	**FP**		**IP**	**FP**
1	Akhanto Marak / Khoga Sangma, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 9957378310*	DRMR 150-35	Rainfed	DRMR 150-35	1420	940	51.1	22382	18334	76680	50760	21872	3.426	2.769
2	Teresta Sangma / Wele Marak, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 9707554799*	NRCHB -101	Rainfed	NRCHB-101	1140	900	26.7	22308	19803	61560	48600	10455	2.75	2.45

3	SaroMomin / WagistarMarak, Village: SotaiMilanpur GP: Bhalukmari, Balipara *Ph. 8011134308*	DRMR 150-35	Rainfed	DRMR 150-35	1650	1080	52.8	23382	18546	89100	58320	25944	3.81	3.14
4	Alpana Sangma Jack Marak, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 9957942573*	DRMR 150-35	Rainfed	DRMR 150-35	1420	950	49.5	21994	18896	76680	51300	22282	3.48	2.71
5	Komola Daimary / Debo Daimary, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 8761804352*	DRMR 150-35	Rainfed	DRMR 150-35	1540	1030	49.5	23128	19117	83160	55620	23529	3.59	2.90
6	Okil Basumatary / Monesar Daimary, Village: Sotai Milanpur GP: Bhalukmar, Balipara *Ph. 7086017473*	DRMR 150-35	Rainfed	DRMR 150-35	1380	950	45.3	21102	17629	74520	51300	19747	3.53	2.91
7	Banner Mech / Lengra Mech, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 7896055604*	DRMR 150-35	Rainfed	DRMR 150-35	1460	980	49.0	23422	19659	78840	52920	22157	3.36	2.69
8	Gopal Choudhary / Rambason Choudhary, Village: Parmai ghuli GP: Napam, Balipara *Ph. 9854117059*	NRCHB -101	Rainfed	NRCHB-101	1260	980	28.6	21882	17895	68040	52920	11133	3.109	2.95
9	Rabindhar Gogoi / Bipin Gogoi, Village: Roumari GP: Rangajan, Balipara *Ph. 6003665961*	NRCHB -101	Rainfed	NRCHB-101	1070	800	33.8	22062	17013	57780	43200	9531	2.61	2.53

10	Pabitra Sharma / Giridhai Sharma, Village: Roumari GP: Rangajan, Balipara *Ph. 6002131117*	PM-28	Rainfed	PM-28	1580	1080	46.3	22122	18755	85320	58320	23600	3.85	3.10
11	Deepak Gogoi / BipinGogoi, Village: Roumari GP: Rangajan, Balipara *Ph. 8723802170*	PM-28	Rainfed	PM-28	1675	1180	41.9	23162	19132	90450	63720	22700	3.90	3.33
12	Nityananda Gogoi / Kenam Gogoi, Village: Roumari GP: Rangajan, Balipara *Ph. 8310163635*	PM-28	Rainfed	PM-28	1300	1000	30.0	21468	17011	70200	54000	11743	3.27	3.17
13	Dhaneswar Mili / Bhogaram Mili, Village: Roumari GP: Rangajan, Balipara *Ph. 967859821*	PM-28	Rainfed	PM-28	1460	980	49.0	22525	19102	78840	52920	22497	3.50	2.77
14	Sanika Burh /Sama Burh, Village: Roumari GP: Rangajan, Balipara *Ph. 967859821*	PM-28	Rainfed	PM-28	1460	1040	40.4	21982	18816	78840	56160	19514	3.58	2.98
15	Smt.Puneshwar Tiwari Ramniranjan Tiwari Village: Roumari GP: Rangajan, Balipara *Ph. 9085153897*	PM-28	Rainfed	PM-28	1340	1040	28.8	23208	19669	72360	56160	12661	3.11	2.85
16	JatinBarua / Kanak Gogoi, Village: Roumari GP: Rangajan, Balipara *Ph. 9085153897*	PM-28	Rainfed	PM-28	1420	940	51.1	22048	21916	76680	50760	25788	3.47	2.31

17	Chandra Katuwal Ganesh Katuwal, Village: Roumari GP: Rangajan, Balipara *Ph. 8486267402*	PM-28	Rainfed	PM-28	1540	1080	42.6	24648	17895	81360	58320	18087	3.37	3.25
18	Khawart Sangma / Khelensin Sangma, Village: Roumari GP: Rangajan, Balipara *Ph. 7636873071*	DRMR 150-35	Rainfed	DRMR 150-35	1500	1090	37.6	24488	19953	81000	58860	17605	3.30	2.94
19	DoalMarak / Markosh Marak, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 8011404820*	NRCHB -101	Rainfed	NRCHB-101	1380	1080	27.8	19898	18805	74520	58320	15107	3.74	3.10
20	Kono Sangma / Jeten Sangma, Village: Sotai Milanpur GP: Bhalukmari, Balipara *Ph. 6901813802*	NRCHB -101	Rainfed	NRCHB-101	1200	920	30.4	22022	19069	64800	49680	12167	2.94	2.60

3. List of beneficiary farmers of crop demonstrations conducted in Bihaguri cluster of Sonitpur district of Assam during 2020-21

Name of Cluster: Bihaguri, Sonitpur														
SN	**Name and address of farmers with phone**	**Variety in IP**	**Situation**	**Variety in FP**	**Yield (kg /ha)**		**YIOFP (%)**	**COC (Rs/ha)**		**GMR (Rs/ha)**		**ANMR (Rs/ha)**	**B: C Ratio**	
					IP	**FP**		**IP**	**FP**	**IP**	**FP**		**IP**	**FP**
1	Kiran Devi / Kumud Nath Village: Bhalukekhowa GP: No: 2 Bihaguri,Bihaguri Ph. 9854222888	PM-28	Rainfed	PM-28	1320	970	36.1	19382	15350	72600	53350	15218	3.74	3.47

2	RushiKt Nath / Lt RudraKt Nath Village: Bhalu kekhowa GP: No: 2 Bihaguri, Bihaguri *Ph. 6002995909*	NRCHB-101	Rainfed	NRCHB-101	1228	960	27.9	21382	17094	67540	52800	10452	3.15	3.08
3	Puneswar Nath / Lt RudraKt Nath Village: Bhalukekhowa GP: No: 2 Bihaguri, Bihaguri *Ph. 6002995909*	NRCHB-101	Rainfed	NRCHB -101	1630	1080	50.9	23920	20870	89650	59400	27200	3.74	2.84
4	Mala Moni Das / Dhrubajyoti Nath Village: Bhaluke khowa GP: No: 2 Bihaguri, Bihaguri *Ph. 9706274166*	DRMR 150-35	Rainfed	DRMR 150-35	1232	940	31.1	22188	17883	67760	51700	11755	3.05	2.89
5	Sewali Devi / Arun Nath Village: Bhalukekhowa GP: No: 2 Bihaguri,Bihaguri *Ph. 9613662642*	NRCHB-101	Rainfed	NRCHB-101	1600	1100	45.5	22068	17168	88000	60500	22600	3.98	3.52
6	Pranja lNath C/O Deben Nath Village: Bhalukekhowa GP: No: 2 Bihaguri, Bihaguri *Ph. 8724022704*	NRCHB-101	Rainfed	NRCHB-101	1304	880	48.2	21892	17266	71720	48400	18604	3.26	2.80
7	Mintu Nath / Mahendra Nath, Village: Bhalukekhowa GP: No: 2 Bihaguri,Bihaguri *Ph. 9365504733*	PM-28	Rainfed	PM-28	1576	1020	54.5	23375	18152	86680	56100	25357	3.70	3.09

8	Balin Nath / Lt. TariniKt Nath Village: Bhalukekhowa GP: No: 2 Bihaguri, Bihaguri *Ph. 8473977833*	PM-28	Rainfed	PM-28	1328	1000	32.8	23208	19170	73040	55000	14002	3.14	2.86
9	Arunnath / LakheswarNath Village: Bhaluke khowa GP: No: 2 Bihaguri, Bihaguri *Ph. 8724820653*	PM-28	Rainfed	PM-28	1650	1120	47.3	25128	19844	90750	61600	23866	3.61	3.10
10	Khagen Nath / Lt Harimon Nath, Village: Bhaluke khowa GP: No: 2 Bihaguri, Bihaguri *Ph. 9706923596*	PM-28	Rainfed	PM-28	1264	1000	26.4	23162	19395	69520	55000	10753	3.00	2.83
11	Deepa Das / Harikt Das Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9101482593*	DRMR 150-35	Rainfed	DRMR 150-35	1680	1180	42.4	25068	19288	92400	64900	21720	3.68	3.36
12	Dulal Das Lt Punaram Das, Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9365820427*	DRMR 150-35	Rainfed	DRMR 150-35	1368	1000	36.8	22908	18619	75240	55000	15951	3.28	2.95
13	Maheswar Das /Lt Gangaras Das Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9365820427*	DRMR 150-35	Rainfed	DRMR 150-35	1536	1050	46.3	21462	17645	84480	57750	22913	3.93	3.27

14	Minu Das / Prabin Das Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 6002777584*	PM-28	Rainfed	PM-28	1240	1040	19.3	21582	19147	68200	57200	8565	3.16	2.98
15	Momi Das / Deepak Das Village: Bapubheti GP: Puthimari,Bihaguri *Ph. 8812006763*	PM-28	Rainfed	PM-28	1432	960	49.2	23808	19361	78760	52800	21513	3.30	2.72
16	Dulumoni Borah / Lt Durgeswar Borah Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 8812006763*	NRCHB-101	Rainfed	NRCHB-101	1256	820	53.2	21502	18107	69080	45100	20585	3.21	2.49
17	Seniram Das Gopal Das Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9101482513*	DRMR 150-35	Rainfed	DRMR 150-35	1680	1175	42.9	24242	18759	92400	64625	22292	3.81	3.44
18	Nirmali Borah Dilip Borah Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9101482593*	PM-28	Rainfed	PM-28	1584	1040	52.3	23368	17937	87120	57200	24489	3.72	3.18
19	Kamal kumara Boro Sameer Boro Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 9957859809*	DRMR 150-35	Rainfed	DRMR 150-35	1700	1080	57.4	23448	18131	93500	59400	28783	3.98	3.27

20	Deep Saikia BenuSaikia Village: Bapubheti GP: Puthimari, Bihaguri *Ph. 6002934909*	NRCHB-101	Rainfed	NRCHB-101	1496	1020	46.7	21868	18042	82280	56100	22354	3.76	3.10

4. List of beneficiary farmers of crop demonstrations conducted in Dhekiajuli cluster of Sonitpur district of Assam during 2020-21

Name of cluster: Dhekiajuli cluster of Sonitpur														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Nikha Basumatary / BollenBasumatary Village: Ansaipur, GP: Batasipur, hekiajuli *Ph.9365028601*	DRMR 150-35	Rainfed	DRMR 150-35	1540	1120	37.5	22818	19392	83160	60480	19254	3.64	3.12
2.	Laxmi Basumatary / HarichandraBasumatary, Village: Ansaipur, GP: Batasipur,Dhekiajuli *Ph.9101489119*	DRMR 150-35	Rainfed	DRMR 150-35	1640	1200	36.7	24568	19896	88560	64800	19088	3.60	3.26
3.	Dipali Basumatary / Anando Basumatary, Village: Ansaipur, GP: Batasipur, Dhekiajuli *Ph.8011158724*	PM-28	Rainfed	PM-28	1580	1160	36.2	23368	19862	85320	62640	19174	3.65	3.15
4.	Hadansa Boro / Laben Boro, Village: Ansaipur, GP: Batasipur Dhekiajuli *Ph.9324065884*	NRCHB-101	Rainfed	NRCHB-101	1520	1140	33.3	23368	20071	82080	61560	17223	3.51	3.06

5.	SanjoyBoro / Nogen Boro Village: Ansaipur, GP: Batasipur, Dhekiajuli *Ph.9365028601*	NRCHB-101	Rainfed	NRCHB-101	1600	1100	45.5	24598	20627	86400	59400	23029	3.51	2.87
6.	Manjula Goyari / Binay Goyari Village: Ansaipur, GP: Batasipur, Dhekiajuli *Ph.910152524*	PM-28	Rainfed	PM-28	1600	1120	42.9	24868	21577	86400	60480	22629	3.47	2.80
7.	Amit Narzary / Ajit Basumatary, Village: Ansaipur, GP: Batasipur, Dhekiajuli *Ph.6369238767*	NRCHB-101	Rainfed	NRCHB-101	1400	1040	34.6	24662	19745	75600	56160	14523	3.06	2.84
8.	Kotocuria Basumatary / Lt. Matia Basumatary, Village: Ansaipur, GP: Batasipur,Dhekiajuli *Ph.7896659731*	PM -28	Rainfed	PM -28	1520	1120	35.7	23334	19627	82080	60480	17893	3.51	3.08
9.	Binut Boro / Sonai Boro, Village: Ansaipur, GP: Batasipur, Dhekiajuli *Ph.9365028601*	NRCHB-101	Rainfed	NRCHB-101	1400	1020	37.3	24278	20797	75600	55080	17039	3.11	2.64
10.	Chitra Basumatary /RajuBasumatary, Village: Ansaipur, GP: Batasipur,Dhekiajuli *Ph.6398766254*	PM-28	Rainfed	PM-28	1640	1160	41.4	23772	18802	88560	62640	20950	3.72	3.33

