A Success Story on Integrated Pest Management (IPM) In Rice for control of Yellow Stem Borer by the farmers of Dhalai District, Tripura

Name of the KVK: KVK, Dhalai, Salema, Tripura

Name of the farmer& Address:

Introduction: Tripura is one of the predominantly an agarian state among the seven state of North east Region where rice is grown both in hills and valleys. Jhum or shifting cultivation is practices in hill region whereas settled farming in plain areas. The major farming system is rice based farming system which is basically rainfed. The traditional system of cultivation is mainly followed due to lack of awareness among the farmers, indiscriminate use of fertilizer and pesticide leads to low productivity and resistance development in the pest population towards chemical. Adoption of IPM strategies is the best solution to takle the pest problem. IPM practice in rice production initiatives includes regular pest monitoring, optimal use of pest control chemical, complementary weed control strategies and alternate cultural and biological controls.

KVK Intervention:To overcome this problem in brinjal crop cultivation Krishi Vigyan Kendra Dhalai, Salema,took initiative to introduce pheromone trap in collaboration with NCIPM, New Delhi, as a demonstration unit ofIntegrated Pest Management (IPM)in brinjal crop to control the insect pests like fruit and shoot borers.Training and critical input like pheromone trap were provided to the selected beneficiaries and timeto time field monitoring was done to the farmers field by the institution.As continuous monitoring aids in timely detection and early warming of the pest, identifying the peak of occurrence and timing of insecticidal application.Which is also helps in avoiding unnecessary chemical sprays and timely application of pesticides when absolutely essential. Thus pheromone has a major role in Brinjal IPM, which is effectively used for the early detection of the pest and to monitor its seasonal activity in order to schedule appropriate plant protection measures.

Output and outcome: Total40 nos. of trap was provided to the selected beneficiaries as a demonstration unit purpose.Farmers feedback were recorded.Majority of the farmers were happy by this technique as after using this pheromone trap in the Brinjal crop, they observed the less use of chemical sprays and insect pest attack of the crop, which saves their crop and money for excess buying of insecticides. It allows the farmer to harvest the good and healthy Brinjal fruit for marketable surplus and increased the average net return from about Rs.99000/- to Rs. 1,57,000/- per hectare

Result & Discussion:

Package of practice	% shoot damage	% fruit damage (Weight basis)	Yield (q/ha)	Gross Cost (Rs/ha) /	Gross Return (Rs/ha)	Net Return (Rs/ha)	BCR
IPM	5.25	16.62	19.83	78000	237960	157960	3.05
Farmers practice	7.20	19.73	15.41	85000	184920	99920	2.17
Control (untreated)	14.68	42.57	8.95	70000	107400	37400	1.53

By adopting IPM practice yield of 19.83 Mt could be obtained in comparison to farmers practice where yield obtained was 15.41 Mt moreover cost of production was higher in case of farmers practice due to high use of pesticide. IPM practice adopted under the demonstration programme not only reduces the cost of production but also decreased the infestation level and increase the fruit yield. Farmers who undertook the demonstration are very much happy to see the results.

Impact:The IPM strategy was implemented in farmers' fields as a pilot project basis in a demonstration unit in selected areas of Dhalai District, Tripura,and its use was extended in the adjoining villages too.It was observed that, earlier farmersapply 3 – 4 times chemical spray in a week. Now, after using this pheromone trap chemical sprays reduces from 3-4 times to once in a week. Labor requirement decreased for those farmers who adopted this IPM technology.Farmers profit margins and production level increased significantly. Due to less use of chemical sprays reduced the environmental risk associated with pest management and provides economic benefits due to sustained development, increased productivity and reduced pest damage. The majority of the farmers were happy as this technique is environment friendly, improve the crop quality, reduces the chemical sprays and preserved the soil fertility level. After seeing this result, now they wants to expandmore areas under Brinjal cultivation by using the pheromone trap.