

Success story of Mr. Atul Misong: a cabbage farmer from Jorhat, Assam

Being a major vegetables crop, cabbage is extensively cultivated in all the districts of Assam, as a major cash crop in rabi season. Out of different reasons for poor productivity of cabbage, one of the major limiting factors is the damage caused by diamond back moth (DBM), *Plutella xylostela*. Heavy infestation causes retardation of growth resulting in under sized cabbage heads. Farmers are relying mostly on chemical pesticides, but the chemicals are not providing satisfactory control of the pest. The pests have developed resistance to practically all the insecticides used.

According to the schedule training programme of AICRPBC project, AAU, Jorhat, an awareness programme on BIPM of rabi vegetables was organized at Neul Gaon, under Block Dhekorgora, District Jorhat during August' 2017. In the interactive session, the farmers exchanged their views and they showed their interest on bio control technologies to manage the insect pests instead of chemical pesticides.

Mr. Atul Misong, aged 45, an young energetic progressive farmer of said village came forward to incorporate bio intensive pest management technology in vegetables cultivation more particularly in cabbage and accordingly he prepared 1 ha of land with an early maturing variety "Golden acre". The inputs like bioagent, (*Trichogramma chilonis*, *T. piriadae*), microbial pesticides viz., *Lacanicilium lacunae*, *Beauveria bassiana* ; Neem oil and plant protection equipments were supplied to the farmers. However, the farmer invested some input like

seeds, fertilizers and FYM from his own side. The demonstration site was regularly monitored by scientist from AICRPBC, AAU, Jorhat with necessary technical guidance time to time right from nursery bed preparation to till harvesting.

The excellent performance of the crop brought a significant success compared to the previous years and it served as model for the neighboring farmers of the village.

As per information given by Mr. Missong, he earned maximum net return from the crop during 2017-18 compared to previous year's crop. The BIPM methods imposed in the crop showed highly effective against *Plutella xylostela* as compared to solely chemical dependant crop. The average infestation of *Plutella xylostela* was minimum and the number of larvae per plant was only 0.84. The average yield was about 254 q/ha. The average wholesale market rate of cabbage during 2017 was rupees 15 per kg only, therefore, the net income from produce was about Rs. 3,81,000.00. The farmer was highly satisfied with technology provided by AICRP Biocontrol project and subsequently, Mr. Missong has been continued the BIPM package for cabbage cultivation in succeeding years also. Mr. Missong was also well supported from his family members in different farming activities.



Nursery



Cabbage plot



Cabbage plot

Success story of Mr. Rajib Morang: a potato farmer from Jorhat, Assam

Potato (*Solanum tuberosum* L.) is one of the most important staple food crop. In Assam, potato is subjected to attack by large numbers of insect pests from the time of planting to the harvesting. Pest damage could be considered as a major yield reducing factor for which the potential yield of potato crop is not achieved. Among different insect pests of potato, cut worm (*Agrotis ipsilon*) and red ant (*Dopryulus orientalis*) are the major sub terranean pests of potato in Assam and the losses in tuber yield in potato crop due to cutworm have been estimated to be about 25-30 per cent .

Mr. Rajiv Marang, aged 42 years, a marginal farmer of Dhangdhora village under Titabor Block of Jorhat district was selected as one of the beneficiary under TSP programme during 2014-15 for growing commercial cultivation of potato. Mr. Marang used maximum area of his cultivable land for potato crop with some local varieties (Rangpuria, Badami Aloo and Lalpahari etc). But he didn't get good satisfactory return from his crop due to heavy infestation of tubers by cutworm (*Agrotis ipsilon*) and red ant (*Dorylus orientalis*). Earlier, he was too much worried about this pest's problem and was unable to manage those insect with any kind of inscticides used during tuber formation stage.

However, before implementing TSP programme in the village, a training programme was organized by AICRPBC, AAU, Jorhat centre to disseminate the scientific knowledge related to agronomic as well as management practices of different *Rabi* vegetables. Mr. Morang showed his interest and he desired to expand his potato land High Yielding Varieties instead of local varieties and accordingly he prepared a plot of land measuring near about 0.5 ha. Scientist of AICRPBC, project had provided assistance to him in the form of inputs like quality seeds, fertilizers, biopesticides and insecticides. Eventually, he was guided and helped in every aspects right from sowing to harvesting.

On an average, the tuber infestation by cutworm and red ant were about 15 percent compared to local potato varieties with 34 percent during 2014-15. Mr. Morang could be able to harvest a very good yield of 134q/ha and sold the agricultural produce @ Rs.15.0/kg in nearby market. Due to his perseverance and dedication he proved that the IPM technology was able to manage the pest problem along with higher production. He was very happy with the performance in terms of yield, market price and net profit. He earned a net profit of around Rs. 1,75,000.00 from the crop. By observing the profit made by Mr. Morang , the other farmers of his locality are also going to inculcate their interest for cultivation of potato by following IPM package. Mr. Morang has been continuously cultivated potato from 2014-15 till now without lapse.



Potato Field



Potato Field