11.	RubalBasumatary/ Lt.BirenBasumatary, Village: Ansaipur, GP: Batasipur Block: Dhekiajuli *Ph.9365028601*	DRMR 150-35	Rainfed	DRMR 150-35	1480	1120	32.1	23918	20379	79920	60480	15901	3.34	2.96
12.	Thimafri Basumatary / Biso Basumatary, Village: Ansaipur, GP: Batasipur,Dhekiajuli *Ph.9365028601*	PM-28	Rainfed	PM-28	1560	1140	36.8	23832	19227	84240	61560	18075	3.53	3.20
13.	Laishri Narzary / Pradip Narzary, Village: Ansaipur, GP: Batasipur,Dhekiajuli *Ph.9365028601*	PM-28	Rainfed	PM-28	1680	1180	42.4	23858	19943	90720	63720	23085	3.80	3.19
14.	Juri Saikia / PradipSaikia, Village: Gabharupar, GP:Thelamara,Dhekiajuli *Ph.7399910474*	PM-28	Rainfed	PM-28	1680	1220	37.7	24277	20239	90720	65880	20802	3.73	3.25
15.	Deepa Das /Biswajit Das, Village: Gorpara Pathar, GP: Chennimari Block: Dhekiajuli *Ph.7002416963*	DRMR 150-35	Rainfed	DRMR 150-35	1640	1180	39.0	24478	20183	88560	63720	20545	3.61	3.15
16.	Shefali Das / Manik Das, Village: Gorpara Pathar, GP: Chennimari Block: Dhekiajuli *Ph.839985370*	DRMR 150-35	Rainfed	DRMR 150-35	1600	1200	33.3	24776	20617	86400	64800	17441	3.48	3.14

17.	Krishna Dutta / Gauranga Dutta, Village: GorparaPathar, GP:Chennimari,Dhekiajuli *Ph.6002683668*	PM-28	Rainfed	PM-28	1680	1180	42.4	24798	20874	90720	63720	23076	3.65	3.05
18.	Sukumar Das / Loharam Das, Village: Gorpara Pathar, GP: Chennimari Block: Dhekiajuli *Ph.9954971036*	NRCHB-101	Rainfed	NRCHB-101	1200	880	36.4	24570	20193	64800	47520	12903	2.63	2.35
19.	Nirmal Mura / Jiban Mura, Village: GorparaPathar, GP:Chennimari,Dhekiajuli *Ph.7896001196*	NRCHB-101	Rainfed	NRCHB-101	1280	920	39.1	24282	20089	69120	49680	15247	2.84	2.47
20.	Ratan Biswas / Krishna Biswas, Village: GorparaPathar, GP:Chennimari,Dhekiajuli *Ph.9706275072*	PM-28	Rainfed	PM-28	1520	1080	40.7	23518	19899	82080	58320	20141	3.49	2.93

5. List of beneficiary farmers crop demonstrations conducted in Gabhoru cluster of Sonitpur district of Assam during 2020-21

Name of Cluster: Gabhoru cluster of Sonitpur														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Julan Borah / ltkhomeswar BorahVillage: Da ParbatiaLengaChuburiGP: Parbatia, Gabhoru Ph.8402812942	DRMR 150-35	Rainfed	DRMR150-35	1680	1120	50.0	24668	19718	92400	61600	25850	3.74	3.12

2.	Kamini Sarkar Das / Apurba Das Village: Da ParbatiaLenga Chuburi GP: Parbatia, Gabhoru *Ph.6000786806*	DRMR 150-35	Rainfed	DRMR1 50-35	1610	1140	41.2	22188	17923	88550	62700	21585	3.99	3.49
3.	Dilip Borah Lt Pithu BoraVillage: Da Parbatia Lenga Chuburi GP: Parbatia, Gabhoru *Ph.9706160334*	PM-28	Rainfed	PM-28	1600	1080	48.1	23920	20820	88000	59400	25500	3.67	2.85
4.	Ashim Pathak ltKhireswar Pathak Village: Da Parbatia Lenga Chuburi GP: Parbotia, Gabhoru *Ph.9706715185*	PM-28	Rainfed	PM-28	1560	1080	44.4	22182	17859	85800	59400	22077	3.86	3.32
5.	Nitul Borah / Narayan Borah Village: Da Parbatia Lenga Chuburi GP:Parbotia, Gabhoru *Ph.9365591188*	PM-28	Rainfed	PM-28	1600	1100	45.5	22282	20969	88000	60500	26187	3.94	2.88
6.	Badal Borah / Lt. Padmaram Bora,Village: Da Parbatia Lenga Chuburi GP:Parbotia, Gabhoru *Ph.9954953070*	NRCHB-101	Rainfed	NRCHB -101	1480	980	51.0	23162	19429	81400	53900	23767	3.51	2.77
7.	Bhadeswar Tamuli / Suniram Tamuli Village: Da Parbatia LengaChuburi GP: Parbotia, Gabhoru *Ph.6000786806*	NRCHB-101	Rainfed	NRCHB -101	1400	900	55.6	22768	17743	77000	49500	22475	3.38	2.78

8.	Ranjit Nath / Lamoram NathVillage: Boga Bora Chuburi GP: Beseria, Gabhoru *Ph.9678668401*	PM-28	Rainfed	PM-28	1520	1060	43.4	23582	17559	83600	58300	19277	3.54	3.32
9.	Puspendra Adhikari / Kula Adhikari Village: Boga Bora ChuburiGP: Beseria, Gabhoru *Ph.8876641185*	NRCHB-101	Rainfed	NRCHB-101	1650	1090	51.4	22868	20729	90750	59950	28661	3.96	2.89
10.	Pallabi Bora / Indubhushan Borah Village: Boga Bora ChuburiGP: Beseria, Gabhoru *Ph.8761942709*	PM-28	Rainfed	PM-28	1670	1150	45.2	24678	19241	91850	63250	23163	3.72	3.28
11.	Asha Borah / Pranjit BorahVillage: Boga Bora ChuburiGP: Beseria Block: Gabhoru *Ph.8134921051*	NRCHB-101	Rainfed	NRCHB 101	1600	1100	45.5	23468	18941	88000	60500	22973	3.74	3.19
12.	Prasnata Nath / Lama ram Nath Village: Boga Bora Chuburi GP: Beseria, Gabhoru *Ph.8133996961*	NRCHB-101	Rainfed	NRCHB-101	1560	1020	52.9	22882	19255	85800	56100	26073	3.74	2.91
13.	Humeswar Borah Akan BorahVillage: Boga Bora Chuburi GP: Beseria,Gabhoru *Ph.9613174163*	DRMR 150-35	Rainfed	DRMR 150-35	1685	1140	47.8	24228	19161	92675	62700	24908	3.82	3.27

14.	Monoj Borah / Anata Borah Village: Boga Bora Chuburi GP: Beseria, Gabhoru *Ph.9101081836*	DRMR 150-35	Rainfed	DRMR 150-35	1600	1070	49.5	24368	18921	88000	58850	23703	3.61	3.11
15.	Moromi Borah / Bharat Borah Village: Boga Bora Chuburi GP: Beseria, Gabhoru *Ph.9706593442*	PM-28	Rainfed	PM-28	1700	1150	47.8	23820	20021	93500	63250	26451	3.92	3.15
16.	Suren Borah Padma Kanta Borah Village: Boga Bora Chuburi GP: Beseria, Gabhoru *Ph.8761837708*	NRCHB-101	Rainfed	NRCHB-101	1520	1050	44.8	22982	19081	83600	57750	21949	3.63	3.02
17.	Hiraynamoyi Devi / Hirayna Nath Village: Da Beseria GP: Beseria, Gabhoru *Ph.9706925770*	PM-28	Rainfed	PM-28	1680	1130	48.7	24668	19121	92400	62150	24703	3.74	3.25
18.	Moromi Devi / Prafulla NathVillage: Da Beseria GP: Beseria, Gabhoru *Ph.8486193430*	DRMR 150-35	Rainfed	DRMR 150-35	1280	960	33.3	24128	18821	70400	52800	12293	2.91	2.80
19.	Ranjan Bora / Mahendra BoraVillage: Boga Bora Chuburi GP: Beseria,Gabhoru *Ph.7896816828*	PM-28	Rainfed	PM-28	1280	980	30.6	24368	19521	70400	53900	11653	2.88	2.76

20.	Rajib Bora Lt.Jangya Bora Village: Boga Bora Chuburi GP: Beseria Block: Gabhoru *Ph.8723028864*	PM-28	Rainfed	PM-28	1400	1000	40.0	23262	19529	77000	55000	18267	3.31	2.81

6. List of beneficiary farmers of crop demonstrations conducted in Agomani cluster of Dhubri district of Assam during 2020-21

Name of Cluster: Agomani, Dhubri														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Fatema Bibi W/o- A. Rahim Sk, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 7896572905	NRCHB -101	Irrigated	NRCH B-101	1230	880	39.8	23005	20094	61500	44000	14589	2.67	2.19
2.	Fulbor Khan S/o Sabed Khan, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 9126106403	NRCHB -101	Irrigated	NRCH B-101	1245	918	35.6	22655	20099	62250	45900	13794	2.75	2.28
3.	Manju Bala Barman S/o Bishgher Barman, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 8473884908	NRCHB -101	Irrigated	NRCH B-101	1160	896	29.5	22305	20059	58000	44800	10954	2.60	2.23

4.	Dipali Barman S/o Bimal Barman, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 9126106403	DRMR -150-35	Irrigated	DRMR 150-35	1186	905	31.0	23005	20147	59300	45250	11192	2.58	2.25
5.	Arpona Roy S/oHirandra Nath Roy, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 6901340216	DRMR - 150-35	Irrigated	DRMR 150-35	1170	895	30.7	23005	20185	58500	44750	10930	2.54	2.22
6.	Saiful Hoque S/o Johir Ali, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 7602797937	DRMR -150-35	Irrigated	DRMR 150-35	1240	910	36.3	23005	20094	62000	45500	13589	2.69	2.26
7.	Motior Rahman S/o Afaz Uddin, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 9126106403	DRMR-- 150-35	Irrigated	DRMR 150-35	1150	875	31.4	23005	20094	57500	43750	10839	2.49	2.18
8.	Khalek Mandal S/o Jobbar Ali Mandal, Village- Kherbari Pt-I, Agomani, Dhubri Ph. 9101507809	PM -28	Irrigated	PM -28	1200	890	34.8	22655	20099	60000	44500	12944	2.65	2.21
9.	Alima Khatun, W/o EbrahimSk, Village- KherbariPt-I, Agomani, Dhubri Ph. 6900129061	NRCHB -101	Irrigated	NRCH B-101	1225	915	33.9	22655	20085	61250	45750	12930	2.70	2.28

10.	Gulapjan Bibi W/o Abdul Mojit, Village- Dighaltari, Agomani, Dhubri Ph. 9954048472	NRCHB -101	Irrigated	NRCH B-101	1155	860	34.3	22655	20106	57750	43000	12201	2.55	2.14
11.	Alima Bewa W/o Abdul Aziz, Village- Dighaltari, Ph., Dhubri Ph. 6901920561	NRCHB -101	Irrigated	NRCH B-101	1175	840	39.9	23005	20161	58750	42000	13906	2.55	2.08
12.	Moriom Bibi W/o Abdus Sattar Ali, Village- Dighaltari, Agomani, Dhubri Ph. 9957364845	NRCHB -101	Irrigated	NRCH B-101	1120	850	31.8	23005	20094	56000	42500	10589	2.43	2.12
13.	NurZahan Bibi W/o Rostom Ali, Village- Dighaltari, Agomani, Dhubri Ph. 9954048472	NRCHB -101	Irrigated	NRCH B-101	1160	870	33.3	23005	20059	58000	43500	11554	2.52	2.17
14.	Abu Taher Miah, S/o Noor Md, Village- Dighaltari, Agomani, Dhubri Ph. 9101530610	DRMR -150-35	Irrigated	DRMR 150-35	1110	850	30.6	22305	20059	55500	42500	10754	2.49	2.12
15.	Hamida Bibi W/o Noor Alom, Village- Jinkata, Agomani, Dhubri Ph. 8486096562	DRMR -150-35	Irrigated	DRMR 150-35	1090	820	32.9	22305	20059	54500	41000	11254	2.44	2.04

16.	Ashraf Ali S/o Abdul Mozid, Village- Jinkata, Agomani, Dhubri Ph. 8486096562	PM -28	Irrigated	PM -28	1050	800	31.3	22305	20094	52500	40000	10289	2.35	1.99

7. List of Beneficiary farmers of crop demonstrations conducted in Chapar-Salkocha cluster of Dhubri district of Assam during 2020-21

Name of Cluster: Chapar-Salkocha, Dhubri														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Hares Ali S/o Lt. Ramjan Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 6901545113	NRCHB-101	Irrigated	NRCHB-101	1650	1170	41.0	22305	20059	82500	58500	21754	3.69	2.92
2.	Abu Shama Khan S/o Lt. Parbat Ali Khan, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 8473043661	NRCHB-101	Irrigated	NRCHB-101	1570	1110	41.4	22305	20147	78500	55500	20842	3.52	2.75
3.	Komor Ali S/o Sohor Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 9864114830	NRCHB-101	Irrigated	NRCHB-101	1720	1270	35.4	23005	20391	86000	63500	19886	3.74	3.11
4.	Anwar Hussain S/o Mina Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 6001218443	NRCHB-101	Irrigated	NRCHB-101	1610	1120	43.8	23005	20094	80500	56000	21589	3.49	2.79
5.	Karim Ali S/o Safor Ali, Village- Lalkura, Chapar-Salkocha, Dhubri Ph. 9365720374	NRCHB-101	Irrigated	NRCHB-101	1510	1180	28.0	22305	20147	75500	59000	14342	3.38	2.93

