



Adoption of IPM technologies in cotton ecosystem of Tapi district

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Abstract : IPM is such a technology that reduces the cost of plant protection and increase the yield. It also helps in reducing the pesticide use and thus, prevents/delays development of pesticide resistance, reduces residues in soil, water, food and definite role in the prevention of environment imbalance. The study was conducted in Tapi district of South Gujarat. Majority of the respondents gained medium level of the overall knowledge and adopted cultural, mechanical and biological practices for pest control. Due to the adoption of IPM in cotton, the data regarding comparison of economics between conventional and IPM technology indicates that the 63 per cent reduction in cost of plant protection in IPM as compared with conventional methods of pest control. Increased in yield was 51 per cent. Additional income from trap crops was Rs. 2150 per hectare. The 56 per cent increase in income and 65 per cent augment in net profit with IPM technology in cotton, respectively. This may be due to the proper guidance given by KVK scientists, demonstrations and constant follow up by KVK missionary. The different constraint faced by cotton growers in adoption of biocontrol measures in cotton was also studied. The study has acknowledged the knowledge level of the cotton growers towards IPM technology. This study can be guideline for other extension worker to implement this way of extension technology for their clients on IPM. On this foundation the extension personnel may locate clients for training and also those who can be used as counselors to other farmers. The study is also useful for effective propagation of the IPM technology in other regions for eco friendly and sustainable agricultural development.

Key Words : Cotton, Pesticide resistance, I.P.M.

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INTRODUCTION

Nizar taluka is situated at the border of Gujarat and Maharashtra. It is located 110 km from district place and Krishi Vigyan Kendra headquarters, Vyara. The Nizar block of Tapi district is far away from district place as well as from NAU research station. Therefore, it is the most neglected block and still today no any extension agency is available to cater the need of farmers regarding agricultural technology. The main crops of the taluka are cotton, chilly, tur in *Kharif* and wheat, chickpea, sugarcane and gram in *Rabi*. Cotton is an important cash crop and plays an important role in Indian economy. Cotton is highly susceptible to several pests. About 166 different species of pests and diseases are reported to attack

cotton at various stages of its growth. Amongst these, the cotton bollworm *Helicoverpa armigera*, the white fly *Bemisia tabaci*, Jassids, *Amrasca biguttula biguttula* and the pink bollworm *Pectinophora gossypiella* have been causing economic damage to cotton crop all over the country. With introduction of Bt cotton, the incidence of sucking pests *viz.*, jassids, thrips, whiteflies, mealy bugs, mites etc. has increased tremendously. Increased use of pesticides resulted in several sour effects like development of resistance in insect pests to insecticides, pest resurgence, pesticides residues, health hazards, destruction of natural fauna, ecological disturbances and environmental pollution, besides increased cost of production. The study was conducted to know the knowledge level of cotton growers regarding IPM components, per cent

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