

## Product Information Sheet

### Cryptolaemus (Cryptolaemus montrouzieri)

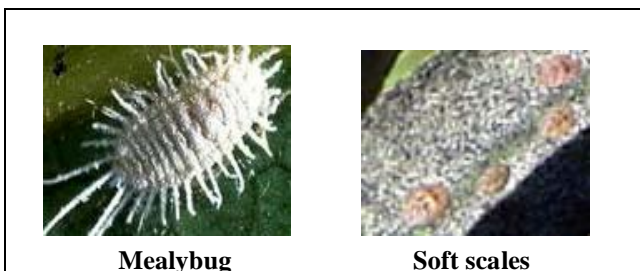
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#### Target Pests

Cryptolaemus are an extremely effective predator of a range of mealybug species and young soft scales. They are particularly effective in protected areas, such as indoor areas and green houses, where mealybug can be an especially difficult pest to control.

Mealybugs are serious pests of orchard trees, gardens and indoor plants. All mealybugs produce large amounts of honeydew, on which unsightly sooty mould grows. Mealybugs are difficult to control with pesticides due to their waxy covering and habit of living in protected parts of the plant. This makes the use of natural predators an effective control strategy.

Whilst Cryptolaemus will feed on other insects, mealybugs and soft scales are their main targets.



#### Main pests controlled by Cryptolaemus

Cryptolaemus adults tend to disperse quite rapidly after release which means control is more effective when higher numbers of mealybug are present, or when the Cryptolaemus can be confined, such as in an indoor or greenhouse situation.



**Cryptolaemus adult and larvae feeding on mealybug**

#### Product Description

The Cryptolaemus ladybird is a **native to Australia** and is found throughout all states. It is an effective predator of mealybugs and soft scales in particular, with both larvae and adults feeding as predators.

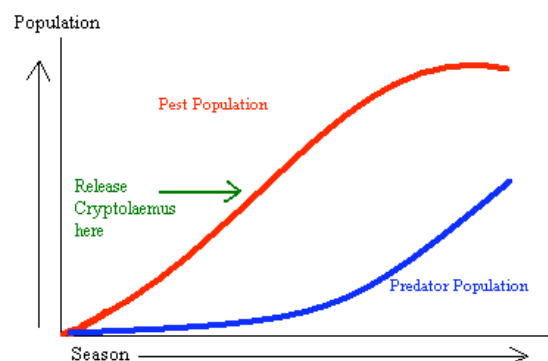
An order of Cryptolaemus from Bug Central contains approximately 40 adult ladybirds, ready for release into the garden.

Cryptolaemus larvae can be easily confused with the mealybug that they are very good at controlling, as can be seen in the above photos.

Cryptolaemus adults lay up to 10 eggs per day into the mealybug egg masses, with newly hatched larvae then feeding directly into the eggs or young mealybug. Larvae move to the underside of leaves and pupate before emerging as adults. The lifecycle of Cryptolaemus takes between 4 and 7 weeks.

#### How It Works!

Pests generally build up rapidly at the start of each new season, with predators & parasites not active until pests have reached damaging levels. This is demonstrated in the table below.



Releasing high numbers of predators or parasites to coincide with this pest build up gives control before damage levels get too high.

## Suitable Crops/Environments

Cryptolaemus are common **native predators** in Australia. Whilst they are most active in warmer regions, they can tolerate a wide range of climates including greenhouses and indoor gardens.

Cryptolaemus, as with most predators and parasites, work best in situations where a mixture of plants is growing. This ensures a range of insects will be available to sustain a population when pest numbers are low, and also provide alternative food sources.

Cryptolaemus are despatched from the insectary via Express Post. As a general rule, the punnets can be kept for 2 to 3 days in a cool (but not cold) place prior to release.

As with most good bugs, it is best to avoid extremes of heat and cold around release times, and ensure no pesticide residues are present when releasing the Cryptolaemus. As a general guide, ensure several weeks have elapsed since any pesticides have been applied. This may need to be longer in protected areas such as indoor plants.

Follow up releases may improve control, particularly where a history of high mealybug levels exists.

## Release Instructions

To release the Cryptolaemus, simply sprinkle the contents of the punnets evenly on the target plants. Each punnet can be spread over 10 or more small to medium sized plants. In protected areas, a few bugs per square metre will be enough to give control of mealybugs. Release as close to the target pests as possible, as this will also further increase the likelihood of immediate control.

Ensure all material is removed from the punnet. In IPM every bug counts!!

For best results, release bugs in the late afternoon or early evening as they are less active at night and will stay closer to the release site.

Cryptolaemus will rapidly disperse from the release area and begin feeding as well as lay eggs. It is not unusual to have difficulty finding the Cryptolaemus shortly after release.

## After Release

Detailed information is not available on the toxicity of all pesticides, but it is fair to say that many will kill your Cryptolaemus! Some fungicides will also cause disruption to natural enemies, and it is better to avoid products that do not specifically detail their effects on beneficials.

Cryptolaemus larvae are often difficult to distinguish from the mealybug they are so effective at controlling. As mentioned above, the adults will rapidly disperse from the release sites, so it is not uncommon to have difficulty finding evidence of the predators at work!

## Cryptolaemus & IPM

Integrated Pest Management (IPM) relies on a range of activities to reduce pests. IPM does not aim to totally eliminate pests, as this is neither natural nor desirable. IPM seeks to achieve a balance between all organisms in the garden.

Releasing good bugs helps maintain this balance. Using plants that encourage beneficial insects is also recommended.

If a pesticide does need to be applied due to a high level of pest activity, then select the product with the lowest toxicity possible.

Releasing predators and parasites after such an application is important, allowing time for the pesticide to dissipate, and to help restore the natural balance.

For further information on this or other products:

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