6.	Hanif Ali S/o Afaj Uddin, Village-Lalkura, Chapar-Salkocha, Dhubri Ph. 9706345580	NRCHB-101	Irrigated	NRCHB-101	1550	1195	29.7	22305	20059	77500	59750	15504	3.47	2.98
7.	Monir Uddin S/o Manser Ali, Village- Lalkura, Chapar-Salkocha, Dhubri Ph. 9954033330	NRCHB-101	Irrigated	NRCHB-101	1620	1200	35.0	23005	20185	81000	60000	18180	3.52	2.97
8.	Rajab Ali S/o Jabed Ali, Village-Dhirerchar, Chapar-Salkocha, Dhubri Ph. 9957728805	NRCHB-101	Irrigated	NRCHB-101	1645	1210	36.0	22305	20094	82250	60500	19539	3.69	3.01
9.	Sohor Ali S/o Sahab Uddin, Village- Dhirerchar, Chapar-Salkocha, Dhubri Ph. 8473984711	NRCHB-101	Irrigated	NRCHB-101	1610	1160	38.8	23005	20147	80500	58000	19642	3.49	2.88
10.	Azad Ali, S/o Hakim Uddin, Village- Dhirerchar, Chapar-Salkocha, Dhubri Ph. 8472837500	NRCHB-101	Irrigated	NRCHB-101	1540	1105	39.4	22655	20147	77000	55250	19242	3.39	2.74
11.	Samad Ali S/o Besej Uddin, Village- Dhirerchar, Chapar-Salkocha, Dhubri Ph. 8011990167	NRCHB-101	Irrigated	NRCHB-101	1580	1125	40.4	22655	20085	79000	56250	20180	3.49	2.80

12.	Jhumer Ali S/o Delsad Ali, Village-Dhirerchar, Chapar-Salkocha, Dhubri Ph. 6304701916	NRCHB-101	Irrigated	NRCHB-101	1550	1100	40.9	22305	20059	77500	55000	20254	3.47	2.74
13.	Abu Siddique S/o Haran Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 7636948547	PM -28	Irrigated	PM -28	1630	1170	39.3	22655	20099	81500	58500	20444	3.59	2.91
14.	Jalal Uddin S/o Jamat Ali, Village-Simlabari, Chapar-Salkocha, Dhubri Ph. 7663808513	DRMR 150-35	Irrigated	DRMR 150-35	1530	1070	43.0	23005	20094	76500	53500	20089	3.33	2.66
15.	Asmot Ali S/o Ajgor Ali, Village-Simlabari, Chapar-Salkocha, Dhubri Ph. 7002845465	DRMR 150-35	Irrigated	DRMR 150-35	1460	1120	30.4	22305	20059	73000	56000	14754	3.27	2.79
16.	Surman Ali S/o Ajgor Ali, Village-Simlabari, Chapar-Salkocha, Dhubri Ph. 9954891963	DRMR 150-35	Irrigated	DRMR 150-35	1490	1125	32.4	23005	20085	74500	56250	15330	3.24	2.80
17.	Fazar Ali, S/o Ajgor Ali Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 6001164232	PM- 28	Irrigated	PM -28	1650	1180	39.8	22305	20059	82500	59000	21254	3.69	2.94

18.	Abdul Mozid S/o Juran Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 8011561454	PM- 28	Irrigated	PM -28	1675	1190	40.8	22305	20059	83750	59500	22004	3.75	2.97
19.	Bodiot Jamal Khan S/o Lt. Parbat Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 8011036534	DRMR 150-35	Irrigated	DRMR 150-35	1380	945	46.1	23005	20085	69000	47250	18830	2.99	2.35
20.	. Saddam Husain S/o Abdul Karim, Village- Sildanga, Chapar-Salkocha, Dhubri Ph. 7896380690	NRCHB-101	Irrigated	NRCH B-101	750	640	17.2	22305	20147	37500	32000	3342	1.68	1.59
21.	Sahabul Sk S/o Lt. Joher Uddin, Village- Sildanga, Chapar-Salkocha, Dhubri Ph. 9707653313	PM- 28	Irrigated	PM -28	1610	1140	41.2	22655	20099	80500	57000	20944	3.55	2.84
22.	Abdul Mozid S/o Juran Ali, Village- Simlabari, Chapar-Salkocha, Dhubri Ph. 7637051061	PM- 28	Irrigated	PM -28	1690	1175	43.8	22305	20147	84500	58750	23592	3.79	2.92

8. List of beneficiary farmers of crop demonstrations conducted in Gauripur cluster of Dhubri district of Assam during 2020-21

Name of Cluster: Gauripur cluster of Dhubri														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Anowara Bewa W/o- Lt. Jamser Ali, Village- Tisterpar, Gauripur, Dhubri Ph. 6002431922	NRCHB -101	Irrigated	NRCHB-101	1058	825	28.2	22305	20094	52900	41250	9439	2.37	2.05
2.	Nur Islam Sk S/o Panir Uddin, Village- Tisterpar, Gauripur, Dhubri Ph. 7896178855	NRCHB -101	Irrigated	NRCHB-101	1480	990	49.5	22305	20094	74000	49500	22289	3.32	2.46
3.	Hazrat Ali Khandakar S/o Mr.Asrab Ali Khandakar, Village- Tisterpar, Gauripur, Dhubri Ph. 6002431922	NRCHB -101	Irrigated	NRCHB-101	1580	1040	51.9	23005	20094	79000	52000	24089	3.43	2.59
4.	Kasiron Bewa W/o Lt. Sahar Uddin, Village- Tisterpar, Gauripur, Dhubri Ph. 8822008715	DRMR 150-35	Irrigated	DRMR 150-35	1430	1010	41.6	22305	20147	71500	50500	18842	3.21	2.51
5.	Abdul Hamid S/o Geda Boksha, Village- Tisterpar, Gauripur, Dhubri Ph. 7636980984	DRMR 150-35	Irrigated	DRMR 150-35	1098	865	26.9	22305	20094	54900	43250	9439	2.46	2.15

6.	Kholil Sheikh S/o Mohir Uddin, Village- Tisterpar, Gauripur, Dhubri Ph. 8075357942	PM- 28	Irrigated	PM -28	1370	945	45.0	22655	20099	68500	47250	18694	3.02	2.35
7.	Kader Ali S/o Panir Sheikh, Village- Tisterpar, Gauripur, Dhubri Ph. 9707747793	PM- 28	Irrigated	PM -28	1385	960	44.3	22655	20085	69250	48000	18680	3.06	2.39
8.	Nurjahan Bibi W/o Hifzur Rahman Prodhani, Village- Madhusoulmari Pt-I, Gauripur, Dhubri Ph. 6913937424	NRCHB -101	Irrigated	NRCHB-101	1570	1025	53.2	23005	20161	78500	51250	24406	3.41	2.54
9.	Nojmul Hoque S/o Lt. Eyasin Ali, Village- Madhusoulmari Pt-I, Gauripur, Dhubri Ph. 9365991190	NRCHB -101	Irrigated	NRCHB-101	1358	920	47.6	23005	20147	67900	46000	19042	2.95	2.28
10.	Rofiza Bewa W/o Lt. Eyakub Ali, Village- Madhusoulmari Pt-I, Gauripur, Dhubri Ph. 8638306203	NRCHB -101	Irrigated	NRCHB-101	1410	930	51.6	23005	20085	70500	46500	21080	3.06	2.32
11.	Jadab Ch. Roy S/o Dhiren Ch. Roy, Village- Khudimari Pt-I, Gauripur, Dhubri Ph. 6003603865	DRMR 150-35	Irrigated	DRMR 150-35	1350	950	42.1	22305	20147	67500	47500	17842	3.03	2.36

12.	Sanjib Kr. Roy S/o Jiten Mondal Roy, Village- Khudimari Pt-II, Gauripur, Dhubri Ph. 9101397732	DRMR 150-35	Irrigated	DRMR 150-35	1470	965	52.3	23005	20147	73500	48250	22392	3.19	2.39
13.	Kartik Roy S/o Jiten Mondal Roy, Village- Khudimari Pt-II, Gauripur, Dhubri Ph. 9707061109	DRMR 150-35	Irrigated	DRMR 150-35	1430	925	54.6	22655	20085	71500	46250	22680	3.16	2.30
14.	Kasani Bibi W/o Kosom Uddin, Village- Khudimari Pt-II, Gauripur, Dhubri Ph. 6001219286	PM- 28	Irrigated	PM -28	1450	965	50.3	23005	20161	72500	48250	21406	3.15	2.39
15.	Surojit Chakravorty S/o Lt. Anil Chakrovorty, Village- Khudimari Pt-II, Gauripur, Dhubri Ph. 9085746584	PM- 28	Irrigated	PM -28	1280	920	39.1	23005	20094	64000	46000	15089	2.78	2.29
16.	Deepok Kr. Roy S/o JogendraNath Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri. Ph. 7664905529	NRCHB -101	Irrigated	NRCHB-101	1335	920	45.1	22655	20085	66750	46000	18180	2.95	2.29
17.	Ganesh Ch. Roy S/o Kamala Kanta Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri, Ph. 8486126125	NRCHB -101	Irrigated	NRCHB-101	1280	850	50.6	22655	20106	64000	42500	18951	2.82	2.11

18.	Mrityunjoy Kr. Roy S/o Krish Kt. Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri, Ph. 9957396352	DRMR 150-35	Irrigated	DRMR 150-35	1385	955	45.1	22655	20099	69250	47750	18944	3.06	2.38
19.	Nipon Roy S/o Satish Ch. Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri, Ph. 8638572019	DRMR 150-35	Irrigated	DRMR 150-35	1245	830	50.0	23005	20085	62250	41500	17830	2.71	2.07
20.	Lankeshwar Roy S/o Durgacharan Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri, Ph. 8761949085	PM- 28	Irrigated	PM -28	1345	900	49.4	22655	20085	67250	45000	19680	2.97	2.24
21.	Alok Kr. Roy S/o Kamalesh Ch. Roy, Village- Kismet Hasdaha Pt-II, Gauripur, Dhubri, Ph. 9707729213	PM- 28	Irrigated	PM -28	1298	935	38.8	22305	20147	64900	46750	15992	2.91	2.32

9. List of beneficiary farmers of crop demonstrations conducted in Mahamaya cluster of Dhubri district of Assam during 2020-21

Name of Cluster: Mahamaya, Dhubri														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg/ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Joygun Bibi W/o Muhuruddin, Village- Patakata-II, Mahamaya, Dhubri Ph. 8822534711	DRMR 150-35	Irrigated	DRMR 150-35	1546	1070	44.5	23005	20094	77300	53500	20889	3.36	2.66
2.	Nobiran Khatun W/o Lalchand Ali, Village- Patakata-II, Mahamaya, Dhubri Ph. 6001038938	DRMR 150-35	Irrigated	DRMR 150-35	1650	1175	40.4	23005	20161	82500	58750	20906	3.59	2.91
3.	Sayed Ali S/o. Arab Ali, Village- Patakata-II, Mahamaya, Dhubri Ph. 8399995450	DRMR 150-35	Irrigated	DRMR 150-35	1530	1120	36.6	22655	20085	76500	56000	17930	3.38	2.79
4.	Shanjab Ali S/o Lt. Jubbar Ali, Village- Patakata-II, Mahamaya, Dhubri Ph. 8399995450	DRMR 150-35	Irrigated	DRMR 150-35	1550	1125	37.8	22655	20106	77500	56250	18701	3.42	2.79
5.	Fulchand Ali S/o Abdul Majid, Village- Patakata-II, Mahamaya, Dhubri Ph. 9126260179	DRMR 150-35	Irrigated	DRMR 150-35	1490	1100	35.5	23005	20085	74500	55000	16580	3.24	2.74

6.	Abdul Rahman S/o Samsul Hoque, Village- Patakata-II, Mahamaya, Dhubri Ph. 8135801262	PM -28	Irrigated	PM -28	1420	1015	39.9	22655	20099	71000	50750	17694	3.13	2.53
7.	Nur Mohammad S/o Gonjer Ali, Village- Patakata-II, Mahamaya, Dhubri Ph. 7576024394	PM-28	Irrigated	PM -28	1480	1055	40.3	23005	20147	74000	52750	18392	3.22	2.62
8.	Omar Ali S/o Samser Ali, Village- Joharmura, Mahamaya, Dhubri Ph. 9954798303	NRCHB-101	Irrigated	NRCHB-101	1490	1120	33.1	22305	20059	74500	56000	16254	3.34	2.79
9.	Nur Hussain S/o Daraz Uddin, Village- Joharmura, Mahamaya, Dhubri Ph. 8085547030	NRCHB-101	Irrigated	NRCHB-101	1520	1135	33.9	22305	20147	76000	56750	17092	3.41	2.82
10.	Nur Jamal S/o. Abed Ali, Village- Joharmura, Mahamaya, Dhubri Ph. 8638002506	NRCHB-101	Irrigated	NRCHB-101	1500	1090	37.6	22655	20147	75000	54500	17992	3.31	2.71
11.	Shanata Bhanu W/o Anowar Hussain, Village- Joharmura, Mahamaya, Dhubri Ph. 8822384978	NRCHB-101	Irrigated	NRCHB-101	1650	1115	48.0	23005	20185	82500	55750	23930	3.59	2.76

12.	Momena Khatun W/o-Ful Chand Ali Ahmed, Village- Joharmura, Mahamaya, Dhubri Ph. 9864397803	NRCHB-101	Irrigated	NRCHB-101	1535	1120	37.0	22305	20147	76750	56000	18592	3.44	2.78
13.	Monser Ali S/oEyasin Ali, Village-Joharmura, Mahamaya, Dhubri Ph. 8472828452	NRCHB-101	Irrigated	NRCHB-101	1530	1135	34.8	22305	20059	76500	56750	17504	3.43	2.83
14.	Khodeja Bibi W/o Samsul Hoque, Village- Joharmura, Mahamaya, Dhubri Ph. 8638502219	NRCHB-101	Irrigated	NRCHB-101	1560	1130	38.1	22305	20059	78000	56500	19254	3.49	2.82
15.	Rahima Khatun W/o Haider Ali, Village-Dalaneralga – II, Mahamaya, Dhubri Ph. 8822534711	NRCHB-101	Irrigated	NRCHB-101	1465	980	49.5	22305	20094	73250	49000	22039	3.28	2.44
16.	Hazrat Ali S/o Lt. Raham Ali, Village- Dalaneralga – II, Mahamaya, Dhubri Mobile: 6001760986	NRCHB-101	Irrigated	NRCHB-101	1573	1150	36.8	22305	20059	78650	57500	18904	3.53	2.86
17.	Asir Uddin S/o Lt. Raham Ali, Village- Dalaneralga – II, Mahamaya, Dhubri Ph. 6002234067	NRCHB-101	Irrigated	NRCHB-101	1610	1120	43.8	22655	20059	80500	56000	21904	3.55	2.79

