

Tomato pinworm

Keiferia lycopersicella

Crops affected: Eggplant, Tomato

What is it?

Tomato pinworm is a free-living pest. The larvae leaf mine causing distortion and burrow into the fruit. **Tomato** is a primary host, but it also affects **eggplant** and potato.

What does it look like?

Adults are 4-6 mm long and have forewings which are dull brown-grey coloured with slight blackish dots, often with faint yellowish or brownish streaks (Fig 1). Mature larvae are 5-7 mm long, with a yellowish to brownish head and dark lines across the body (Fig 2 & 3). Young larvae are pale green or pink. Pupa are about 4 mm long with pupation occurring in a cocoon in the soil. It has a wingspan of 7-11 mm.

What should I look for?

Young larvae mine into the leaves and feed on the leaves as they mature, folding or tying them together (Fig 4 & 5). Flowers may also be affected. Larvae also bore into the fruit to feed and rot may occur. When fully-grown the larvae spin a thread to descend into the soil to pupate.

Adult pinworms lay 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. Frass may be found around the pinholes.

How does it spread?

Common methods of pinworm spread include: infested fruit, movement and planting of infested seedlings, picking and packing boxes carrying eggs, larvae or pupae from infested locations, and natural spread by moths flying around 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 larval damage to the fruit. Larval feeding on leaves may lead to plant loss, reduced photosynthesis and diminished growth. Loss of crop yield and quality, rejected fruit due to cosmetic damage, and indirect losses from secondary rots 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 pests and unusual symptoms. Make sure you are familiar with common pests of your industry so you can recognise something different.



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Fig 1. Tomato pinworm adult. Photo credit: Mark Dreiling, Bugwood.org



Fig 2. Tomato pinworm larva on tomato leaf. Photo credit: [University of Maryland Extension](https://www.umd.edu/extension)



Fig 3. Tomato pinworm larva. Photo credit: Alton N. Sparks, Jr, University of Georgia, Bugwood.org

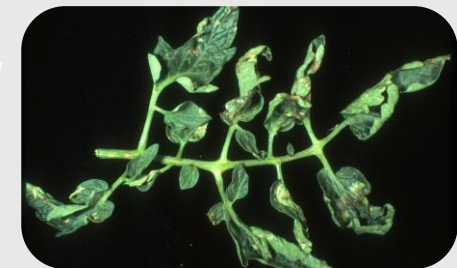


Fig 3. Leaf damage by tomato pinworm larva. Photo credit: John Trumble, University of California, Riverside (US). <https://gd.eppo.int>



Fig 5. Plant damage by tomato pinworm. Photo credit: John Trumble, University of California, Riverside (US). <https://gd.eppo.int>