Tomato leaf miner
*Tuta absoluta*
- Adults: small, grey-brown, thin. Larvae: small, yellow-green with black heads, turning pinkish-green with age.
- Thin silvery trails (mines) on leaves which may join together to form white blotches
- Holes on fruit surface with galleries inside

Silverleaf whitefly
*Bemisia tabaci*
- Adults: tiny, yellow, white wings; fly when disturbed
- Cause vein and leaf yellowing; leaf mottling; leaf curling; chlorotic margins
- Secrete honeydew on which sooty mould grows
- Whitefly are vectors of a variety of diseases (see the Common Diseases in Tomato photosheet)

Western flower thrips
*Frankliniella occidentalis*
- Adults: small, thin, pale yellow to light brown, 4 long narrow fringed wings. On young lower leaf surfaces, buds, flowers and fruits
- Silverish spots on leaves
- Distorted plant growth
- Deformed flowers and abortion of flowers

Serpentine leaf miner
*Liriomyza trifolii/sativae/huidobrensis*
- Adults: small, black and yellow. On the underside of leaves in the mornings and evenings
- Whiteish trails (tunnels) on the upper side of leaves. Small whitish to yellow-orange larvae, and their black frass, found inside the tunnels
- Leaves may drop prematurely and reduce yield and fruit size
- Deformed, stippled and curled leaves that remain green
Cotton bollworm
*Helicoverpa armigera* (syn. *Heliothis armigera*)
(©Gyorgy Csoka, Hungary Forest Research Institute, Bugwood.org; Alton N. Sparks, Jr., University of Georgia, Bugwood.org; Clemson University, USDA, Bugwood.org; Andrew B.S. King)

- Adult: yellow-brown moth, white hindwings
- Small caterpillars on leaves below highest open flowers and fruit bases, translucent and yellow-whitish with a black head
- Large caterpillars in fruits, vary from yellow/green/brown/red with grey/black stripes along the body
- Small dark entry holes at the base of tomato, near the stem, and under base leaves of flower. Open fruit to look for larvae

Fruit fly
*Bactrocera* spp., *Ceratitis* spp., *Dacus* spp.
(©Wade Jenner, CABI; CABI)

- Adult: looks similar to a house fly but is smaller with a colourful body. On flowers and fruits
- Tiny black spots on fruit
- Yellow/white larvae feed within the fruit
- Fruit rot

Mites
*Tetranychus urticae*, *Oligonychus gossypii*
(©Whitney Cranshaw, Bugwood.org; Clemson University, USDA, Bugwood.org; Frank Peairs, Bugwood.org; Georg Goergen/IITA Insect Museum, Benin)

- Tiny (pinhead—sized) reddish or pale spotted spider-like insects. Often on younger leaves at the junction of leaf veins.
- Leaves: smaller than usual, wilting, yellowing and whitening of leaves, loss of leaves
- Bruises on young and big fruits, and on stems

Fruit piercers
*Achaea* spp.
(©Forest and Kim Starr; CABI; Pest and Diseases Image Library, Bugwood.org)

- Adults: Brown to dark-brown, varying wing patterns, 50-80 mm wingspan. Found on plants and/or on weeds and in neighbouring bushes. Pierce fruit to suck juice
- Larvae/maggots: varying colours and sizes—generally grow up to 5 cm long. Feed on leaves. Move in a looping manner.