10. List of Beneficiary farmers of crop demonstrations conducted in Rupshi cluster of Dhubri district of Assam during 2020-21

Name of Cluster: Rupshi, Dhubri														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Kabi Ray, S/o Lt Gunaman Ray, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 6000147324	NRCH B-101	Irrigated	NRCHB -101	1280	910	40.7	23005	20185	64000	45500	15680	2.78	2.25
2.	Prodhani Ray S/o Lt Mandal Ray, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 6001500771	NRCH B-101	Irrigated	NRCHB -101	1265	900	40.6	22305	20147	63250	45000	16092	2.84	2.23
3.	Dinesh Ray S/o Lt Pusuram Ray, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 9706498402	DRMR 150-35	Irrigated	DRMR 150-35	1190	880	35.2	23005	20185	59500	44000	12680	2.59	2.18
4.	ProbhatCh.Ray S/o Lt Praneshwar Ray, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 9957208719	DRMR 150-35	Irrigated	DRMR 150-35	1225	875	40.0	23005	20059	61250	43750	14554	2.66	2.18

5.	Bharat Mahanta S/o Lt- Mohanchand Mahanta, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 9864970876	PM- 28	Irrigated	PM -28	1120	810	38.3	23005	20185	56000	40500	12680	2.43	2.00
6.	Sanat Kr. Ray S/o Rabi Chand Ray, Village- East Gaikhowa-II, Rupshi, Dhubri Ph. 9101007893	PM- 28	Irrigated	PM -28	1175	945	24.3	23005	20185	58750	47250	8680	2.55	2.34
7.	Ananta Ray S/o KripaNath Ray, Village- Sukatikhata, Rupshi, Dhubri Ph. 9365444691	PM- 28	Irrigated	PM -28	1160	870	33.3	23005	20185	58000	43500	11680	2.52	2.16
8.	Dinesh Ch Ray S/o Sona Ram Ray, Village- Sukatikhata, Rupshi, Dhubri Ph. 7365161274	NRCH B-101	Irrigated	NRCHB -101	1120	870	28.7	22655	20147	56000	43500	9992	2.47	2.16
9.	UkilCh Ray S/o Tuni Ram Ray, Village- Sukatikhata, Rupshi, Dhubri Ph. 6002720619	NRCH B-101	Irrigated	NRCHB -101	1128	865	30.4	23005	20059	56400	43250	10204	2.45	2.16
10.	Dilbar Ali S/o Sayed Ali, Village- Sukatikhata, Rupshi, Dhubri Ph. 9101198523	PM- 28	Irrigated	PM -28	1197	920	30.1	23005	20059	59850	46000	10904	2.60	2.29

11.	Kobat Ali S/o Umor Ali, Village-Sukatikhata, Rupshi, Dhubri Ph. 9707476752	DRMR 150-35	Irrigated	DRMR 150-35	1192	872	36.7	23005	20147	59600	43600	13142	2.59	2.16
12.	Sekendar Ali S/o Rahamat Ali, Village- Sukatikhata, Rupshi, Dhubri Ph. 8011744783	DRMR 150-35	Irrigated	DRMR 150-35	1156	835	38.4	22305	20094	57800	41750	13839	2.59	2.08
13.	Aktar Ali S/o Jamser Ali, Village- Sukatikhata, Rupshi, Dhubri Ph. 9368397368	DRMR 150-35	Irrigated	DRMR 150-35	1095	880	24.4	23005	20059	54750	44000	7804	2.38	2.19
14.	Jabed Ali S/o AmatullaSk, Village- Rowa Pt-I, Rupshi, Dhubri Ph. 9957530600	DRMR 150-35	Irrigated	DRMR 150-35	1182	845	39.9	22305	20094	59100	42250	14639	2.65	2.10
15.	MantuSk S/o Samser Ali, Village- Rowa Pt-I, Rupshi, Dhubri Ph. 6000745288	DRMR 150-35	Irrigated	DRMR 150-35	1274	852	49.5	22655	20147	63700	42600	18592	2.81	2.11
16.	Sabed Ali S/o. Omar Ali, Village-Rowa Pt-I, Rupshi, Dhubri Ph. 8822500760	DRMR 150-35	Irrigated	DRMR 150-35	1185	865	37.0	23005	20147	59250	43250	13142	2.58	2.15

17.	Nural Hoque S/o Jonab Ali, Village-Rowa Pt-I, Rupshi, Dhubri Ph. 8638845315	DRMR 150-35	Irrigated	DRMR 150-35	1208	950	27.2	22655	20147	60400	47500	10392	2.67	2.36
18.	Mir JumlaSk S/o Isa Hoque Ali, Village- Tiamari Pt-I, Rupshi, Dhubri Ph. 8402026514	NRCH B-101	Irrigated	NRCHB -101	1120	870	28.7	23005	20059	56000	43500	9554	2.43	2.17
19.	Rashid Khan S/o Elimuddin Khan, Village- TiamariPt-I, Rupshi, Dhubri Ph. 9954005608	NRCH B-101	Irrigated	NRCHB -101	1155	835	38.3	23005	20147	57750	41750	13142	2.51	2.07
20.	Monowar Hussain S/o Basuruddin Sk, Village- Tiamari Pt-I, Rupshi, Dhubri Ph. 9678258868	NRCH B-101	Irrigated	NRCHB -101	1235	858	43.9	22655	20147	61750	42900	16342	2.73	2.13
21.	Aktar Hussain Mondal S/o Hobibar Rahman Mondal, Village- Chapgarh Pt-I, Rupshi, Dhubri Ph. 8812935046	DRMR 150-35	Irrigated	DRMR 150-35	1350	910	48.4	22305	20147	67500	45500	19842	3.03	2.26
22.	MokbulHussain S/o Jamser Ali, Village- Chapgarh Pt-I, Rupshi, Dhubri Ph. 8474081590	DRMR 150-35	Irrigated	DRMR 150-35	1178	897	31.3	22655	20147	58900	44850	11542	2.60	2.23
23.	Abul Kalam S/o Yeakub Ali, Village- Chapgarh Pt-I, Rupshi, Dhubri Ph. 9706880887	PM- 28	Irrigated	PM -28	1190	850	40.0	23005	20059	59500	42500	14054	2.59	2.12

24.	Deben Ch Roy S/o Sitta Roy Village-Chapgarh Pt-I, Rupshi, Dhubri Ph. 6002674648	PM- 28	Irrigated	PM -28	1320	890	48.3	22305	20147	66000	44500	19342	2.96	2.21

11. List of beneficiary farmers of crop demonstrations conducted in Bachimari cluster of Darrang district of Assam during 2020-21

Name of Cluster: Bachimari cluster of Darrang														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Parimal Sil S/o Gopal Sil, No.1 Bargarakhuti, Bachimari, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1355	988	37.0	22286	17562	74525	54340	15461	3.34	3.09
2	Khursed Alam S/o Mahimuddin, No.1 Bargarakhuti, Bachimari, Darrang, Assam Ph.9101761415	NRCHB-101	Irrigated	NRCHB-101	1450	1106	31.0	22286	17562	79750	60830	14196	3.58	3.46
3	Abdul Matleb S/o Abdul Hoque, No.1 Bargarakhuti, Bachimari, Darrang, Assam	PM-28	Irrigated	PM-28	1343	1005	33.6	22286	17562	73865	55275	13866	3.31	3.15

4	Samir Ali S/o Rahim,No.1 Bargarakhuti, Bachimari, Darrang, Assam Ph.9101516634	NRCHB-101	Irrigated	NRCHB-101	1382	1052	31.0	22286	17562	76010	57860	13426	3.41	3.29
5	Ekk Bahadur Chetry S/o Jit Bahadur,No.1 Bargarakhuti, Bachimari , Darrang, Assam	PM-28	Irrigated	PM-28	1324	920	43.9	22286	17562	72820	50600	17496	3.27	2.88
6	Abul Kashem S/o Abdul Barek, NO.1, Nagaon, Bachimari, Darrang, Assam Ph.6000136983	NRCHB-101	Irrigated	NRCHB-101	1325	1042	27.0	29082	22183	72875	57310	8666	2.51	2.58
7	Jillul Hoque S/o Suraj Ali,Nagaon, Bachimari, Darrang, Assam Ph.9101910897	PM-28	Irrigated	PM-28	1290	995	29.6	23082	20183	70950	54725	13326	3.07	2.71
8	Mainuddin Ali S/o Mahajuddin,Nagaon, Bachimari, Darrang, Assam Ph.9608349900	PM-28	Irrigated	PM-28	947	740	28.0	23082	20183	52085	40700	8486	2.26	2.02
9	Aleb Ali S/o Suraj Ali,Nagaon, Bachimari, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1365	1020	34.0	29082	22183	75075	56100	12076	2.58	2.53
10	Mantu Ghosh S/o Santosh Ghosh, No.2 Barjhar, Bachimari, Darrang, Assam Ph.9957330246	NRCHB-101	Irrigated	NRCHB-101	1535	1050	46.0	31685	20574	84425	57750	15564	2.66	2.81

11	Satya Ch Biswas S/o Boloram Biswas, No.2 Barjhar, Bachimari, Darrang, Assam Ph.9678725899	DRMR 150-35	Irrigated	DRMR 150-35	1388	1040	33.5	22685	18574	76340	57200	15029	3.37	3.08
12	Juran Mondal S/o Pawanmondal No.2 Barjhar, Bachimari, Darrang, Assam Ph.9365363123	DRMR 150-35	Irrigated	DRMR 150-35	1390	1026	35.5	22685	18574	76450	56430	15909	3.37	3.04
13	Mahajyoti Biswas S/o MadhuSudhan Biswas No.2 Barjhar, Bachimari, Darrang, Assam Ph.7888626737	NRCHB-101	Irrigated	NRCHB-101	1374	1028	34.0	20288	18574	75570	56540	17316	3.72	3.04
14	Jayanta Das S/o Jagadish Das No.2 Barjhar, Bachimari, Darrang, Assam Ph.9954600889	DRMR 150-35	Irrigated	DRMR 150-35	1330	1035	28.5	22685	18574	73150	56925	12114	3.22	3.06
15	Jahurul Islam S/o Ahej Uddin, No.2 Barjhar, Bachimari, Darrang, Assam	DRMR 150-35	Irrigated	DRMR 150-35	1275	918	38.9	22685	18574	70125	50490	15524	3.09	2.72
16	Abdul Jubbar S/o Mukshed Ali,Baruajhar, Bachimari, Darrang, Assam Ph.8638260313	DRMR 150-35	Irrigated	DRMR 150-35	976	840	16.2	20288	18570	53680	46200	5762	2.65	2.49
17	Hussain Ali S/o Nuwai Saeikh Baruajhar, Darrang Bachimari, Assam	NRCHB-101	Irrigated	NRCHB-101	1320	1055	25.0	20288	18570	72600	58025	12857	3.58	3.12

18	Bahaj Uddin S/o Omar Ali,Baruajhar, Bachimari, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1394	1060	32.0	20288	18570	76670	58300	16652	3.78	3.14
19	Mahammad Ali S/o Kasim Ali, No.1 Bargarakhuti, Bachimari, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1345	1015	33.0	22286	17562	73975	55825	13426	3.32	3.18
20	Rumi Devi Saharia S/o Ajay Kr. Saharia,Dalgaon, Bachimari, Darrang, Assam Ph.9706628463	PM-28	Irrigated	PM-28	1210	930	30.1	20288	18570	66550	51150	13682	3.28	2.75

12. List of beneficiary farmers of crop demonstrations conducted in Pachim Mangaldai cluster of Darrang district of Assam during 2020-21

Name of Cluster: Pachim Mangaldai, Darrang														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Tilak Ch Deb Sarma S/o Lakshadhar Sarma,Chamuapara, Pachim Mangaldai, Darrang, Assam Ph.8404035739	NRCHB-101	Irrigated	NRCHB-101	1240	1060	17.0	20684	18574	68200	58300	7790	3.30	3.14
2	Prasanna Saikia S/o. Rangdhar Saikia,Chamuapara, Pachim Mangaldai, Darrang, AssamPh.9957755467	NRCHB-101	Irrigated	NRCHB-101	1367	1010	35.0	20684	18574	75185	55550	17525	3.63	2.99
3	Amarendra Deka S/o Khiteswar Deka Chamuapara, Pachim Mangaldai, Darrang, Assam Ph.8472009913	NRCHB-101	Irrigated	NRCHB-101	1375	1020	35.0	24277	18574	75625	56100	13822	3.12	3.02
4	Sarat Kalita S/o Kerkatu Kalita,Chamuapara, Pachim Mangaldai, Darrang, Assam Ph.6002481958	NRCHB-101	Irrigated	NRCHB-101	1484	1115	33.0	24277	18574	81620	61325	14592	3.36	3.30

