Exotic Pest Fact Sheet 12

Tomato Pinworm (*Keiferia lycopersicella*)

What is it?

Tomato Pinworm is a free-living pest that leaf mines causing distortion and burrows into the fruit. Host plants are tomatoes, eggplant and potatoes.

What does it look like?

Mature larvae are 5-7 mm long, have a yellowish to brownish head and dark lines across the body. Young larvae are pale green or pink. Pupa are about 4 mm long with pupation occurring in a cocoon in the soil. The adult has a forewing which is dull brown-grey coloured with slight blackish dots, often with faint yellowish or brownish streaks. It has a wingspan of 7-11 mm.

What should I look for?

Young larvae mine into the leaves and as they mature feed on the leaves, folding or tying them together. Flowers may also be affected. Larvae can also bore into the fruit to feed and rot may occur. When the larva is fully grown it spins a thread to descend to the ground and pupate in a cocoon in the soil.

Adult pinworms lay their eggs on the upper surfaces of the leaves of young plants. Leaves should be examined for signs of leaf mining or blistering and flowers examined as the season progresses. When fruit develops, it should be examined for pinhole markings created by larvae, and for larval galleries beneath the surface.

How does it spread?

Common methods for the pinworm to spread include: infested fruit, movement and planting of infested seedlings, picking and packing boxes carrying eggs, larvae or pupae from infested localities, and natural spread by moths flying within and between tomato plants. Movement of soil or other growing media containing pupae could also spread the pest.

Why is it important?

The most serious issue with tomato pinworm is direct damage to the fruit by the larvae. Larval feeding on leaves may lead to plant losses, diminished plant growth and reduced yield. Loss of yield and quality, crop rejection due to cosmetic damage, and indirect losses from secondary rot development have been reported.

Where is it present?

Tomato Pinworm is present in North, Central and South America, including Hawaii. An outbreak occurred in Italy in 2008 but the pest did not establish itself.

How can I protect my industry?

Check your production site frequently for the presence of new diseases and unusual symptoms. Make sure you are familiar with common pests and diseases of your industry so you can recognise something different.

TomatoesNZ

Fig 1: Tomato pinworm larva. Image: Alton N. Sparks, Jr, University of Georgia, Bugwood.org

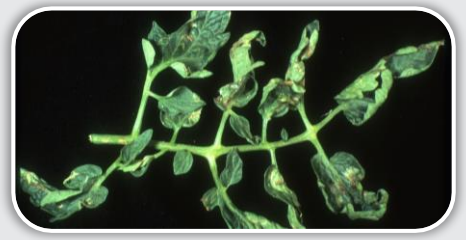

Fig 2: Leaf damage by tomato pinworm larva. Image: John Trumble, University of California, Riverside (US). https://gd.eppo.int

Fig 3: Plant damage by tomato pinworm. Image: John Trumble, University of California, Riverside (US). https://gd.eppo.int