

# Two-spotted mite

*Tetranychus urticae*

# Fact sheet

Alison Fattore, NSW DPI, 2024

## Risk period

Table 1. The risk and monitoring periods for two-spotted mite activity.

Flowering			Fruit drop		Golf ball			Colour break		Maturation		
Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	

## Description

**Eggs** are spherical and translucent, yellowing with age.

**Immature:** larvae hatch with 6 legs, are pale yellowish-white and oval. Nymphs resemble the adult but are smaller and have 8 legs, gaining an extra pair once they grow and moult their skin (Figure 1).

**Adults** are 0.5 mm long, 8-legged, greenish–yellow with 2 red–brown spots (one on each side of the abdomen; Figure 2).

## Life cycle

Females can lay up to 70 eggs on leaf and fruit surfaces over 2 weeks. Tiny larvae emerge from eggs (6-legged) and moult to become 8-legged nymphs before becoming an adult. In ideal climates (i.e. hot, dry summers), a full life cycle is completed in about 10 days and heavy populations can rapidly build (Figure 3). There can be up to 20 generations produced annually.

## Damage

Sap sucking causes yellow spotting on immature fruit rind. Ripe fruit are dull. All stages are found on the undersides of leaves, with active stages producing webbing. Their sap-sucking on leaf undersides causes yellow spotting on upper leaf surfaces (Figure 4) and leaves can become bleached. Leaf drop can occur after severe infestations.

**Risk period:** November to May (QLD and coastal NSW) and January to April (southern citrus regions; Table 1).

## Monitoring

All citrus varieties are susceptible. Fine yellow leaf spots on upper leaf surfaces and webbing on the undersides of leaves often indicate mite activity. Randomly inspect 10–20 trees (fruit and leaves) for yellow spotting and mite presence. A 10× hand lens should be used as mites are difficult to see with the naked eye. Fruit surfaces and the undersides of leaves should be checked.

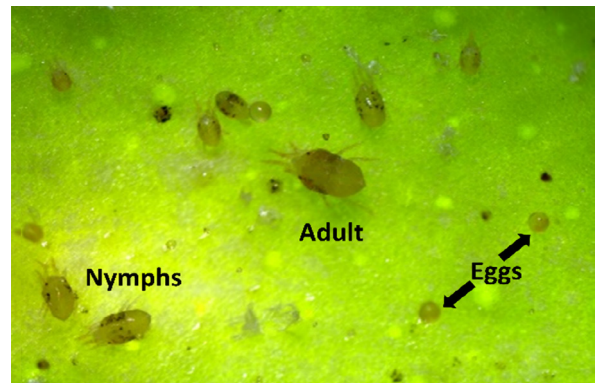


Figure 1. Two-spotted mite adult, nymphs and eggs.



Figure 2. Two-spotted mite adult.

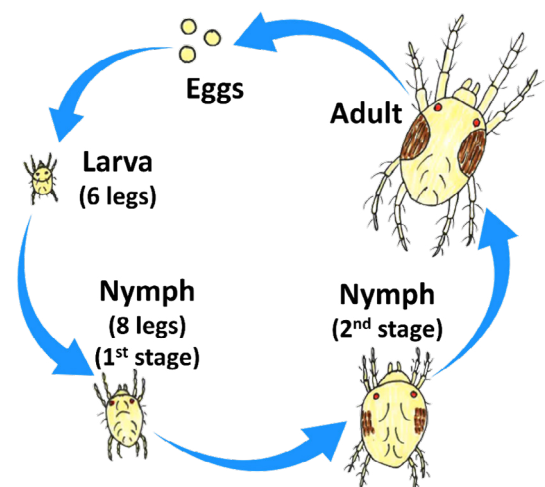


Figure 3. Two-spotted mite life cycle.

## IPDM for the citrus industry



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CITRUS FUND



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## Management and control

**Biological:** natural predators include lady beetles (*Stethorus* spp.) (Figure 5), lacewings, predatory thrips (*Scolothrips sexmaculatus*) and predatory mites (*Neoseiulus californicus*, *Phytoseiulus persimilis*, *Typhlodromus occidentalis*). *N. californicus*, *P. persimilis* and *T. occidentalis* are available commercially and can be periodically released.

**Cultural:** inter-row vegetation can encourage natural predators by promoting food abundance and protection. Maintain food and shelter for beneficial insects by alternate mowing of inter-rows. Mites favour dusty conditions, so avoid bare soil in inter-rows and use windbreaks.

**Chemical:** decisions to spray should be based on monitoring; avoid calendar spraying. The use of broad-spectrum chemicals to manage other insect pests also kills natural predators of two-spotted mite, promoting mite outbreaks. Use selective insecticides to manage citrus pests. Mites can develop resistance to chemicals quickly and their use should be the last resort. If two-spotted mites are present in more than 20% of fruit or leaves, and predators are absent, consider treatment. Select the least toxic alternative to beneficial insects. Consult your pest control specialist.



Figure 4. Two-spotted mite causes yellow spotting on leaves.



Figure 5. *Stethorus* spp. lady beetle predate on spider mites and two-spotted mites. Image: Lowan Turton © State of New South Wales.

## More information

Agriculture Victoria (2024) *Two-spotted mite*. Department of Energy, Environment and Climate Action, <https://agriculture.vic.gov.au/biosecurity/pest-insects-and-mites/priority-pest-insects-and-mites/twospotted-mite>

Smith D, Beattie GA and Broadley R (1997) *Citrus pests and their natural enemies*. Queensland Department of Primary Industries.