

Garden practice

Controlling glasshouse pests



Pests can overwhelm plants in summer glasshouses, so early identification and control are vital – whether using biological control or pesticides

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Glasshouses provide a warm, sheltered environment, ideal for plant growth. The flip side to this, however, is that they also provide favourable conditions for sap-sucking pests. Most of these pests are not native to Britain and require the higher temperatures found under glass.

Pests can survive year round in glasshouses and will produce many generations. At 15°C (59°F) glasshouse whitefly takes about 55 days to complete its life cycle from egg to adult, but at 25°C (77°F), it takes half that time. This rapid reproduction rate, and the potential repeated use of pesticides, can lead to pesticide resistance building up.

There are two strategies for glasshouse pest control, depending on the pest and situation: releasing biological control in summer, or using chemical insecticides.

Biological control involves introducing a predator or parasite of the pest into the glasshouse. Under suitable conditions the predator will breed and bring the pest problem under control. If this is to be effective, the pest must be identified

correctly so that the appropriate predator or parasite can be used (see right to identify and treat five pests common to glasshouses).

Aphids, whitefly, mealybugs and some scale insects excrete a sugary liquid known as honeydew. This sticky substance coats the upper surface of leaves, allowing the growth of sooty moulds – these are not directly harmful, but spoil the plants' appearance.

It is important to recognise the early signs of infestation so that controls can be deployed before heavy infestations have built up. Predators and parasites are usually more sensitive to pesticides than pests, so if biological controls are to be used, avoid using more persistent synthetic pesticides. Organic sprays, such as fatty acids and plant oils, have little persistence so can be used before introducing biological controls. ●

More from RHS Online For further information, type the pest name or 'Biological control' in the search box at www.rhs.org.uk

Housekeeping to help reduce pests



Monitor pest numbers in glasshouses by using yellow sticky traps to give an early warning of the build-up of a whitefly infestation, as well as controlling fungus gnats.



Check the underside of leaves and shoot tips regularly for signs of pest infestation. Early treatment makes control easier and can prevent damage or even plant death.



Quarantine new plants for a month outdoors or on a windowsill in a plant-free room before putting them in the glasshouse to allow pests or diseases to become apparent.



Keep the glasshouse tidy, and remove dying foliage and flowers. Dispose of heavily infested plants and keep the pots and beds free of weeds.

Common glasshouse pests

Scale insects

Symptoms: limpet-like insects that live beneath waxy shells. Soft scale (*Coccus hesperidum*) attacks citrus, *Ficus*, *Schefflera* and others with flat, yellowish brown scales that cluster on the underside of leaves. Plants are sticky with honeydew and develop sooty mould.

Control: spray with plant oils or fatty acids. A parasitic wasp, *Metaphycus helvolus*, is available for biological control; or spray ornamental plants with deltamethrin, thiacloprid, acetamiprid or thiamethoxam.



PETER STILES

Mealybug

Symptoms: soft-bodied insects, up to 4mm (3/16in) long and covered with a white, mealy wax. They suck sap from plants, often infesting leaf axils and stem joints. Heavily infested plants lack vigour and may then be affected by honeydew and sooty mould.

Control: remove infested shoots. Parasitic wasps (*Leptomastix* species), or a ladybird predator (*Cryptolaemus montrouzieri*), offer biological control. Pesticides for scale insects can be used on mealybugs.



RHS / KETH HARRIS

Aphids

Symptoms: several species of greenfly and other aphids can infest glasshouse plants. They can cause stunted and distorted growth, and create honeydew and sooty mould problems. Their white cast skins can be mistaken for whitefly.

Control: predatory midge larvae (*Aphidoletes aphidimyza*) or parasitic wasps (*Aphidius* and *Aphelinus* species). Alternatively, use a pesticide as recommended for whitefly control (see below).



GAP PHOTOS / GEOF DUFFY

Red spider mite

Symptoms: tiny yellowish black mites (*Tetranychus urticae*) live underneath foliage, causing a pale mottling of the upper leaf surface. Heavily infested leaves dry up and may be covered in silk webbing. Mites are orange-red in their dormant winter period.

Control: predatory mite *Phytoseiulus persimilis* controls light infestations from April to October. Maintain humid conditions to deter this pest and spray the underside of leaves with plant oils or fatty acids.



RHS / ANDREW HALSTEAD

Whitefly

Symptoms: adult glasshouse whitefly (*Trialeurodes vaporariorum*) are white-winged insects that readily fly when disturbed. Adults and their flat, scale-like nymphs suck sap from the lower leaf surfaces and can cover foliage with honeydew and sooty mould.

Control: parasitic wasp (*Encarsia formosa*) is effective from April to October. Otherwise use pesticides for scale insects (except thiamethoxam) on ornamental plants, tomatoes, cucumber, peppers and aubergine.



FLPA / NIGEL CATTIN