5	Lakshi Saharia S/o Balo Saharia,Chamuapara, Pachim Mangaldai, Darrang, Assam, Ph.8472009913	NRCHB-101	Irrigated	NRCHB-101	1465	1020	44.0	20684	18574	80575	56100	22365	3.90	3.02
6	Anupama Kalita S/o Basanta Kalita,Chamuapara, Pachim Mangaldai, Darrang, Assam, Ph.7002025650	NRCHB-101	Irrigated	NRCHB-101	1460	1155	26.0	29082	22183	80300	63525	9876	2.76	2.86
7	Bhanu Nath S/o Pramod ChNath,Niz Rangamati, Niz Rangamati, Pachim Mangaldai, Darrang, Assam Ph. 8486435153	NRCHB-101	Irrigated	NRCHB-101	1450	1120	29.0	29082	22183	79750	61600	11251	2.74	2.78
8	Maneswar Nath S/o Dinaram Nath,Niz Rangamati, Niz Rangamati, Pachim Mangaldai, Darrang, Assam Ph. 6900888491	NRCHB-101	Irrigated	NRCHB-101	1402	1090	29.0	29082	22183	77110	59950	10261	2.65	2.70
9	Latumoni Saharia S/o Jalti Saharia,Niz Rangamati, Pachim Mangaldai, Darrang, AssamPh. 6003303466	PM-28	Irrigated	PM-28	1320	1052	25.0	23082	20183	72600	57860	11841	3.15	2.87
10	Lakshya Barua S/o Choka Barua,Barthe kerabari,Pachim Mangaldai, Darrang, Assam Ph. 9854501246	PM-28	Irrigated	PM-28	1240	910	36.0	22283	17562	68200	50050	13429	3.06	2.85
11	Kiran Kalita S/o Ghateswar Kalita,Gariapara, Pachim Mangaldai, Darrang, Assam Ph. 9854501246	NRCHB-101	Irrigated	NRCHB-101	1436	1095	31.0	22283	17562	78980	60225	14034	3.54	3.43
12	Minakshi Goswami S/o Kritikanta Goswami,Gariapara, Pachim Mangaldai, Darrang, Assam Ph. 6000157882	PM-28	Irrigated	PM-28	1325	1020	30.0	22283	17562	72875	56100	12054	3.27	3.19
13	Rachita Begum S/o Ohab Ali,Chamuapara, Pachim Mangaldai, Darrang, Assam Ph. 9707631059	PM-28	Irrigated	PM-28	1280	1055	21.0	23082	20183	70400	58025	9476	3.05	2.87

14	Tapan Deka S/o Tankeswar Deka, Manitari, Pachim Mangaldai, Darrang, AssamPh. 9127374826	NRCHB-101	Irrigated	NRCHB-101	1485	1020	46.0	20288	18570	81675	56100	23857	4.03	3.02
15	Bipul Deka S/o Kaheswar Deka,Manitari, Pachim Mangaldai, Darrang, Assam Ph. 600071792	NRCHB 101	Irrigated	NRCHB-101	1398	1052	33.0	20288	18570	76890	57860	17312	3.79	3.12
16	Harmohan Deka S/o Baliram Deka,Manitari, Pachim Mangaldai, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1026	814	26.0	20288	18570	56430	44770	9942	2.78	2.41
17	Hiren Deka S/o Kantaram Deka, Manitari, Pachim Mangaldai, Darrang, Assam	NRCHB-101	Irrigated	NRCHB-101	1436	1055	36.0	20288	18570	78980	58025	19237	3.89	3.12
18	Soodhan Deka S/O Jogendra DekaManitari, Pachim Mangaldai, Darrang, Assam	NRCHB 101	Irrigated	NRCHB-101	985	725	36.0	20288	18570	54175	39875	12582	2.67	2.15
19	Manju Barua S/o Durlav Barua,Barthekerabari, Pachim Mangaldai, Darrang, Assam Ph. 7399816157	NRCHB-101	Irrigated	NRCHB-101	1375	1005	37.0	22283	17562	75625	55275	15629	3.39	3.15
20	Tulashi Medhi S/o Taju Ram Medhi,Manitari, Pachim Mangaldai, Darrang, Assam Ph. 7399816157	PM-28	Irrigated	PM-28	1340	1030	30.0	20288	18570	73700	56650	15332	3.63	3.05

13. List of beneficiary farmers of crop demonstrations conducted in Sipajhar cluster of Darrang district of Assam during 2020-21

Name of Cluster: Sipajhar, Darrang														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Krishna Priya Nath C/o Homen Nath,Basachuba, Sipajhar, Darrang, Assam Ph.8638884762	TS-38	Irrigated	TS-38	1055	725	46.0	22283	17562	58025	39875	13429	2.60	2.27
2	Niranjan Nath S/o Phuleswar Nath,Basachuba, Sipajhar, Darrang, Assam Ph.7662855128	PM-28	Irrigated	PM-28	1340	1025	31.0	22283	17562	73700	56375	12604	3.31	3.21
3	Kamal Nath, S/o Bhadreswar Nath, Basachuba, Sipajhar, Darrang, Assam Ph.7896058585	PM-28	Irrigated	PM-28	1290	955	35.0	22283	17562	70950	52525	13704	3.18	2.99
4	Pawban Nath S/o Tilok Nath, Basachuba, Sipajhar, Darrang, Assam	DRMR 150-35	Irrigated	DRMR 150-35	1435	1120	28.0	22283	17562	78925	61600	12604	3.54	3.51
5	Lohit Nath, Basachuba S/o Lt. Kamiram Nath Sipajhar, Darrang, Assam. Ph.7636907225	DRMR 150-35	Irrigated	DRMR 150-35	1320	1012	30.0	22283	17562	72600	55660	12219	3.26	3.17
6	Nagen Chamua S/o Lt. Bhabin Chamua, Jayantipur, Sipajhar Darrang, Assam Ph. 9577644468	PM-28	Irrigated	PM-28	1280	1005	27.0	23082	20183	70400	55275	12226	3.05	2.74
7	Bhugneswar Rajbongshi S/o Lt. Rajat Rajbongshi, Jayantipur, Sipajhar, Darrang, Assam. Ph.9101274739	NRCHB - 101	Irrigated	NRCHB-101	1484	1010	47.0	29082	22183	81620	55550	19171	2.81	2.50
8	Minu Chamua S/o Arun Chamua, Jayantipur, Sipajhar, Darrang, Assam Ph.6901748304	PM-28	Irrigated	PM-28	1140	925	23.0	23082	20183	62700	50875	8926	2.72	2.52

9	Ramen Kakoti S/o Arun Chamua,Titkuchi, Sipajhar, Darrang, Assam. Ph.9365249860	NRCHB - 101	Irrigated	NRCHB-101	1502	1118	34.0	29082	22183	82610	61490	14221	2.84	2.77
10	Bongshi Deka S/o Bani Deka,Titkuchi, Sipajhar, Darrang, Assam.Ph.8136080389	DRMR 150-35	Irrigated	DRMR 150-35	1455	1050	39.0	23082	20183	80025	57750	19376	3.47	2.86
11	Elimuddin Ahmed,S/o Ajir Ali, Sanowa, Sipajhar, Darrang, Assam. Ph.9707232592	TS-38	Irrigated	TS-38	876	690	23.0	20288	18570	48180	37950	8512	2.37	2.04
12	Mainul Hoque S/o Dilbar Ali, Sanowa, Sipajhar, Darrang, Assam.Ph.8811886835	TS-38	Irrigated	TS-38	845	575	22.0	20288	18570	46475	31625	13132	2.29	1.70
13	Rafikul Hoque S/o Lt. Litan Ali, Sanowa, Sipajhar, Darrang, Assam. Ph.9864132282	DRMR 150-35	Irrigated	DRMR 150-35	1170	865	35.0	20288	18570	64350	47575	15057	3.17	2.56
14	Moon Hoque S/o Sabidullah Hoque Sanowa, Sipajhar, Darrang, Assam Ph.6900624193	TS-38	Irrigated	TS-38	781	504	22.0	20288	18570	42955	27720	13517	2.12	1.49
15	Makoni Begum S/o Saliuddin Ahmed, Sanowa, Sipajhar, Darrang, Assam. Ph.6900624193	TS-38	Irrigated	TS-38	855	675	24.0	20288	18570	47025	37125	8182	2.32	2.00
16	Haren Deka S/o Lt. Kiharam Deka, Halda, Sipajhar, Darrang, Assam Ph.9864203211	TS-38	Irrigated	TS-38	1062	712	43.0	22283	17562	58410	39160	14529	2.62	2.23
17	Arun Ch. Nath S/o Lt Lalit Nath, Halda, Sipajhar, Darrang, Assam.Ph.6002638214	PM-28	Irrigated	PM-28	1320	985	34.0	22283	17562	72600	54175	13704	3.26	3.08
18	Manmil Nath S/o Lt. Janmiram Nath, Halda, Sipajhar, Darrang, Assam.Ph.8135852075	DRMR 150-35	Irrigated	DRMR 150-35	1340	1012	32.0	22283	17562	73700	55660	13319	3.31	3.17

19	Saraju Chamua S/o Hareswar Chamua, Halda, Sipajhar, Darrang, Assam.Ph.6002628596	NRCHB - 101	Irrigated	NRCHB-101	1432	1004	43.0	22283	17562	78760	55220	18819	3.53	3.14
20	Moslim Ali, S/o Lt. Farmuz Ali,Halda, Sipajhar, Darrang, Assam. Ph.6002850412	TS-38	Irrigated	TS-38	945	620	45.0	22283	17562	51975	34100	13154	2.33	1.94

14. List of beneficiary farmers of crop demonstrations conducted in Kaliapani, cluster of Jorhat district of Assam during 2020-21

Name of Cluster: Kaliapani, Jorhat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Jintu Kalita, Bhokot Gaon, Kaliapani, Jorhat,Ph.9101453762	NRCHB-101	Rainfed	NRCHB-101	1208	970	25.0	26000	23420	60400	48500	9320	2.32	2.07
2	Luku Dutta, Bhokot Gaon, Kaliapani, Jorhat	NRCHB-101	Rainfed	NRCHB-101	1325	960	38.0	26000	23420	66250	48000	15670	2.55	2.05
3	Noren Borah, Bhokot Gaon, Kaliapani, Jorhat, Ph.7099602285	PM-28	Rainfed	PM-28	1361	1046	30.0	31000	23000	68040	52300	7740	2.19	2.27
4	Ramen Borah, Bhokot Gaon, Kaliapani, Jorhat, 6002487386	NRCHB-101	Rainfed	NRCHB-101	1280	980	31.0	26000	23419	64000	49000	12419	2.46	2.09
5	Rupa Hazarika, Bhokot Gaon, Kaliapani, Jorhat, Ph.9864709090	NRCHB-101	Rainfed	NRCHB-101	1323	1003	32.0	26000	23420	66160	50160	13420	2.54	2.14
6	Rupamoni Kalita, Bhokot Gaon, Kaliapani, Jorhat, 6026036347	PM-28	Rainfed	PM-28	1352	1060	28.0	28000	25000	67580	53000	11580	2.41	2.12
7	Tileswarkalita, Bhokot Gaon, Kaliapani, Jorhat Ph. 8638595796	PM-28	Rainfed	PM-28	1415	1105	28.0	28000	25000	70750	55250	12500	2.53	2.21
8	Amosewar Saikia, Duliya Gaon, Jorhat, Ph.6000585044	NRCHB-101	Rainfed	NRCHB-101	1320	1032	28.0	26000	23420	66000	51600	11820	2.54	2.20
9	Bhaskarjyotiborah, Duliya Gaon, Kaliapani, Jorhat, Ph.6001317216	NRCHB-101	Rainfed	NRCHB-101	1230	940	31.0	26000	23419	61500	47000	11919	2.37	2.01
10	Jyotish Borah, Duliya Gaon, Kaliapani, Jorhat, Ph.9101055627	NRCHB-101	Rainfed	NRCHB-101	1148	1014	13.0	26500	23419	57400	50690	3629	2.17	2.16
11	Siva Nath Borah, Duliya Gaon, Kaliapani, Jorhat, 9706155069	NRCHB-101	Rainfed	NRCHB-101	1120	920	22.0	26500	23419	56000	46000	6919	2.11	1.96
12	Bhani Taye, Japong Gaon, Kaliapani, Jorhat Ph. 9954530851	NRCHB-101	Rainfed	NRCHB-101	1126	930	21.0	26500	23420	56300	46500	6720	2.12	1.99
13	Debika Narah, Japong Gaon, Kaliapani, Jorhat, Ph.9365916596	NRCHB-101	Rainfed	NRCHB-101	1331	1001	33.0	26500	23420	66570	50030	13460	2.51	2.14

