

Fruit-tree mites

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Fruit-tree spider mite typically affects apples. However, it can be a widespread problem in hot, dry seasons on other fruit and ornamental woody plants.

Q What are fruit-tree mites?

A These are tiny (less than 1mm long) eight-legged creatures, related to spiders. Some feed on fruit-tree leaves, others are useful predators.

The commonest pest is the fruit-tree spider mite, (*Panonychus ulmi*). It is found on apples, pears, walnuts, soft fruits, hedgerow shrubs and *Prunus* crops, especially damsons and plums. Ornamental plants affected include cotoneaster, hawthorn and chaenomeles.

They suck sap from the undersides of leaves, injecting toxic saliva in the process.

Q How do I recognise the bad guys?

A You are likely to see the symptoms first. Leaves develop a light speckling all over and often take on a distinctly bronze tint. The leaves lose their gleam and become rather dull. If you look on the backs of the leaves with a hand lens you should see the mites feeding near the main leaf veins or moving around slowly. You may see transparent, fine webbing - often between the base of the leaf and the stem. White cast skins can usually be seen, too.

The female mites are the most obvious. They are oval with a bristly, humped back and are

usually dark red with a pale spot where each bristle meets the body, though you'll need a good hand lens to see this.

The males and immature stages are smaller, ranging in colour from bright red to pale green. At first they have only six legs; they develop eight legs later. Males are pear-shaped, with the blunt end at the front.

Q What about the good guys?

A Several mites are predators of harmful spider mites. Typhs (*Typhlodromus pyri*) are one of the most common. They are about 0.3mm long and very mobile - if you turn over a leaf infested with red spider mite and look at it through a magnifying glass, you'll probably see typhs rushing about. They are naturally pale coloured, but when they eat red spider mites they appear red, as you can see the red mites through their translucent abdomen.

Amblyseius finlandicus and *Phytoseiulus macropilis* are other predatory mites similar in size to typhs. *Anystis agilis* is a larger mite, 1mm long, dark red with a spherical body and long legs. Like the other predators, it's very active.

The beneficial red velvet mite (*Allothrombium fuliginosum*) may turn up anywhere in the garden, including fruit trees, as it feeds on

woolly aphids, small caterpillars and many other insects. They are up to 2.5mm long and blood red in colour, with short legs.

Q Could I mistake these mites for anything else?

A If the mites have no humped back and few bristles, they could be bryobia mites. These have very long front legs and are much flatter. They can be troublesome, but are usually less of a problem than fruit-tree spider mites. Treat in the same way as fruit-tree spider mites. One major difference is that they are seldom insecticide-resistant.

You may also come across beetle mites feeding on algae, lichens and moss on branches and trunks. They are dark red and shiny, 1mm long and can be seen in conspicuous clusters on tree bark. They are harmless.

Despite their name, spider mites aren't small spiders. True spiders won't do any harm in the garden.

Q When do attacks develop?

A If enough eggs survive the winter, you can start seeing damage as early as petal fall, with severe damage in June. However, damage usually becomes serious later on in July, August and September.

Q What damage do they do?

A The mites feed by sucking sap and will cause premature leaf fall if present in large numbers. The overall crop may be reduced and fewer fruit buds laid down for the following year. Fruit-tree mites breed quickly at high temperatures and dislike humidity, so infestations are worst in hot, dry summers and on trees that are trained against warm walls.

Q Can you tell me more about fruit-tree mites?

A They overwinter as eggs beneath small branches and spurs. These eggs are bright red and tiny (0.7mm). They are laid in masses which are fairly easy to spot. They hatch as the buds burst the following spring, with hatching completed by mid-June.

The young mites feed beneath the leaves. They become adults after three moults. Before each moult they slow right down, becoming inactive. Don't be fooled by this slowdown - they will soon become active again, leaving their empty coats on the leaves. Once adults, they lay more eggs and the cycle begins again. They don't need to mate to produce eggs, though unmated females only produce male offspring. Mated females produce both female and male offspring. The pale, summer eggs hatch in about two weeks. Immature forms reach adulthood in another two weeks. Therefore each of the four or five overlapping generations takes about a month to develop. In this way the population soon reaches high levels if there are no restraining factors. The mites spread by crawling from leaf to leaf. When

the weather is warm and still, they reach new plants by spinning a strand of silk that acts like a parachute, carrying them to new plants. If you want to buy a new fruit tree, check it carefully as gardeners can inadvertently spread mites by introducing infested trees to their gardens.

When temperatures fall in September the females lay the overwintering eggs. If the trees lose leaves and become stressed by spider mites early in the year, overwintering eggs are visible as early as August.

Q Can problem mites be controlled?

A Spider mite numbers are often kept down by natural predators, such as typhs and other beneficial mites. Many bugs and black-kneed capsids also feed on fruit spider mites, though unlike typhs they don't get going until the mites are already numerous. They tend to wipe out the spider mites and then either starve or fly off.

Ideally, keep insecticide-spraying in the fruit garden to a minimum to give these helpful insects a chance to do your work for you. If possible, spot treat any local infestations of fruit-tree pests so the predators are not totally wiped out, as they would be if you treated every tree all over.

The fruit-tree spider mites don't multiply as fast in cool, damp weather, so they're unlikely to be a problem every year. Wetting down wall-grown trees may help control the mites in this situation.

Q Can fruit spider mites be sprayed?

A Wait until late May and take

action only if you see colonies starting to build up. Spray with a contact insecticide approved for use. Trees that have been sprayed intensively in the past may harbour pesticide-resistant fruit tree spider mites. If spraying has no effect, this could be the reason.

Q Can winter tar washes help?

A There are no winter tar washes available for this use. Use summer insecticide treatments instead.

Q Are there any biological controls?

A Although biological controls are available for the two-spotted spider mite associated with greenhouse and herbaceous plants, there are none for fruit-tree spider mites.

Q Are there any resistant apples

A 'Cox's Orange Pippin' appears less susceptible than 'Discovery' or 'Worcester Pearmain'.

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