

Tarsonemids and other mites

GWF270
Updated February 2009

Mites are common, tiny and mostly harmless. There are a few, however, that can cause serious damage to plants both indoors and in the garden.

Q Are all mites harmful to garden plants?

A Spider mites (also called red spider mites) are well-known for the damage they cause - see GWF251. Other mites can also cause problems, but some are harmless as they feed on fungi. Most mites are harder to spot than spider mites as they are smaller and cause less distinctive damage. They usually have eight legs and sac-like bodies.

Q Which mites are most likely to cause problems?

A *Tarsonemid* mites, *Bryobia* mites, *Acarid* mites and some gall mites. Also see GWF298. Some examples of other mites follow.

Cyclamen mite

Q Tell me more about them.

A The cyclamen mite (*Phytonemus pallidus*) is a tarsonemid mite. They are tiny (0.25mm long), slow-moving, spherical and shiny. They curl up into a saucer shape when disturbed, though you will need a powerful magnifying glass to see this. They are cream to brown, getting darker with age. They attack a range of indoor plants as well as cyclamen, especially azaleas, begonias, gloxinias, ivies and African violets.

They breed all year round in a heated greenhouse, taking as little as two weeks to complete

their life cycle when the temperature reaches 21°C. Their eggs are laid on shoot ends, hatching in as little as four days into the immature forms, which turn into the adult about seven days later. Females are bigger than males, and more common. Males aren't needed for breeding as the females can produce viable eggs without fertilisation.

Q What damage do they do?

A Young leaves and flower petals are vulnerable to attack while they are still in bud. The mites feed by sucking sap, and leaves become distorted or puckered; petals appear discoloured and flecked. The young leaves become brittle with down-turned, rolled edges, and are easily damaged. In severe attacks, the affected flowers and leaves drop.

Chrysanthemums can suffer from russet-like roughening of the stem below the flowers, although another mite, the leaf rust mite, can also cause this.

The mites get from plant to plant by crawling. They are not speedy, so spread slowly.

Q What can I do about them?

A Check all new plants for any signs of damage. If you see suspicious-looking buds, leaves or flowers or detect the mites, take the plant back.

Since spread is slow, keep new

plants away from your main collection for a few weeks. If any develop signs of mite attack, discard them and wash down the benching to get rid of any mites which might have migrated from the plant. Keeping your plants spaced out in the greenhouse will slow down the spread.

Spraying is difficult, as none of the chemicals available to gardeners are really effective against these mites.

Dispose of any infested plant material by burning, burying or consigning it to the dustbin. These pests can lurk in plant debris, so good hygiene is helpful. Picking off infested buds will also slow down the spread.

In extreme cases, you could try immersing the plant in hot (43°C) water for seven minutes. This may harm the plant but should not kill it. Be careful not to overdo this treatment.

Biological control using the predatory mite *Amblyseius*, which is usually used to control thrips, can be used to keep down cyclamen mite. You need to introduce them regularly, starting well before the mites become numerous.

Broad mite

Q Tell me more about them.

A Broad mites (*Polyphagotarsonemus latus*) affect indoor plants, especially begonias,

cyclamen and ivies. Like cyclamen mites, they are tarsonemid mites and only an expert can hope to be able to tell them apart. They breed very quickly in warm conditions. They live in colonies beneath the leaves, and spread by crawling, to new shoots.

Q What damage do they do?

A By feeding on the leaf undersides, they cause them to pucker, with a downwards curling-in of the edges. Leaves may also become bronzed, shiny and brittle. Flowers, too, are affected with bud drop and distortion. Although plants may not die, their growth is often stunted.

Q What can I do about them?

A There are no pesticides recommended for controlling broad mites. Although sulphur dusts and sprays used to control fungal diseases appear have some effect on them, but it's best to use the methods recommended for cyclamen mite for control.

Strawberry mite

Q Tell me more about them.

A The strawberry mite (*Phytonemus pallidus fragariae*) is almost exactly the same as the cyclamen mite, but is found outdoors on strawberries. The female mite spends the winter in the centre of the plants, and reproduces without fertilisation. Males are relatively uncommon; only one in 20 is male, and they don't survive the winter. Eggs are laid in small numbers from early spring until autumn. The mites don't usually reach damaging numbers until July. The eggs hatch about ten days after laying; after an eight-day larval and resting phase, the adults emerge. These time-frames vary, with hot

dry weather giving rise to large numbers of mites.

They spread by crawling from plant to plant. It's likely that mites are also carried on clothing, garden equipment, on the breeze and by insects.

Q What damage do they do?

A They feed on the sap in the surface cells of very young leaves before they expand. The damage becomes noticeable as the leaf spreads; attacked leaves have a rough surface and are puckered, especially at the edges. It is this leaf curling that lets you know that nematodes are not the cause. Nematode damage does not cause leaf curling and mainly shows up before late summer. August and September are peak mite-damage periods. Affected plants lose a lot of foliage and become stunted, often in patches. In severe cases, fruit production is reduced.

Some strawberries fruit from June onwards for a prolonged period like 'Aromel'. These perpetual kinds type of strawberry seem especially susceptible.

Q What can I do about them?

A The best defence is to avoid planting infested plants. New stocks from specialist strawberry nurserymen should be free of the mite. These plants should be set out as far away from your old crop as you can. They usually crop well in their first year, but are damaged more and more as they age. Frequent replanting with fresh stock is often needed. Runners often have few mites, so crop well for the first year.

None of the chemicals available to gardeners will control strawberry mite.

Michaelmas daisy mite

Q Tell me more about them.

A These tarsonemid mites

(*Phytonemus pallidus*) are a serious problem with perennial asters. Instead of flowers, infected plants produce rosettes of tiny, green leaves on scarred rough brown stems. Plants are stunted, too. Spotting the tiny creamy mites is especially difficult as they dwell amongst the flower buds. Get rid of infected, damaged plants by burning or consigning them to the dustbin. There is no chemical control. However, *Aster amellus* and *Aster novae-angliae* appear to flower normally when infested.

Fern mites

Q What are they?

A The fern mite (*Hemitarsonemus tepidarium*) is a yellow/brown tarsonemid mite that feeds on ferns, especially *Asplenium bulbiferum*.

Q Tell me more about them.

A They overwinter as eggs on the fronds and rhizome. In warm weather they hatch and reproduce, taking between a week and three weeks to complete their life cycle.

Q What damage do they do?

A The young fronds and scales at the base of the plants are injured and as the fronds expand, they show the characteristic rough areas and distortion. In severe attacks the plant is stunted or killed.

Q What can I do about them?

A Treat them in the same way as cyclamen mites.

Suppliers of biological control

Biowise 01798 867574

Defenders Ltd 01233 813121

Harrod Horticultural 0845 402 5300

Just Green 01621 785088

Scarletts 01206 240466