14	Niroda Padun, Japong Gaon, Kaliapani, Jorhat Ph. 6900809285	TS-38	Rainfed	TS-38	920	700	31.0	24000	20000	46000	35000	7000	1.92	1.75
15	Pabitra Padun, Japong Gaon, Kaliapani, Jorhat, Ph.882278412,	NRCHB-101	Rainfed	NRCHB-101	1160	910	27.0	26500	23420	58000	45500	9420	2.19	1.94
16	Phuleswarinarah, Japong Gaon, Kaliapani, Jorhat, Ph.6002164724	PM-28	Rainfed	PM-28	1345	990	36.0	31000	27000	67250	49500	13750	2.17	1.83
17	Ramesh Pegu,Japong Gaon, Kaliapani, Jorhat, 8822778412	TS-38	Rainfed	TS-38	1100	903	22.0	25000	21000	55000	45150	5850	2.20	2.15
18	Ranjit taye, Japong Gaon, Kaliapani, Jorhat Ph.7086337350,	TS-38	Rainfed	TS-38	1067	830	29.0	25000	21000	53350	41500	7850	2.13	1.98
19	Atul Kalita, Kumar Gaon, Kaliapani, Jorhat, 6002789814	NRCHB-101	Rainfed	NRCHB-101	1220	1017	20.0	26500	23420	61000	50835	7085	2.30	2.17
20	*Bhudeswarkalita, Koibotro Gaon, Kaliapani, Jorhat Ph. 8473907400*	NRCHB-101	Rainfed	NRCHB-101	1210	1010	20.0	26500	23419	60500	50505	6914	2.28	2.16
21	Huniram Borah, Kumar Gaon, Kaliapani, Jorhat Ph.6001026663,	NRCHB-101	Rainfed	NRCHB-101	1170	1003	17.0	26500	23420	58500	50160	5260	2.21	2.14
22	Jayanta Baruah, , Koibotro Gaon, Jorhat Ph.9678443545	PM-28	Rainfed	PM-28	1340	1076	25.0	31000	27000	67000	53815	9185	2.16	1.99
23	Jintu Kalita, Koibotro Gaon, Kaliapani, Jorhat, Ph.7002008675	NRCHB-101	Rainfed	NRCHB-101	1278	940	36.0	26500	23419	63910	47000	13829	2.41	2.01
24	Nibedita Borah, Koibotro Gaon, Kaliapani, Jorhat, 9365457358	NRCHB-101	Rainfed	NRCHB-101	1230	1002	23.0	26500	23419	61500	50105	8314	2.32	2.14
25	PobitraSaikia, Kumar Gaon, Kaliapani, Jorhat Ph. 9365624174	TS-38	Rainfed	TS-38	970	770	26.0	24000	20000	48500	38500	6000	2.02	1.93
26	Rongai Saikia, Kumar Gaon,Kaliapani, Jorhat, Ph.9401088947	NRCHB-101	Rainfed	NRCHB-101	1328	1000	33.0	26500	23420	66395	50010	13305	2.51	2.14

15. List of beneficiary farmers of crop demonstrations conducted in Majuli cluster of Jorhat district of Assam during 2020-21

Name of Cluster: Majuli, Jorhat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Subramoniyam Sastri / Girish Sastri, Mohkina Village, Majuli, Ph.7002146221	PM -28	Rainfed	PM- 28	1500	1006	49.0	31000	24000	90000	60360	22640	2.90	2.52
2	Hemanta Sarmah / Kumud Sarmah, Mohkina Village, Majuli, Jorhat, Ph.9957685162	NRCHB -101	Rainfed	NRCHB - 101	1400	1120	25.0	28778	23420	84000	67200	11442	2.92	2.87
3	Jintu Moni Devi / Dilip, Mohkina Village, Majuli, Jorhat, Ph.9101542171	PM -28	Rainfed	PM- 28	1490	1031	45.0	31000	25000	89400	61860	21540	2.88	2.47
4	Anil Narah / Khagen Narah, Mohkina Village, Majuli, Jorhat, Ph.9957685168	NRCHB -101	Rainfed	NRCHB - 101	1430	1019	40.0	28778	23420	85800	61134	19308	2.98	2.61
5	Dharmeswar Borah / Mohkona Borah, Milanmadhupir Village, Majuli, Jorhat, Ph. 6026738797	PM -28	Rainfed	PM- 28	1470	1060	39.0	30000	25000	88200	63600	19600	2.94	2.54
6	Debajit Hazarika / Mahendra Hazarika, Milanmadhupur Village, Majuli, Ph.6002236469	PM- 28	Rainfed	PM- 28	1620	1050	54.0	30000	25000	97200	63000	29200	3.24	2.52
7	Popy Borah / Rupak Borah, Milanmadhupur Village, Majuli, Jorhat, Ph.7399919063	PM -28	Rainfed	PM 28	1370	1070	28.0	31000	27000	82200	64200	14000	2.65	2.38

8	Kanak Das / Bupai Das, Milan madhupur village, Majuli, Jorhat, Ph. 60000787537	NRCHB -101	Rainfed	NRCHB - 101	1370	980	40.0	28778	23420	82200	58800	18042	2.86	2.51
9	Jan Saikia / Durna Saikia, Borbari Village, Majuli, Jorhat, Ph.9101382057	NRCHB - 101	Rainfed	NRCHB - 101	1380	1102	25.0	28778	23420	82800	66132	11310	2.88	2.82
10	Ratul Saikia / Sadhaa Saikia, Borbari Village, Majuli, Jorhat, Ph.7896206470	NRCHB -101	Rainfed	NRCHB - 101	1410	1003	41.0	28778	23420	84600	60192	19050	2.94	2.57
11	Bhabani Gayan / Sandeswar Gayon, Borbari Village, Majuli, Jorhat, Ph.9101818231	NRCHB -101	Rainfed	NRCHB -101	1420	1029	38.0	28778	23420	85200	61752	18090	2.96	2.64
12	Putul Saikia / Srikanta Saikia, Borbari Village, Majuli, Jorhat, Ph.6001026007	NRCHB -101	Rainfed	NRCHB - 101	1400	1050	33.0	28778	23420	84000	63000	15642	2.92	2.69
13	Prafulla Saikia / Manik Saikia, Rowmora village, Majuli, Jorhat, Ph.8638580637	NRCHB -101	Rainfed	NRCHB - 101	1415	990	43.0	28778	23420	84900	59400	20142	2.95	2.54
14	Reba Bora / Liridhar Bora, Rowmora village, Majuli, Jorhat, Ph.7099306364	NRCHB -101	Rainfed	NRCHB - 101	1492	1000	49.0	28778	23420	89520	60012	24150	3.11	2.56
15	Rajen Boruah / Redo Borah, Rowmora Village, Majuli, Jorhat, Ph. 600879008	NRCHB -101	Rainfed	NRCHB - 101	1400	930	51.0	28778	23420	84000	55800	22842	2.92	2.38
16	Dharmeswar Borah / Aniram Borah, Rowmora Village, Majuli, Jorhat, 9 Ph.707271935	NRCHB -101	Rainfed	NRCHB - 101	1386	1049	32.0	28778	23420	83160	62940	14862	2.89	2.69

16. List of beneficiary farmers crop demonstrations conducted in Ujani Majuli cluster of Jorhat district of Assam during 2020-21

Name of Cluster: Ujani Majuli cluster of Jorhat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Paban Senapati / Purna Senapati, Borbil, UjaniMajuli, Jorhat, Ph. 9678653629	PM- 28	Rainfed	PM- 28	1410	1130	25.0	31000	27000	84600	67800	12800	2.73	2.51
2	Swarna Borah / Dipen Senapati, Borbil, UjaniMajuli, Jorhat Ph.8812875644	PM- 28	Rainfed	PM- 28	1490	1080	38.0	30000	25000	89400	64812	19588	2.98	2.59
3	Rupjyoti Borah / Mridul Senapati Borbil, UjaniMajuli, Jorhat Ph. 7896401043	NRCHB -101	Rainfed	NRCHB - 101	1410	1013	39.0	28778	23420	84600	60756	18486	2.94	2.59
4	Rupa Senapati C/o Anil Senapati Borbil, UjaniMajuli, Jorhat Ph.9678309032	NRCHB -101	Rainfed	NRCHB - 101	1370	940	46.0	28778	23420	82200	56400	20442	2.86	2.41
5	Anima Deori / KejiyaDeoriMudoibil, UjaniMajuli, Jorhat Ph.6002660398	NRCHB-101	Rainfed	NRCHB - 101	1380	1000	38.0	28778	23420	82800	60000	17442	2.88	2.56
6	Aijoni Deori / Anil Deori Mudoibil, UjaniMajuli, Jorhat, 9954392706	NRCHB -101	Rainfed	NRCHB - 101	1310	1017	29.0	28778	23420	78600	61014	12228	2.73	2.61
7	Junmoni Boiragi / Ananta Boiragi Mudoibil, UjaniMajuli, Jorhat Ph. 6002933814	NRCHB -101	Rainfed	NRCHB - 101	1385	950	46.0	28778	23420	83100	57000	20742	2.89	2.43

8	Prodip Borah / Lt Deba Borah Mudoibil, UjaniMajuli, Jorhat 9101832409	NRCHB -101	Rainfed	NRCHB - 101	1365	1001	36.0	26780	23420	81900	60048	18491	3.06	2.56
9	Mina Deori / Senapati Deori Major Deori, UjaniMajuli, Jorhat Ph. 7892613568	NRCHB -101	Rainfed	NRCHB - 101	1310	1003	31.0	28778	23420	78600	60186	13056	2.73	2.57
10	Ayaz Doley / Birinchi Doley MajorDeori, UjaniMajuli, Jorhat Ph.8011273079	NRCHB -101	Rainfed	NRCHB - 101	1320	1020	29.0	28778	23420	79200	61212	12630	2.75	2.61
11	Phukan Deori / Phiju Deori Major Deori, UjaniMajuli, Jorhat Ph.7896056566	PM -28	Rainfed	PM- 28	1605	1170	37.0	30000	25000	96300	70200	21100	3.21	2.81
12	Hira Deori / Ajay Deori Major Deori, UjaniMajuli, Jorhat Ph. 9365775360	PM -28	Rainfed	PM- 28	1475	1140	29.0	28000	25000	88500	68400	17100	3.16	2.74
13	HimaiDeori / Benu Deori Major Deori, UjaniMajuli, Jorhat 6002753435	PM- 28	Rainfed	PM- 28	1460	1103	32.0	28000	25000	87600	66150	18450	3.13	2.65
14	Mina Deori / Amula Deori Chiram Deori, UjaniMajuli, Jorhat Ph.9101500434	NRCHB -101	Rainfed	NRCHB - 101	1353	1037	30.0	28778	23420	81192	62220	13614	2.82	2.66
15	PurabiDeori / Ajay Depri Chiram Deori, UjaniMajuli, Jorhat Ph.9365507912	NRCHB -101	Rainfed	NRCHB - 101	1310	970	35.0	28778	23420	78600	58200	15042	2.73	2.49
16	Chandrama Deori / Numol Deori Chiram Deori, UjaniMajuli, Jorhat Ph.6001028213	NRCHB -101	Rainfed	NRCHB - 101	1335	1018	31.0	28778	23420	80070	61080	13632	2.78	2.61

17	BornaliDeori / Mansukha Deori Chiram Deori, UjaniMajuli, Jorhat Ph.6002128386	NRCHB -101	Rainfed	NRCHB - 101	1324	1015	30.0	28778	23420	79416	60882	13176	2.76	2.60
18	Anjana Deori Gandhi Deori Chiram Deori, UjaniMajuli, Jorhat Ph.9954392706	NRCHB-101	Rainfed	NRCHB - 101	1446	1031	40.0	28778	23420	86760	61866	19536	3.01	2.64

17. List of beneficiary farmers of crop demonstrations conducted in Podumoni cluster of Golaghat district of Assam during 2020-21

Name of Cluster: Podumoni, Golaghat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield(k/ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	JadumoniSaikia, S/o Lt. UpenSaikia, Kathkothia, Podumoni Ph. 9365171750	NRCHB-101	Rainfed	NRCHB-101	1124	750	49.9	31624	26240	61820	41250	15186	1.95	1.57
2.	SyamalChanda, S/o Lt. RasamaiChanda, Kathkothia, Podumoni Ph. 8011528856	NRCHB-101	Rainfed	NRCHB-101	1050	750	40.0	31624	26240	57750	41250	11116	1.82	1.57
3.	NripenSaikia, S/o Lt. LakhiSaikia, Kathkothia, Podumoni Ph. 9365936406	NRCHB-101	Rainfed	NRCHB-101	1088	680	60.0	31624	26240	59840	37400	17056	1.89	1.42
4.	Jibon Bora, S/o Lt. Apuram Bora, Kathkothia, Podumoni Ph. 7636057788	NRCHB-101	Rainfed	NRCHB-101	1104	720	53.303	31624	26240	60720	39600	15736	1.92	1.50
5.	Krishna Chanda, S/o Lt. SukhamaiChanda, Kathkothia, Podumoni Ph. 9101134179	NRCHB-101	Rainfed	NRCHB-101	1112	820	35.600	31624	26240	61160	45100	10676	1.93	1.71

6.	Ritul Das, S/o Lt. Sarbananda Das,Kathkothia, Podumoni Ph. 9401960354	NRCHB-101	Rainfed	NRCHB-101	1080	720	50.0	31624	26240	59400	39600	14416	1.87	1.50
7.	Arun Bora, S/o Lt. Jitumoni Borah,Kathkothia, Podumoni Ph. 9365171750	NRCHB-101	Rainfed	NRCHB-101	1140	840	35.701	31624	26240	62700	46200	11116	1.98	1.76
8.	KalpanaChetry, W/o TilakChetry, Da-chamua, Podumoni Ph. 8822364653	PM-28	Rainfed	PM-28	1724	900	91.6	31624	26240	117232	61200	50648	3.70	2.33
9.	VanuChetry, W/o KailashChetry, Da-chamua, Podumoni Ph. 6002782943	PM-28	Rainfed	PM-28	1160	760	52.6	31624	26240	63800	41800	16616	2.01	1.59
10.	Kiran Bora, S/o Hireswar Bora, Da-chamua, Podumoni Ph. 9101843942	PM-28	Rainfed	PM-28	1348	760	77.4	31624	26240	74140	41800	26956	2.34	1.59
11.	Khagendra Kumar Chetri, S/o KarnaBahadurChetri, Da-chamua, Podumoni Ph. 9101245490	PM-28	Rainfed	PM-28	1200	740	62.1	31624	26240	60000	37000	17616	1.89	1.41
12.	London Manjhi, S/o PutoliManjhi, Kuwaripather, Podumoni	PM-28	Rainfed	PM-28	1236	760	62.6	31624	26240	67980	41800	20796	2.14	1.59
13.	Md. Abdul Haque, S/o BasuruddinHaque, Kuwaripather, Podumoni Ph. 7637871696	PM-28	Rainfed	PM-28	1088	680	60.0	28024	26240	59840	37400	20656	2.13	1.42
14.	DharmeswarKalita, S/o Lt. KaminiKalita, Kuwaripather, Podumoni Ph. 6001561519	PM-28	Rainfed	PM-28	1488	1040	43.1	31624	26240	81840	57200	19256	2.58	2.17
15.	Dinesh Gogoi, S/o Lt. Chandra Kt. Gogoi, Da-chamua, Podumoni Ph. 8011534992	TS-38	Rainfed	TS-38	1352	900	50.2	31624	26240	81120	54000	21736	2.56	2.05

