

# Gardennote

## Tomato pests in the home garden and their control

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Various insects, nematodes, and mite pests can damage tomato crops in the home garden, and nematodes, russet mites, and budworms can be especially destructive. The plants can be damaged at all stages of growth.

A description of some of the more important pests is given here together with methods for their control.

### Exotic pest

#### Fruit fly



Figure 1. Queensland fruit fly



Figure 2. Mediterranean fruit fly

The exotic Queensland fruit fly was first detected in Western Australia in green tomatoes in 1989 and subsequently eradicated.

The Mediterranean fruit fly also occasionally attacks vine ripened tomatoes in suburban backyards. Control this pest with fortnightly applications of spinosad.

### Common pests

#### Aphids

Aphids are most commonly seen in spring and autumn when the weather is mild and humid. They are small, soft-bodied, green, grey, or black insects with thin legs. Aphids may be winged or wingless and are usually slow moving. The insects cluster on the tips of the plant shoots. By sucking the sap, they reduce the vigour of the plants. Aphids also can be carriers of virus diseases, which can severely reduce yields and quality.



Figure 3. Aphids

Control with evening sprays of cyfluthrin (12.5 g/L or 4 g/l or 0.25 g/kg), or imidacloprid (200 g/L, 0.125 g/L, 0.25 g/kg, 50 g/kg) (only registered for green peach aphids), or dustings of sulfur (S) as elemental (400 g/kg) + copper (Cu) as oxychloride (40 g/kg) + carbaryl (20 g/kg).

Soapy water may also reduce numbers.



Figure 4. Native budworm (green)

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Figure 5. Native budworm (brown)

### Budworm

These caterpillars are tough-skinned, brown, reddish or green and are about 40 mm long when fully grown. They have irregular dark stripes on their back and a lighter stripe on each side of the body. Budworms bore holes in the fruit.

These pests are hard to kill and it is important that any infestation is tackled early in the season before the fruit becomes vulnerable to attack. They are common in summer.

The caterpillars pupate in the soil. The moths have light brown forewings and the hind wings have a darker brown margin on the trailing edge. They lay small white visible eggs singly on the plants, which are a sign of a pending attack.

Early sprays are essential as the small caterpillars are easier to kill and at this stage have caused less damage. Control with dustings of S as elemental (400 g/kg) + Cu as oxychloride (40 g/kg) + carbaryl (20 g/kg), or pyrethrins, or cyfluthrin.

Cutworms (several spp.)

Cutworms are caterpillars which live in the soil during the day and attack the plant at night. Young seedlings are the most vulnerable to attack. The cutworms damage the stem at the base causing the plant to collapse.

A stout, brown or black, herring-boned, soft-bodied, hairless caterpillar about 4 cm long may be found in the soil surrounding the plant.

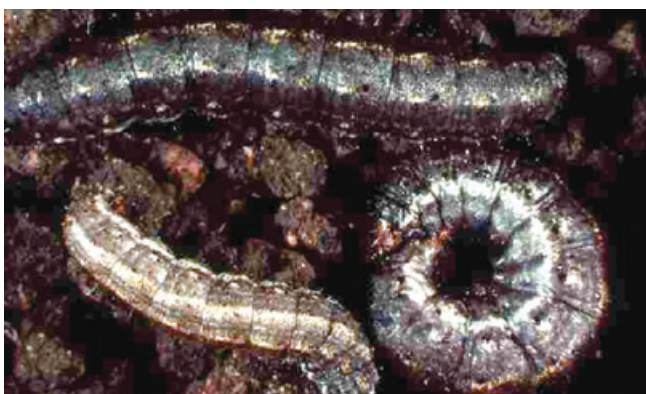


Figure 6. Brown cutworm

When disturbed, it curls up nose to tail. The caterpillar pupates in the soil and emerges as a medium-sized, grey-bodied moth with dark wings.

Control with evening sprays of diazinon (800 g/L) or dustings of S (400 g/kg) + Cu as oxychloride (40 g/kg) + elemental S + carbaryl (20 g/kg), or cyfluthrin, or pyrethrins.

### Looper caterpillars

These are voracious foliage feeders of tomatoes,



Figure 7. Looper caterpillar

potatoes, and other vegetables. They are soft-bodied caterpillars, usually green with bright-coloured bands on either side of the body, and are about 40 mm long when fully grown. They move with a distinctive looping action. Mainly found in the summer, they eat large holes in the foliage and may attack young flowers and fruit.



Figure 8. Root knot nematodes on a carrot

The insects pupate in the soil and emerge as brown, medium-sized moths which are sometimes active during the day. They have silvery marks on the forewings.

