

Spider mites

GWF251
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Although barely visible, spider mites quickly build up into large colonies. These pests can ruin the foliage of ornamental plants and reduce yields of fruit and vegetables.

Q What are spider mites?

A Spider mites are tiny wingless insect-like creatures that have eight legs and a one-piece body. They are so small that a hand lens is needed to see them clearly. Greenhouse spider mites (*Tetranychus urticae*) are also known as two-spotted spider mite or red spider mite. Another spider mite found indoors is the carmine spider mite (*Tetranychus cinnabarinus*). Both species feed on plant sap.

Q Can you tell me more about them?

A Tiny (0.14mm diameter) eggs hatch into white, six-legged larvae. The eggs are easily seen with a hand lens, but the larvae are harder to spot. The adult female lays 4-6 eggs a day, starting when they are 36 hours old. It is at this adult stage that they take on their characteristic two-spotted appearance. The whole life cycle can take as little as three days in hot conditions, though in cooler weather it may extend to a month.

By September, the shorter days and slower plant growth stop their reproduction. The remaining females turn red and find sites to hibernate, such as in the soil, on bark and on greenhouse walls, even on pots. The first adults seen in spring are also bright red.

Q Are they something to worry about?

A Although they are extremely small, spider mites can build up to enormous numbers in the right conditions, making them one of the most destructive pests in the garden. They can ruin foliage, spoiling ornamental plants and reducing yields of vegetables, fruit and salad crops. Heavy attacks can even kill plants.

Q How can I tell if they are present?

A Look underneath the leaves for tiny slow-moving mites with two dark spots on their backs. A hand lens will help. Another test is to hold a sheet of white paper beneath the plant and shake the foliage. The mites will fall on to the paper and can be clearly seen. Look out for a fine webbing on the underside of the leaves and on young shoot tips in advanced cases. Check for yellowing (chlorosis) and minute speckling of leaves. In the later stages, brown falling leaves and needles are also seen. Cucumbers and melons, in particular, can be severely affected by a spider-mite attack.

Some strains of spider mites cause the plant hypertoxic shock: the leaves become bleached, wilted and dried-up.

Q Which plants are most at risk?

A Spider mites have been found on over 180 different species of plant. However, some are more susceptible than others. Ones likely to be affected include: begonia, brugmansia, carnation, chrysanthemum, crocosmia, cucumber, dahlia, datura, French and runner beans, fuchsias, fruit trees and bushes, houseplants, impatiens, melon, pelargoniums, primulas, spruce (*Picea*), strawberries and vines.

Q What causes outbreaks?

A Hot, dry, dusty conditions lead to spider-mite problems. They are often worst in greenhouses, conservatories and on houseplants. These conditions encourage the mites to feed often, causing damage to the plants every time they feed. Even plants that do not normally suffer from spider mites become at risk in these conditions. Unhealthy plants are especially vulnerable.

Cool moist conditions can help to reduce spider-mite populations, perhaps by limiting their breeding success.

Q Can attacks be avoided?

A Spider mites are less likely to attack if you give the plants the best possible conditions, misting

foliage regularly. However, take care not to overdo it, as it can encourage fungal disease.

Get rid of the worst-affected plants as spider mites spread to other plants from them.

Keep new plants separate from others for the first two weeks, in case they are infested.

When you bring plants back indoors after a summer outside, check them carefully for spider mites – it's best to throw out infested plants.

Q Are there any pesticides available for the control of spider mites?

A There are a range of insecticides for control of spider mites. However, bear in mind that if you have used a pesticide and then want to use a biological control, you'll need to wait at least a month, as residues from spraying may kill the predators you introduce. By this time the mites will probably be out of control.

Q Is there a spray that's suitable for organic gardeners?

A Yes, we recommend ready-to-use pyrethrum-based sprays which are suitable for traditional or organic gardeners. Spray the leaf undersides every seven days. Biological control can be used safely 3-4 days after spraying.

Q Tell me more about biological control.

A Introduced predatory mites *Phytoseiulus persimilis* can eliminate spider mites indoors. They can eat up to five adults or 60 eggs per day. The drawback is that they should be introduced when there are only a few spider

mites present. You have to examine your plants closely from April onwards, using a hand lens to spot the first few mites. When you see them, order predators from the suppliers listed here. You might have to make further introductions throughout the summer, but often one will be enough. The effectiveness of the biological control is reduced if the conditions are too hot. If you use shading paint on glass and ventilate the greenhouse well, they should be all right.

You can keep an eye on the *Phytoseiulus* by looking with a hand lens for bigger, rounder, redder mites than spider mites. *Phytoseiulus* won't survive the winter, so you have to introduce it every year.

If spider mite is a problem every year try *Amblyseius andersoni*. It works more slowly than *Phytoseiulus*, but it can be introduced before overwintering spider mites re-emerge in mid-late March. This is because it can survive a few weeks without food and also eats pollen, thrips, springtails and other invertebrates. It's active at temperatures as low as 6°C and is also more tolerant of hot, dry conditions. It can be used outside as well as under protection, provided temperatures are suitable. While it can overwinter in the greenhouse, this probably won't be in sufficient numbers to keep spider mite in check.

Release all predators (according to the instructions) on to the problem plants.

Suppliers

Biowise

Hoyle Depot, Graffham,
Petworth, West Sussex GU28 0LR
01798 867574
www.biowise-biocontrol.co.uk

Defenders Ltd

Occupation Road, Wye,
Ashford, Kent
TN25 5EN 01233 813121
www.defenders.co.uk

Green Gardener

Brook Hill, Brundall Road,
Blofield NR13 4LB
01603 715096
www.greengardener.co.uk

Harrod Horticultural

Pinbush Road, Lowestoft, Suffolk
NR33 7NL 0845 402 5300
www.harrodhorticultural.com

Just Green

Unit 14 Springfield Industrial
Estate, Burnham-on-Crouch,
Essex CM0 8UA
01621 785088
www.just-green.com

Scarletts

Nayland Road, West Bergholt,
Colchester, Essex
CO6 3DH 01206 240466
www.scarletts.co.uk

The Organic Gardening Catalogue

Riverdene Business Park, Molesey
Road, Hersham, Surrey
KT12 4RG 0845 130 1304
www.organiccatalog.com

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