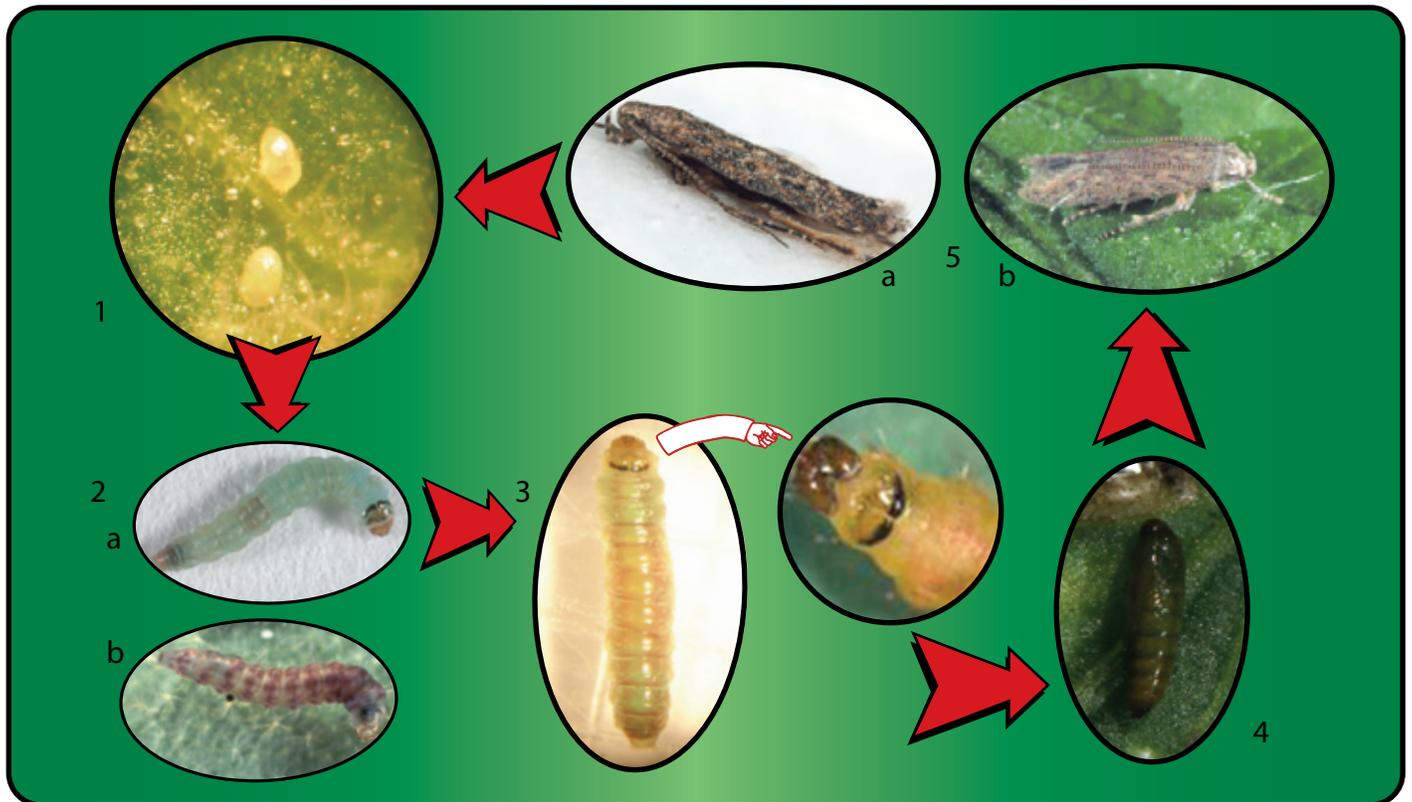


Quick identification guide for *Tuta absoluta* & *Keiferia lycopersicella*

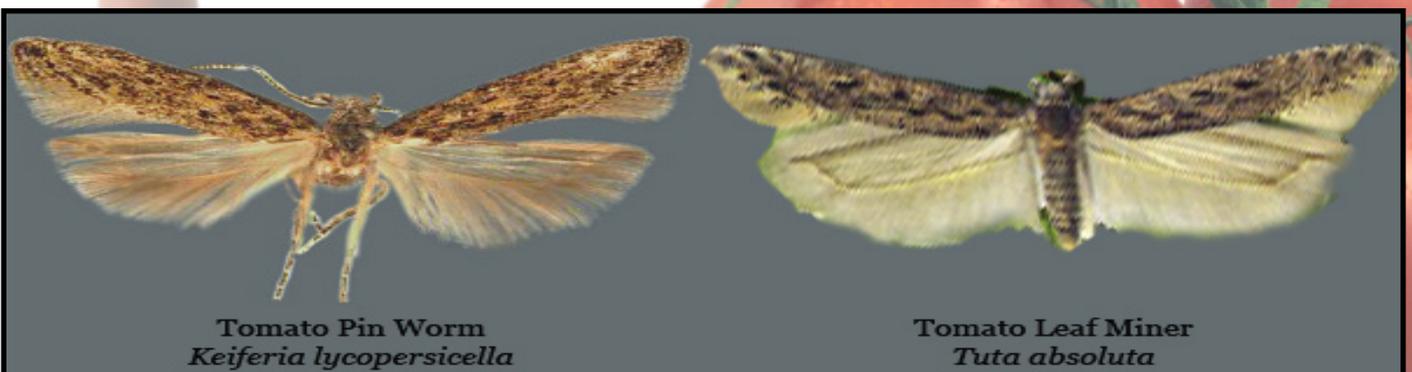


1.Eggs of both species are oval-cylindrical, usually laid on the underside of leaves, on buds, or on the calyxes of green fruit. They are cream-coloured and very small, being about 0.2 mm in diameter and less than 0.4 mm on the longest axis. There is no reliable way to distinguish between the eggs of these two species.

2.Larvae of both species are white or cream with a black head in early instars. As they grow older, they turn pink or green with a brown head. The larvae of *T. absoluta* (a) can be differentiated from *K.lycopercisella* (b) by the prescense of a dark distinct prothoracic shield just behind the head on larvae of *T. absoluta* (3). Larvae of *K.lycopercisella* has brownish to purplish markings along the body.

4.Pupae of both species are brown, and less than 6 mm long.

5.Adult moths are small, with a body length of around 7 mm. They are a brown or silver colour with black spots on the narrow wings; these marks are darker and more visible on *T.absoluta* (a) than *K.lycopercisella* (b). The antennae of both species are long and the legs and palps are ringed with black and brown.



Tomato Pin Worm
Keiferia lycopersicella

Tomato Leaf Miner
Tuta absoluta



