

Bollworm management in outdoor tomatoes

Recognize the problem

Bollworms are also called tomato fruit worms or “Funza wa matunda” in Swahili.

They are caterpillars with a length of 1 to 4 cm.

They are light-grey and have dark-grey thin stripes on the sides.

You may see small young larvae on leaves below the highest flowers of tomatoes, and on the base of green tomatoes around the fruit stem. Young bollworm caterpillars enter tomatoes and start feeding. You will see a small, darkened hole at the base of the tomato fruit near the fruit stem. If you find such a darkened hole, open the fruit to search for the bollworm. Fruits with caterpillars inside decay or ripen fast.

Old 3 cm big caterpillar normally eats inside tomato. (Photo by avrdc.org)



Background

Only the young (less than 1 cm long) caterpillars that are still outside the fruits can be controlled. Caterpillars inside fruits are hidden from sprays. Later on, caterpillars develop (pupate) in the soil and emerge as moths. Moths are difficult to control.

Management

To prevent the problem:

- Avoid crop rotation or nearby planting with peppers, egg plants, maize, sorghum, and cotton if you know bollworms occur in the area. Bollworms like these crops, just as they like tomatoes.
- Grow one or two maize rows as trap crops around or between the tomato rows, because bollworms will go there so fewer will go into the tomato field.

Perform a weekly search for caterpillars on leaves below the highest flowers and on fruit bases. When the first few small larvae are detected, consider action. When you see dark holes on fruit bases, sprays do not help anymore, because larvae are already inside the fruit and hidden from sprays.

- Handpick small young caterpillars from flower bud tips and fruit bases
- Spray Neem-based products (such as nimbecidine) max 3 times in one week intervals
- Use 1 litre of product / acre or 10 plastic-bottle-lids /20 litres water / knapsack sprayer
- Alternatively dissolve ¼ a cup grinded neem seed cake or neem seed powder / litre water
- Spray the fruits and plants to hit caterpillars. Do not spray on ripe fruits.
- Spray hot pepper fluids 2 times max. in one week interval
- Chop 30 to 40 hot peppers or 2 cups hot pepper powder into a bucket of 10 litres warm water (not boiling)
- Let liquid steep (infuse) for 24 hours
- Remove peppers and dilute with another 10 litres cold water then add 20 drops of dishwashing liquid soap
- Spray the fruits and plants to hit caterpillars. Do not spray on ripe fruits.

Entry holes: caterpillar feeds inside; cannot be reached by sprays. (Photo by S. Toepfer)



Scientific name(s) > *Helicoverpa armigera*

The recommendations in this factsheet are relevant to: Kenya, Tanzania



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