16.	KhirodGogoi, S/o DimbeswarGogoi, Da-chamua, Podumoni	TS-38	Rainfed	TS-38	1312	820	60.0	31624	26240	78720	49200	24136	2.48	1.87
17.	DipuGogoi, S/o Bhim Kt. Gogoi, Da-chamua, Podumoni	TS-38	Rainfed	TS-38	1336	860	54.9	31624	26240	80160	51600	23176	2.53	1.96
18.	DebaJyoti Tanti, S/o Lt. Robiram Tanti, Kuwaripather, Podumoni Ph. 9707931217	TS-38	Rainfed	TS-38	1124	780	44.1	28024	26240	56200	39000	15416	2.00	1.48
19.	Jiten Tanti, S/o Lt. Dipak Tanti, Kuwaripather, Podumoni Ph. 6001290938	TS-38	Rainfed	TS-38	1160	810	41.4	28024	26240	67280	46980	18516	2.40	1.79
20.	Ram BahadurChettri, S/o Lt. NorBahadurChettri, Kuwaripather, Podumoni Ph. 8471832220	TS-38	Rainfed	TS-38	1200	900	33.3	31624	26240	69600	52200	12016	2.20	1.98

18. List of beneficiary farmers of crop demonstrations conducted in Bokakhat cluster of Golaghat district of Assam during 2020-21

Name of Cluster: Bokakhat, Golaghat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1.	Nakul Saikia, S/oRukeswar Saikia, Japoripather village, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	940	640	46.9	23424	18000	50760	34560	10776	2.16	1.92
2.	Diganta Saikia, S/o Rongai Saikia, Japoripather village, Bokakhat Ph. 6002962797	NRCHB -101	Rainfed	NRCHB-101	960	600	60.0	23424	18000	52800	33000	14376	2.25	1.83
3.	Mohen Saikia, S/o Rukeswar Saikia, Japoripather village, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	1036	700	48.0	23824	18000	56980	38500	12656	2.39	2.13
4.	Madhab Chetry, S/o AmritChetry, Japoripather, Bokakhat Ph. 9101639526	NRCHB -101	Rainfed	NRCHB-101	1052	740	42.2	23824	18000	57860	40700	11336	2.42	2.26
5.	Dadul Nath, S/o Budhaswar Nath, Lukhrakhonia village, Bokakhat. Ph. 8638984022	NRCHB -101	Rainfed	NRCHB-101	1068	720	48.3	23824	18000	58740	39600	13316	2.46	2.20
6.	Jintu Nath, S/o Ganesh Nath, Lukhrakhonia village, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	1012	720	40.6	23424	18000	55660	39600	10636	2.37	2.20
7.	Anda Murah, S/o Mangra Murah, Lukhrakhonia village, Bokakhat Ph. 8638449760	NRCHB -101	Rainfed	NRCHB-101	900	680	32.4	23424	18000	49500	37400	6676	2.11	2.07
8.	Mithu Nath, S/o Ganesh Nath, Lukhrakhonia village, Bokakhat Ph. 9101110144	NRCHB -101	Rainfed	NRCHB-101	1088	760	42.2	23824	18000	59840	41800	12216	2.51	2.32

9.	Dibyajyoti Saikia, S/o Robi Saikia, Difflopather, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	1124	780	44.1	23824	18000	61820	42900	13096	2.59	2.38
10.	Bokul Munda, S/o Jomai Munda, Difflopather village, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	988	720	37.2	23424	18000	54340	39600	9316	2.31	2.20
11.	Amar Bori, S/o Koneswar Bori, Difflopather village, Bokakhat	NRCHB -101	Rainfed	NRCHB-101	976	700	39.4	23424	18000	53680	38500	9756	2.29	2.13
12.	Jayanta Bori, S/o Naba Bori, Difflopather village, Bokakhat	NRCHB -101	rainfed	NRCHB-101	940	640	46.9	23424	18000	51700	35200	11076	2.20	1.95
13.	Sibaji Loying, S/o LolitLoying, Difflopather village, Bokakhat.	NRCHB -101	rainfed	NRCHB-101	960	680	41.2	23424	18000	52800	37400	9976	2.25	2.07
14.	Suren Saikia, S/o Rukeswar Saikia, Japoripather village, Bokakhat. Ph. 6000604129	PM-28	Rainfed	PM-28	1164	600	94.0	23424	18000	64020	33000	25596	2.73	1.83
15.	Udhabjyoti Nath, S/o Lt. DandaNath, Lukhrakhonia village, Bokakhat Ph. 8638449760	PM-28	Rainfed	PM-28	1200	720	66.7	23824	18000	66000	39600	20576	2.77	2.20
16.	Rupajyoti Bharal S/o, Sukleswar Bharali, Difflopather village, Bokakhat Phone:9101332856	PM-28	Rainfed	PM-28	1172	860	36.3	23824	18000	64460	47300	11336	2.70	2.62
17.	Jitul Saikia, S/o Jiten Saikia, Japoripather village, Bokakhat	TS-38	Rainfed	TS-38	1088	680	60.0	23424	18000	59840	37400	17016	2.55	2.07
18.	Jintu Bora, S/o Photik Bora, Japoripather village, Bokakhat	TS-38	Rainfed	TS-38	1052	760	38.4	23424	18000	57860	41800	10636	2.47	2.32

19.	Bikash Gogoi, S/o Dhiren Gogoi, Lukhrakhonia village, Bokakhat Ph. 7086519325	TS-38	Rainfed	TS-38	1140	780	46.2	23824	18000	62700	42900	13976	2.63	2.38
20.	Rajib Borah, S/o Khogen Borah, Difflopather village, Bokakhat Ph. 9864257885	TS-38	Rainfed	TS-38	1164	820	42.0	23824	18000	64020	45100	13096	2.68	2.50

19. List of beneficiary farmers of crop demonstrations conducted in Kakodonga cluster of Golaghat district of Assam during 2020-21

Name of Cluster: Kakodonga, Golaghat														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Bubul Hazarika, S/oLt. Nogen Hazarika, DhemajiMiri village, Kakodonga. Ph. 9613355445	NRCHB-101	Rainfed	NRCHB-101	1052	600	75.3	23824	18000	64172	36600	21748	2.69	2.03
2	Hema Kanta Das, S/o Nalin Das, Dhemaji Miri village, Kakodonga. Ph. 9101935696	NRCHB-101	Rainfed	NRCHB-101	976	680	43.5	23424	18000	53680	37400	10856	2.29	2.07
3	Prosanta Das, S/o Bogiyan Das, Dhemaji Mirivillage,Kakodonga Ph. 9577329847	NRCHB-101	Rainfed	NRCHB-101	864	600	44.0	23424	18000	43200	30000	7776	1.84	1.66
4	Moina Das, S/o Surupai Das, DhemajiMiri Village, Kakodonga Phone: 9101827163	NRCHB-101	Rainfed	NRCHB-101	1012	720	40.6	23424	18000	50600	36000	9176	2.16	2.00
5	Rupantar Hazarika, S/oPobon Hazarika, DhamajiMiri village, Kakodonga, Ph. 6002611922	NRCHB-101	Rainfed	NRCHB-101	1088	640	70.0	23824	18000	54400	32000	16576	2.28	1.77
6	Bhaikan Hazarika, S/oLt. Nogen Hazarika, Dhemaji Miri Village, Kakodonga, Ph. 6002178928	NRCHB-101	Rainfed	NRCHB-101	940	600	56.7	23424	18000	50760	32400	12936	2.16	1.80

7	Nilakant Das + PurnaKanta Das , S/o Nalia Das + Guna Kanta Das, Dhemaji Miri,Kakodonga, Phone: 8638028577	NRCHB-101	Rainfed	NRCHB-101	1012	640	58.1	23824	18000	54648	34560	14264	2.29	1.92
8	Simanta Hazarika, S/o Nandeswar Hazarika, Natun Chapori village, Kakodonga. Ph. 8812082153	NRCHB-101	Rainfed	NRCHB-101	1276	680	87.6	23824	18000	68904	36720	26360	2.89	2.04
9	Photik Bora, S/o Suren Bora,Natun Chapori village, Kakodonga, Ph. 7086505860	NRCHB-101	Rainfed	NRCHB-101	1236	640	93.1	23824	18000	66744	34560	26360	2.80	1.92
10	Romen Mudoi, S/o Nareswar Mudoi, Natun Chapori, Kakodonga Ph. 8812934904	NRCHB-101	Rainfed	NRCHB-101	1110	660	68.2	23824	18000	59940	35640	18476	2.51	1.98
11	Prdhlad Puzari, S/o Gunjo Puzari, NatunChapori village, Kakodonga Ph. 7002305077	NRCHB-101	Rainfed	NRCHB-101	1124	680	65.3	23824	18000	60696	36720	18152	2.54	2.04
12	Ananta Hazarika, S/o Malbhog Hazarika, Natun Chapori village, Kakodonga Ph. 8753085288	NRCHB-101	Rainfed	NRCHB-101	1162	720	61.4	23824	18000	62748	38880	18044	2.63	2.16
13	Promud Bora, S/o Ranjit Bora, NatunChapori village, Kakodonga Ph. 7086289504	NRCHB-101	Rainfed	NRCHB-101	824	680	21.2	23424	18000	44496	36720	2352	1.89	2.04
14	Biren Bora, S/o Poneswar Bora, Natun Chapori village, Kakodonga Ph. 9864029371	NRCHB-101	Rainfed	NRCHB-101	788	600	31.3	23424	18000	42552	32400	4728	1.81	1.80
15	Shyamal bhodra Saikia, S/oBhudeswar Saikia, Khongiagaon, Dergaon. Ph. 7002670115	PM-28	Rainfed	PM-28	1140	740	54.1	23424	18000	62700	40700	16576	2.67	2.26

16	Biren Mudoi, S/o Pokiram Mudoi, Shiristika, Kakodonga, Ph. 8011984177	PM-28	Rainfed	PM-28	1200	720	66.7	23824	18000	66000	39600	20576	2.77	2.20
17	Biren Bordoloi, S/o KanakashorBordoloi, Shiristika village, Kakodonga. Ph. 6001075279	PM-28	Rainfed	PM-28	1124	760	47.9	23424	18000	61820	41800	14596	2.63	2.32
18	Muhon Dutta, S/o Nakul Dutta, Shiristika village, Kakodonga Ph. 9101096911	PM-28	Rainfed	PM-28	1086	700	55.1	23424	18000	59840	38500	15916	2.55	2.13
19	Montu Saikia, S/o Nogen Saikia, Shiristika village, Kakodonga Ph. 9365992078	PM-28	Rainfed	PM-28	1240	720	72.2	23824	18000	68200	39600	22776	2.86	2.20
20	Koruna Mudoi, S/o Biren Mudoi, Shiristika village, Kakodonga Ph. 9707930469	PM-28	Rainfed	PM-28	1164	740	57.3	23824	18000	64020	40700	17496	2.68	2.26

20. List of beneficiary farmers of crop demonstrations conducted in Demow cluster of Sivasagar district of Assam during 2020-21

Name of Cluster: Demow, Sivasagar														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Sunil Phukan S/o Sonaram Phukan, Gorukhuti, Demow, Sivasagar Ph.8011525814	PM-28	Rainfed	PM-28	1466	1104	33.0	28949	27457	73300	55200	16608	2.53	2.01
2	Sushil Chetia S/o L Bhula Chetia, KhanikarGaon, Demow, Sivasagar 8011298587	PM-28	Rainfed	PM-28	1306	1000	31.0	30547	27457	65300	50000	12210	2.14	1.82
3	Sandaijya Dihingia S/o Late Milaram Dihingia, Gorukhuti, Demow, Sivasagar Ph.97067133931	NRCHB-101	Rainfed	NRCHB-101	1249	950	31.0	22158	16757	62430	47500	9529	2.82	2.83
4	Rita Gogoi S/o Tankeswar Gogoi, Gorukhuti, Demow, Sivasagar Ph.6002216674	NRCHB-101	Rainfed	NRCHB-101	1257	1005	25.0	28949	27457	62845	50265	11088	2.17	1.83

