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BANGLADESH

SUCCESS STORY

“Magic Traps” Increase Farmers’ Profits

Method uses chemical that mimics pheromone of the female melon fly



Bangladeshi farmer Nazrul Islam Khan, with his grandson on his lap, made a profit on his crops after using a melon fly trap that scientists from a USAID-funded project developed.

“It works wonders,” said Nazrul Islam Khan about a trap using a chemical that mimics the melon fly pheromone that a USAID-funded project introduced to him. “Insects flock to the bottle to drown.”

Like many farmers in Bangladesh, Nazrul Islam Khan, from the western district of Jessore, grows cucurbits, plants from the gourd family that include cucumbers and melons. For many years, he and his neighbors suffered great losses due to the melon fly (*Bactrocera cucurbitae*), an insect that decimates cucurbit crops.

But after scientists from a USAID-funded program taught him how to use pheromone traps, Nazrul made a profit. “We call it the ‘magic trap’ because it magically traps fruit flies,” he said, referring to a recycled plastic bottle containing water, a small amount of pesticide, and a capsule of cuelure. Cuelure is a chemical compound that mimics female melon fly sex pheromones. When the trap is placed in a field of melons, “it works wonders,” Nazrul said. “Insects flock to the bottle to drown.”

Scientists working with the USAID program demonstrated that the pheromone trap can catch 5 to 18 times as many flies as the original trap using mashed gourd instead of cuelure. Eliminating hundreds of flies daily, the traps reduce the cost of pest control, since farmers no longer apply pesticides so often and their yields increase. When farmers use cuelure traps together with mashed gourd traps, their net returns can more than triple.

The news about cuelure spread quickly among Bangladesh’s farmers. Some were so eager to try the new technique that they were stealing pheromone traps from research fields before cuelure had become publicly available.

The project has been so successful that the Bangladeshi Minister of Agriculture announced he would register and import enough pheromone to treat almost 1 million acres of cucurbit crops (an area the size of Rhode Island). Today, thousands of cucurbit growers in Bangladesh have adopted the use of cuelure to manage melon flies. Government extension agencies in 15 districts offer farmer field school demonstrations for pheromone baiting, and in Jessore alone more than 90 percent of the farmers are now using the “magic trap.”

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