



Information

DOVE
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Biological Control - SCALE INSECT

There are two broad categories of scale insects - the *Lecanidae*, or soft scale, and the *Diaspidae*, or armoured scale.

The *Diaspidae* comprises many species but each has a limited host range.

The *Lecanidae* have two common species. *Coccus hesperidum* grows up to 4 mm, is oval and green/brown in colour. *Siesta coffeae* is more dome shaped and a deep brown in colour. Soft scale is a common pest on foliage plants, interior landscape and tropical houses.

Siesta coffeae females produce hundreds of eggs before dying. These are protected beneath the female body making control with pesticides difficult. With *C. hesperidum* the female produces up to 250 live young.

Although the life cycle of soft scale is relatively slow, the high numbers of offspring lead to large infestations if left uncontrolled. Soft scales feed on sap causing distortion, yellowing and defoliation. Honeydew is also secreted resulting in sooty moulds.

LIFE CYCLE OF SCALE INSECTS

Crawlers emerge from the eggs and move to other parts of the plant, such as plant stems and near leaf veins where they settle to feed from the phloem. The life cycle for *Saisettia coffeae* takes 95 days at 18°C and 51 days at 28°C.

Read the label before you buy – use pesticides safely

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BIOLOGICAL CONTROL

1. *Metaphycus helvolus*

This is a 2mm long wasp parasitoid. The yellow females attack young soft scales once they have settled to start feeding.

They can lay 5-6 eggs per day and kill many more by host feeding. Parasitised scales appear dark and flat. A circular hole is cut in the scale at the end of incubation from which the adult emerges.

From egg to adult, the life cycle takes 30 days at 20°C and 11 days at 30°C. Successful control relies on sunny conditions with temperatures above 22°C for several hours per day.

It is supplied as adults in 30ml tubes in units of 25.

Introduction rates

Release 5 parasitoid adults per m² in infested areas from April onwards for 3 fortnightly introductions. When sufficient food is available, females can live for up to two months and spread throughout the glasshouse. *Metaphycus* will overwinter in heated glass if young scale is present.

2. *Chilochorus nigrinus*

This is a small black beetle (with a red band of spots) that consumes various scale insects on fruit. The larvae are covered in spines and start at about 1mm in length and increase to 7mm prior to pupation. They consume their prey rather than suck out their insides which make them more vulnerable to insecticides.

It is supplied as adults in 30ml tubes in units of 10 or 25.

Introduction rates

Release 2 adults per m² in infested areas from April onwards for 3 fortnightly introductions.

Other general predators such as lacewings and the mealybug destroyer, *Cryptolaemus montrouzieri* will also eat scale.

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