T. absoluta & *K. lycopersicella* larvae are commonly associated with leaves, creating blotch leaf mines that are visible on both sides of the leaf. There can be several mines on a single leaf. The mines have dark frass (excrement) visible inside, and over time the mined areas will turn brown and die. The larvae also mine apical buds and stems, and at high densities the larvae will attack both green and red fruit.



Leaf mines created by *Keiferia lycopersicella*



Leaf mines created by *Tuta absoluta*

The larvae of both species can tunnel into the fruit and leave only a surface hole visible, and/or may mine just below the surface, creating a yellow-coloured fruit mine. Usually the surface hole made by *K. lycopersicella* is more define and clear than the damage caused by *T. absoluta* as shown in the following pictures:



Fruits damaged by *K. lycopersicella*



ChemTica Internacional



Fruits damaged by *T.absoluta*

The easiest way to differentiate *T.absoluta* from *K.lycopersicella* is by pheromone trapping. *T. absoluta* responds to E3, Z8, Z11-tetradecatrien-1-yl acetate alone or in combination with E3, Z8-tetradecadien-1-yl acetate (5-10%) while *K.lycopersicella* responds to Z/E4-tridecadienyl acetate. Either sticky board traps or soapy water traps baited with rubber septa loaded with approximately 0.5 mg of pheromone are effective for detection. There is little or no attraction of the pheromone of *T. absoluta* for *K.lycopersicella* and vice versa. Traps are most effective when placed within the canopy or preferably near the ground within the crop.

