

Making a Difference



A fatal attraction that benefits farmers

Fighting Pests with Nature's Means

Eggplant fruit and shoot borer (EFSB), *Leucinodes orbonalis*, is the most damaging pest of eggplants in South and Southeast Asia. The yield loss can exceed 65%, as the larvae feed inside the eggplant fruit, making it unmarketable and unfit for human consumption.

Despite the importance of eggplant and the severity of the pest problem, the management practices to combat these pests have largely been limited to frequent sprays of toxic chemical pesticides, affecting the health of farmers and damaging the environment. Eggplant farmers in Philippines spray chemical insecticides up to 56 times during a cropping season to protect their eggplant crop against EFSB. This is equivalent to 41 litres of pesticides per hectare. In Bangladesh, farmers spray insecticides up to 84 times during a 6-7 month cropping season.

An ecologically sound yet highly effective alternative is Integrated Pest Management (IPM). With funding from the U.K. Department for International Development (DFID) scientists at AVRDC set up a project to combat EFSB in South Asia.

The AVRDC-developed IPM strategy consists of weekly excision of EFSB-damaged shoots, installation of pheromone lures to trap male EFSB moths, and withholding chemical pesticides to allow natural enemies to control the EFSB. Farmers who adopt this IPM strategy clearly benefit: they use 22% and 13% less labor in winter and summer seasons, respec-

tively, and have lower production costs and higher net incomes compared to farmers who rely solely on pesticides for insect control.

In collaboration with various national research institutes in the region, AVRDC has trained farmers by means of field days and demonstrations on the proper use of sex pheromone chemicals and methods of sanitation, encouraging farmers to adopt an IPM strategy for EFSB.

Integration makes winners

The AVRDC-IPM strategy provides an opportunity for farmers to reduce pesticide use drastically. Successful nationwide adoption of IPM in eggplant cultivation will likely increase profits, protect the environment and improve public health. AVRDC has recently identified varieties that show partial resistance to EFSB. Scientists are analyzing the chemical basis of this resistance to develop improved varieties in the future, which may be integrated into the IPM strategy to further control the incidence of EFSB and minimize pesticide use.

AVRDC - The World Vegetable Center is the principal international center for vegetable research and development in the world. As a not-for profit institute, research activities at AVRDC aim to alleviate poverty and malnutrition in developing countries through improved production and consumption of vegetables.

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