Control with dustings of S as elemental (400 g/kg) + Cu as oxychloride (40 g/kg) + carbaryl (20 g/kg), or sprays of cyfluthrin, or pyrethrins.



Figure 9. Western flower thrip

### Root-knot nematode

The root knot nematode or eelworm is a minute worm that cannot be seen with the naked eye. It attacks most vegetables and may severely damage tomatoes. Damage is seen as enlarged swellings on the roots and wilting of the plants. Soil fumigants, which are used commercially to control nematodes before planting, are not available in home pack sizes. Home gardeners may use solarisation (using a clear plastic sheet to heat the soil in summer for one month). Another control method is to apply sugar or molasses to the soil at 500g/square metre.

### Thrips

Thrips do not cause severe injury to tomatoes, but are carriers of the serious spotted wilt virus disease, which has seriously damaged tomato plants in the last five years.

Thrips are small, yellow, green, grey, or black torpedo-shaped insects with or without feathery wings, which are usually folded along the back. They have sucking mouthparts which slit the surface and withdraw the sap of the leaves, fruit, and flowers. Routine spraying is essential where spotted wilt virus is a problem. This helps to keep thrips to a minimum. Spraying is most important in the early stages of plant growth. Control with dustings of S as elemental (400 g/kg) + Cu as



Figure 10. Highly magnified two-spotted mite (photo USDA)

oxychloride (40 g/kg) + carbaryl (20 g/kg), or sprays or cyfluthrin (12.5 g/L), or diazinon.

### Two-spotted mite or red spider mite

A serious summer pest of tomatoes, two-spotted mites are usually first noticed by the appearance of the leaves, which begin to look scorched, russetty and dry. The undersides of the affected leaves usually have fine webs under which there are hundreds of small green to red mites and pearly eggs. The mites suck the sap of the leaves and breed very rapidly in warm weather.

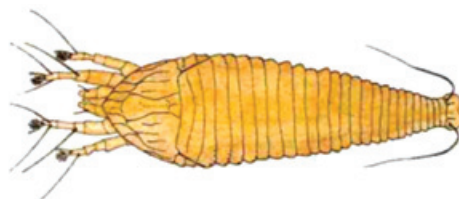


Figure 11. Tomato russet mite (drawing)

When the infestation becomes severe they are almost impossible to control as they are present in such large numbers. They are also resistant to many sprays.

Control by thorough spraying with good coverage of the undersides of the leaves.

Apply dicofol (150 g/L) or S as polysulphide (200 g/L), or S as wettable sulfur (284 g/kg) + Cu as oxychloride(250 g/kg) + others.

### Tomato russet mite or tomato mite

These mites are most severe in summer and autumn. They are much smaller than two-spotted mites and can only be seen with a hand lens with a magnification of 20 times. They are cream, and torpedo-shaped. The damage they cause is easily identified: the stems of the plant become bronzed, the lower leaves wither and die and the skin of the fruit becomes leathery. The flavour of the fruit is also affected.

Control with dicofol (179 g/L), or dust with S as elemental (400 g/kg) + Cu as oxychloride (40 g/kg) + carbaryl (20 g/kg), or spray with S as polysulphide (200 g/L).



Figure 12. Whitefly

## Whitefly

Whiteflies are tiny sap-sucking insects often found on the undersides of leaves. Whitefly adults resemble very small moths and fly in large numbers when disturbed. The young stages have no wings and look more like scale insects. They may be difficult to control. Insects such as lace-wings, ladybirds and hoverflies will feed on whiteflies. Insecticidal soaps may also reduce numbers. Sprays of bioallethrin plus bioresmethrin will also help to reduce whiteflies and also leafhoppers, which are tiny leaf-sucking insects that may damage seedlings and small plants.

## Disclaimer

Mention of trade names does not imply endorsement or preference of any company's product by the Department of Agriculture and Food and any omission of a trade name is unintentional. Recommendations are current at the time of printing. Users of any agricultural chemical must ALWAYS READ THE LABEL before using the product, and strictly comply

with the directions on the label. Users are not absolved from compliance with the directions on the label by reason of any statement made or not made in this publication. Please observe the withholding period (minimum period of days between spraying and harvesting).

Note: The tomato dusts contain carbaryl as the active insecticide, which is currently being reviewed and may be deregistered.

### Specimen identification requirements

When sending or delivering samples, the following information is required:

- Collector's name, location (where the specimen was found), full address, telephone number and e-mail address, description of the damage and date collected.

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