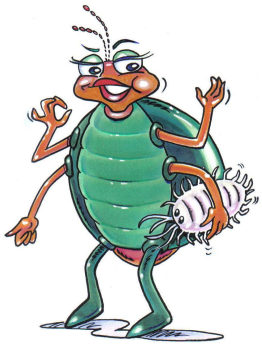
BACKYARD BUDDIES Information Sheet


Linda and her very different looking baby sister feeding on cottony scale eggs

Cryptolaemus montrouzieri

for Mealybug



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Cryptolaemus beetles (Linda) are a type of ladybird native to Australia. They are a very efficient, natural enemy of mealybug, with both the larvae and adult beetle preying on these pests. Cryptolaemus larvae are covered in white waxy filaments, making them very similar in appearance to mealybugs. However, older larvae are larger than mealybugs. With experience, the two can readily be differentiated.

Adult females lay up to ten eggs per day directly into mealybug egg masses. Adult beetles and newly hatched larvae feed on both mealybug eggs and young nymphs. Larvae move to protected areas, such as the underside of leaves, to pupate and subsequently emerge as adult beetles. Their entire life cycle takes between four and seven weeks, depending on temperature.

Target pests

Various species of mealybug
Pulvinaria scales
Soft scales (at crawler stage)

Mealybugs are a serious pest in orchards and vineyards, as well as for many indoor and glasshouse plants. They thrive in protected areas such as the growing tips of many ornamental plants, in flower buds and between clusters of fruit. Mealybugs feed by sucking sap.

All mealybugs produce large amounts of honeydew, on which sooty mould grows. They reach maturity in Summer after approximately four weeks, and produce up to 500 eggs in a white woolly egg mass.

Mealybugs are difficult to control with pesticides. This is largely due to their waxy covering, habit of infesting sheltered plant parts, and the consequential difficulty in achieving effective spray coverage. Mealybugs also readily develop resistance to pesticides.

Suitable crops/environments

Linda can be used to control mealybugs in a range of crops and environments. Like other predatory beetles, Linda is most efficient when her prey is plentiful. If the citrus mealybug *(Planococcus citri)* is present, Linda should be used in conjunction with the wasp parasite *Leptomastix* where available.

Both adult beetles and larvae prey on mealybugs. They survive at temperatures of between 16–33˚C but do best at around 28˚C. Adult beetles are most active in sunny weather.

Since *Cryptolaemus* beetles disperse readily, they work best where the mealybug population is large, or if they can be contained near the infested crop. Linda performs well in glasshouse, nursery, and indoor situations.

Before release

In indoor or nursery environments, Linda is best released whenever mealybug are present. Best results are obtained when a release is made early in the season, followed by several smaller ‘top-up’ releases at intervals of between three and six weeks. This is known as the ‘dribble release technique’. In orchard environments, Linda should be released when active mealybugs are present.

Like other beneficial insects, Linda should be protected from extremes of heat and low humidity. Avoid using insecticides for at least two weeks before release.

At release

Linda is supplied in a punnet containing a minimum of 40 ladybirds. The lid of the punnet or tub should be opened and the ladybirds dislodged by lightly tapping the container onto plant foliage near mealybug infestations.

Recommended release rates

Garden: Minimum one or two beetles per square metre (one punnet per 20– 40 m^2).

After release

Upon release, ladybirds will rapidly disperse throughout the treated area, laying eggs into mealybug egg masses. It may then be two or three weeks before *Cryptolaemus* larvae can be seen feeding on mealybug. Adult ladybirds may not be obvious after release.

Since young *Cryptolaemus* larvae look similar to those of mealybugs, care should be taken not to confuse the two. Significant control is possible within one generation of *Cryptolaemus* (about four weeks), however, high pest populations may take longer to control and may require 'booster' releases.

Practices to aid establishment

Adult ladybirds are strong fliers and will establish best where the population of mealybug is high, or where a special effort is made to keep the ladybirds close to mealybug infestation.

Outdoor situations: For infested trees, branch netting or cages placed in key locations may help improve ladybird establishment. Small shrubs may be covered with a cloth cage as described for plants in enclosed situations.

Enclosed situations: A useful technique is to confine some beetles to one or two heavily infested plants with mosquito netting (or similar material) for a few days while they are laying their eggs. Avoid releasing the beetles where bright lights may attract them away from the release area. In shopping centres and similar situations, it is best to release Linda after hours.

Chemical use

Pesticide residues may slow or prevent the establishment of *Cryptolaemus*. Pyrethroid insecticides are particularly toxic and should be avoided where possible. Products in the eco-organic garden range however, won't harm Linda. If fruit fly control is required only eco-naturalure is considered safe.

Additional information

Linda is dispatched by overnight courier where available and should be received within one or two days. Honey is smeared under the lid of the punnet or tub as food for her while in transit.

Upon her arrival, Linda should be released as soon as possible. In the event of adverse weather such as extreme heat or high rainfall, ladybirds may be stored for one or two days in a dark room at 17˚C. Extra honey should be placed under the lid as additional nourishment.

Excerpt from The Good Bug Book

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