5	Bina Baruah S/o Utpal Boruah, Gorukhuti, Demow, Sivasagar Ph.8638731532	NRCHB-101	Rainfed	NRCHB-101	1285	1001	28.0	28949	27457	64255	50045	12719	2.22	1.82
6	Budhin Gogoi S/o Kamal Gogoi, Gorukhuti, Demow, Sivasagar Ph.9365362843	DRMR 150-35	Rainfed	DRMR 150-35	1428	1107	29.0	28949	27457	71385	55345	14549	2.47	2.02
7	Rekha Dihingia S/o Anil Dihingia, Gorukhuti, Demow, Sivasagar Ph.7086321409	DRMR 150-35	Rainfed	DRMR 150-35	1407	1101	28.0	28949	27457	70365	55025	13848	2.43	2.00
8	Bidya Borbora W/o Promod Borbora, Majumelia, Demow, Sivasagar Ph.7086673550	PM-28	Rainfed	PM-28	1333	1008	32.0	28949	27457	66650	50400	14758	2.30	1.84
9	Jeena Borgohain 9365128859	Failed												
10	Dibyajyoti Borgohain W/o Bhaimoni Borgohain, Majumelia, Demow, Sivasagar Ph.8135070390	DRMR 150-35	Rainfed	DRMR 150-35	1640	1100	49.0	28949	27457	82000	55000	25508	2.83	2.00
11	Goutam Mili S/o Ganesh Mili, Majumelia, Demow, Sivasagar	NRCHB-101	Rainfed	NRCHB-101	1235	1014	22.0	28949	27457	61725	50695	9538	2.13	1.85
12	Sarbananda Tai S/o Bholuka Tai, Majumelia, Demow, Sivasagar Ph.9101852811	NRCHB-101	Rainfed	NRCHB-101	1245	1042	19.0	28949	27457	62225	52095	8638	2.15	1.90
13	Ukiram Kapta S/o Late L Kapta, Majumelia, Demow, Sivasagar Ph.9365646573	NRCHB-101	Rainfed	NRCHB-101	1208	1009	20.0	28949	27457	60375	50445	8438	2.09	1.84
14	Girikanta Mili S/o Late H. Mili, Majumelia, Demow, Sivasagar Ph.9101852811	NRCHB-101	Rainfed	NRCHB-101	1234	1011	22.0	28949	27457	61690	50545	9653	2.13	1.84
15	Boloram Mout S/o Late P Mout, KhanikarGaon, Demow, Sivasagar Ph.7086468337	PM-28	Rainfed	PM-28	1319	1017	30.0	30547	27457	65950	50850	12010	2.16	1.85

16	Rubi Gogoi W/o Kushal Gogoi, Khanikar Gaon, Demow, Sivasagar Ph.9365389334	NRCHB-101	Rainfed	NRCHB-101	1250	1021	22.0	30547	27457	62510	51060	8360	2.05	1.86
17	Raju Gogoi S/o Bolu Gogoi, Khanikar Gaon, Demow, Sivasagar Ph.6001355973	NRCHB-101	Rainfed	NRCHB-101	1238	1016	22.0	30547	27457	61910	50820	8000	2.03	1.85
18	Biswa Mout S/o Late Kekon Mout, Khanikar Gaon, Demow, Sivasagar Ph.7002792163	NRCHB-101	Rainfed	NRCHB-101	1269	1006	26.0	30547	27457	63430	50297	10044	2.08	1.83
19	Bina Gogoi W/o Probin Gogoi, Khanikar Gaon, Demow, Sivasagar Ph.9957269769	PM-28	Rainfed	PM-28	1357	1016	34.0	30547	27457	67850	50800	13960	2.22	1.85
20	Simanta Khanikar S/o L Khanikar, Khanikar Gaon, Demow, Sivasagar Ph.8011169531	PM-28	Rainfed	PM-28	1306	1000	31.0	30547	27457	65281	50016	12175	2.14	1.82

21. List of beneficiary farmers of crop demonstrations conducted in Gaurisagar cluster of Sivasagar district of Assam during 2020-21

Name of Cluster: Gaurisagar, Sivasagar														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Ratul Khaund, Deogharia village, Gaurisagar block, Sivasagar Ph.7002131200	NRCHB -101	Rainfed	NRCHB -101	1226	925	33.0	30347	29476	61307	46258	14178	2.02	1.57
2	Biraj Kalita S/o Late Dhaniram Kalita, Deogharia, Gaurisagar, Sivasagar Ph.7635941460	PM-28	Rainfed	PM-28	1370	1000	37.0	22158	16757	68500	50000	13099	3.09	2.98
3	Jeet Kalita S/o Ambeswar Kalita, Deogharia, Gaurisagar, Sivasagar Ph.8486675990	NRCHB -101	Rainfed	NRCHB -101	1150	960	20.0	22158	16757	57500	48000	4099	2.59	2.86
4	Dhaneswar Kalita S/o Late BaluramKalita, Deogharia, Gaurisagar, Sivasagar Ph.9864453797	NRCHB -101	Rainfed	NRCHB -101	1278	987	29.0	22158	16757	63900	49350	9149	2.88	2.95
5	Nila Dutta S/o Late Kamala Dutta, Deogharia, Gaurisagar, Sivasagar	NRCHB -101	Rainfed	NRCHB -101	950	600	58.0	22158	16757	47500	30000	12099	2.14	1.79
6	Diganta Baruah S/o Kukhram Baruah, Deogharia, Gaurisagar, Sivasagar Ph.7636822685	DRMR 150-35	Rainfed	DRMR 150-35	1378	1005	37.0	28750	27457	68900	50250	17357	2.40	1.83
7	BinandaBaruah S/o Late Bhula Baruah, Deogharia, Gaurisagar, Sivasagar Ph.8133877152	NRCHB -101	Rainfed	NRCHB -101	1198	1019	18.0	28750	29476	59900	50950	9677	2.08	1.73
8	Bulu Borah S/o Late Tupidhor Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.8011556162	PM-28	Rainfed	PM-28	1471	1013	45.0	28750	29476	73550	50650	23627	2.56	1.72
9	Ramen Borah S/o Late Sarumon Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.7635921915	DRMR 150-35	Rainfed	DRMR 150-35	1359	1043	30.0	30347	29476	67950	52150	14929	2.24	1.77
10	Naba Pratim Saikia S/o Late Soda Saikia, Namdongia Bongali, Gaurisagar, Sivasagar Ph.8011085282	DRMR 150-35	Rainfed	DRMR 150-35	1590	1190	34.0	28750	27457	79500	59500	18707	2.77	2.17

11	Jagyeswar Borah S/o Late Susendra Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.6000178516	NRCHB -101	Rainfed	NRCHB -101	1215	910	34.0	22158	16757	60750	45500	9849	2.74	2.72
12	Robin Borah S/o Late Susendra Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.9864298165	NRCHB -101	Rainfed	NRCHB -101	1219	906	35.0	22158	16757	60960	45290	10269	2.75	2.70
13	Bidyut Borah S/o Late Tilok Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.8876464930	NRCHB -101	Rainfed	NRCHB -101	1222	700	75.0	22158	16757	61110	35000	20709	2.76	2.09
14	Jayanta Borah S/o Late Akantiram Borah, Namdongia Bongali, Gaurisagar, Sivasagar Ph.8761074105	NRCHB -101	Rainfed	NRCHB -101	1200	993	21.0	28750	29476	59990	49635	11082	2.09	1.68
15	Lakhimai Neog S/o ArunNeog, Decial, Gaurisagar, Sivasagar Ph.9957959776	PM-28	Rainfed	PM-28	1121	830	35.0	22158	16757	56050	41500	9149	2.53	2.48
16	Kushal Neog S/o Dhaniram Neog, Decial, Gaurisagar, Sivasagar Ph.7099744682	PM-28	Rainfed	PM-28	1100	800	38.0	22158	16757	55000	40000	9599	2.48	2.39
17	Pinki Dutta S/o Dinesh Dutta, Decial, Gaurisagar, Sivasagar Ph.8486108842	DRMR 150-35	Rainfed	DRMR 150-35	1580	1100	44.0	28949	27457	79000	55000	22508	2.73	2.00
18	Pranjal Dutta S/o Chitradhar Dutta, Decial, Gaurisagar, Sivasagar Ph.9957786486	NRCHB -101	Rainfed	NRCHB -101	1226	1001	22.0	28750	29476	61290	50055	11961	2.13	1.70
19	Indrajit Saikia S/o Late Tonuram Saikia, Decial, Gaurisagar, Sivasagar Ph.8011087409	DRMR 150-35	Rainfed	DRMR 150-35	1600	1150	39.0	30347	27457	80000	57500	19610	2.64	2.09
20	Diganta Kalita S/o Late Akon Kalita, Decial, Gaurisagar, Sivasagar 9101188760	DRMR 150-35	Rainfed	DRMR 150-35	1450	1000	45.0	30347	16757	72500	50000	8910	2.39	2.98

22. List of beneficiary farmers of crop demonstrations conducted in Mayong cluster of Morigaon district of Assam during 2020-21

Name of Cluster: Mayong, Morigaon														
SN	Name and address of farmers with phone	Variety in IP	Situation	Variety in FP	Yield (kg /ha)		YIOFP (%)	COC (Rs/ha)		GMR (Rs/ha)		ANMR (Rs/ha)	B: C Ratio	
					IP	FP		IP	FP	IP	FP		IP	FP
1	Manika Saikia, Sativeti, Mayong, Morigaon, Assam Ph.8876317134	PM-28	Rainfed	PM-28	1270	920	38.0	20867	18002	63500	46000	14635	3.04	2.56
2	Kunti Saikia, Sativeti, Mayong, Morigaon, Assam Ph.7896079252	NRCHB-101	Rainfed	NRCHB-101	1345	1035	30.0	20867	18002	67250	51750	12635	3.22	2.87
3	Panita Saikia, Sativeti, Mayong, Morigaon, Assam Ph.6001262181	PM-28	Rainfed	PM-28	1188	914	30.0	20867	18002	59400	45700	10835	2.85	2.54
4	Megali Saikia, Sativeti, Mayong, Morigaon, Assam Ph.9101906028	NRCHB-101	Rainfed	NRCHB-101	1270	956	32.9	20867	18002	63500	47800	12835	3.04	2.66
5	Hemakhi Bora, Sativeti, Mayong, Morigaon, Assam Ph.700214821	NRCHB-101	Rainfed	NRCHB-101	1345	965	39.4	20867	18002	67250	48250	16135	3.22	2.68
6	Rukmini Saikia, Sativeti, Mayong, Morigaon, Assam Ph.6000657106	NRCHB-101	Rainfed	NRCHB-101	1494	1090	37.1	20867	18002	74700	54500	17335	3.58	3.03
7	Sangita Saikia, Sativeti, Mayong, Morigaon, Assam	DRMR 150-35	Rainfed	DRMR 150-35	1427	1094	30.4	20867	18002	71350	54700	13785	3.42	3.04
8	Gulap Senapati, Botabori, Mayong, Morigaon, Assam Ph.6000614781	NRCHB-101	Rainfed	NRCHB-101	1509	1098	37.4	22940	18450	75450	54900	16060	3.29	2.98
9	Prasanta Bordoloi, Botabori, Mayong, Morigaon, Assam	DRMR 150-35	Rainfed	DRMR 150-35	1389	1020	36.2	22940	18450	69450	51000	13960	3.03	2.76

10	Binud Bordoloi, Botabori, Mayong, Morigaon Ph.9859934640	PM-28	Rainfed	PM-28	1337	1015	31.7	22940	18450	66850	50750	11610	2.91	2.75
11	Jayanta Kr. Bordoloi, Botabori, Mayong, Morigaon, Assam	DRMR 150-35	Rainfed	DRMR 150-35	1457	1090	33.7	22940	18450	72850	54500	13860	3.18	2.95
12	Sankar Bordoloi, Botabori, Mayong, Morigaon, Assam Ph.6003061373	NRCHB-101	Rainfed	NRCHB-101	1345	1026	31.1	22940	18450	67250	51300	11460	2.93	2.78
13	Nandeswar, Bordoloi, Botabori, Mayong, Morigaon Ph.99954031402	PM-28	Rainfed	PM-28	1270	1028	23.5	22940	18450	63500	51400	7610	2.77	2.79
14	Dikuswar Bordoloi, Botabori, Mayong, Morigaon Assam Ph.6003791419	PM-28	Rainfed	PM-28	1121	912	22.9	22940	18450	56050	45600	5960	2.44	2.47
15	Rupak Deka, Hatimuria, Mayong, Morigaon, Assam Ph.9101837228	NRCHB-101	Rainfed	NRCHB-101	1389	1038	33.8	20867	18002	69450	51900	14685	3.33	2.88
16	Umesh Deka, Hatimuria, Mayong, Morigaon, Assam Ph.9127369416	NRCHB-101	Rainfed	NRCHB-101	1203	940	28.0	20867	18002	60150	47000	10285	2.88	2.61
17	Kandarpa Baishya, Hatimuria, Mayong, Morigaon, Assam Ph.9170020515	NRCHB-101	Rainfed	NRCHB-101	1412	1095	29.0	20867	18002	70600	54750	12985	3.38	3.04
18	Paresh Bora, Hatimuria, Mayong, Morigaon, Assam Ph.7577012772	NRCHB-101	Rainfed	NRCHB-101	1569	1060	48.0	21341	18002	78450	53000	22111	3.68	2.94
19	Upen Deka, Hatimuria, Mayong, Morigaon, Assam Ph.9854346614	NRCHB-101	Rainfed	NRCHB-101	1262	1025	23.1	20867	18002	63100	51250	8985	3.02	2.85

20	Dipen Deka, Hatimuria, Mayong, Morigaon, Assam Ph.9859143234	NRCHB-101	Rainfed	NRCHB-101	1203	985	22.1	20,867	18002	60150	49250	8035	2.88	2.74


ICAR-DRMR-APART PROGRAMME
RAPESEED MUSTARD CROP DEMONSTRATION 2020-21
DEPARTMENT OF AGRICULTURE, JORHAT
CLUSTER : KALIAPANI DEVELOPMENT BLOCK
DISTRICT : JORHAT
NAME OF FARMER : BHANI TAYE
VILLAGE : JAPONG GEON
Area : 0.25 ha


MUSTARD CROP DEMONSTRATIONS
under
ICAR-DRMR-APART PROGRAMME
2020-21


MUSTARD DEMONSTRATION
UNDER
ICAR-DRMR-APART PROGRAMME
YEAR : 2020-21
Area : 0.25 Ha
Conducted by ATMA, Department of Agriculture, Dhubri, Assam


ICAR-DRMR-APART PROGRAMME
YEAR : 2020 - 21
Name of Farmer : NURJAHAN BIBI
Village : Madhusoulmari Pt.-I
ADO Circle : Madhusoulmari
Cluster Block : Gauripur
Variety : NRCHB-101
Area : 0.25 Ha
Conducted by ATMA, Department of Agriculture, Dhubri, Assam