

Tomato leafminer (421)

Summary

- Worldwide. Asia, Africa, South and Central American, Europe. Not in Oceania.
- Very severe pest, mainly of tomato, but also potato, eggplant, capsicum, and wild species. Larvae attack flowers, mine new leaves, tunnel into stems, eat buds and young fruit. Plants looked scorched from a distance.
- Eggs (about 250) on undersides of leaves, or on fruit; Larvae greenish or light pink when mature, up to 7.5 mm, with brown head. Pupates on leaf in a cocoon or in mines. Adults up to 10 mm long, wingspan 10 mm; forewings silvery-brown with black spots, hindwings fringed. Spread on seedlings, fruit; long distances on fruit, packaging materials.
- Natural enemies: several wasp parasitoids and predators.
- Biosecurity: tomatoes entering countries yet free from the leafminer should be certified free from the pest.
- Cultural control: avoid over-lapping crops (leave minimum 6 weeks); weed (especially nightshades); check seedlings in nursery (crush by hand), and before transplanting to field; monitor regularly using pheromone (1/crop); stake plants; collect and destroy debris after harvest; cultivate soil to plough in pupae; crop rotation.
- Chemical control: note, moth resistant to organophosphates, permethrin and pyrethroids, abamectin, spinosad. Use Bt, BUT rotate with, e.g., neem. For mass trapping (if > 3-4 per trap) use sticky traps or bucket traps with water+oil+pheromone (up to 50 traps/ha).



Photo 1. Leaf blotches caused by tomato leafminer, *Tuta absoluta*.



Photo 2. Larva tomato leafminer, *Tuta absoluta*.



Photo 3. Adult tomato leafminer, *Tuta absoluta*.

Common Name

Tomato leafminer. It is also known as the tomato pinworm or the South American tomato moth.

Scientific Name

Tuta absoluta. It has had several names since it was first described, the last being *Scrobipalpuloides absoluta*. A moth in the Gelechiidae.



Photo 4. Adult tomato leafminer, *Tuta absoluta* (wings folded).

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Information from CABI (2019) *Tuta absoluta* (tomato leafminer). Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/49260>); and Tomato leaf miner (*Tuta absoluta*) (2015). Tomato leaf miner FS. Plant Health Australia. (<https://www.planthealthaustralia.com.au/pests/tomato-leaf-miner-tuta-absoluta/>); and from *Tuta absoluta*. Wikipedia. (https://en.wikipedia.org/wiki/Tuta_absoluta). Photo 1. Dr Andrea Minuto. Leaf mines caused by *Tuta absoluta* on tomato. CERSAA, Albenga (IT). (<https://gd.eppo.int/taxon/GNORAB/photos>). Photo 2&4 Marja van der Straten, NVWA Plant Protection Service, Bugwood.org. Photo 3 Sangmi Lee, Hasbrouck Insect Collection, Arizona State University, Bugwood.org.

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