

# Botanical Control of Tomato Leaf Miner

## Recognize the problem

Originating from South America, *Tuta absoluta* is a devastating pest on tomato crops. Recently, *Tuta absoluta* was considered to be a serious threat to tomato production in the southern region of the country as it can largely damage the crop and reduce the yield.

## Background

*Tuta absoluta* is a micro lepidopteron moth with a high reproductive potential. There are between 10–12 generations per year, with the total life cycle completed within 30–35 days. Adults are nocturnal and hide between leaves during the day time. Adults are 5–7 mm long and with a wingspan of 8–10 mm. Adult females lay eggs on host plants and mature female can lay up to 260 eggs before completing their life cycle. Eggs are small (0.35 mm long), cylindrical and white/yellow coloured. Egg hatching takes place 4–6 days after egg laying. The Larvae is cream in color with a characteristic dark head. Four larval instars develop. Larvae do not enter diapause when food is available. The larval period is the most damaging to crops, which it lasting between 12–15 days. Pupation may take place in the soil, on the leaf surface or within mines in plant stems. *Tuta absoluta* can overwinter as eggs, pupae or adults depending on the environmental conditions. The most important identifying characteristics are the filiform (bead like structure) antenna, silverfish-grey scales and notable black spots present in anterior wing.

## Management

Neem seed extract (Azadirachtin) acts as a contact and systemic insecticide against *Tuta absoluta*. Apply using one of the following methods:

- Neem cake application in soil has resulted in 48.9–100% larval mortality. Apply to the soil as a fertilizer, using 4 g of neem cake per 1 kg of soil.
- Application of neem oil in adaxial surface of the foliage causes 57–100% larval mortality. To apply as a spray solution, use 3 ml of neem oil per liter of water.

Larvae and adult moth. (Photo by Marja van der Straten, NVWA Plant Protection Service, Bugwood.org and Sangmi Lee, Hasbrouck Insect Collection, Arizona State University, Bugwood.org)



Symptoms on fruit. (Photo by Pete Nelson, North Carolina State University, Bugwood.org)



Scientific name(s) > *Tuta absoluta*

The recommendations in this factsheet are relevant to: Afghanistan, All Countries



Authors: Attaullah Hanif  
 ARIA, Kabul Badam Bagh PPQD MAIL  
 tel: +93779848123 email: af.hanif@gmail.com

Edited by Plantwise.