

## Mite-E™ for Spider Mite Control

*Phytoseiulus persimilis* – Predatory mite

**Mite-E™** is a highly active predatory mite that specialises in feeding on two spotted spider mites (*Tetranychus urticae*) and other plant-feeding mite species in the family Tetranychidae.

**Mite-E™** is known to be useful in both greenhouse and outdoor crops, such as rose, orchid, bean, capsicum and strawberry as part of an integrated pest management programme.

### The Pest – Spider Mites

Female two spotted spider mites are pale yellow-green with two large dark green or black spots on the upper part of their body, and are approximately 0.6 mm long. Orange overwintering forms may be found in late autumn, winter and early spring.

Two spotted spider mites are normally found on the underside of leaves within the crop. When the infestation is high, webbing will be visible on the tips of the leaves and may hang down like a silken rope. This is a dispersal mechanism for this species.

Signs and symptoms of two spotted spider mites include:

- Speckling and yellowing of leaves within your crop
- Small mites on the underside of the leaves in your crop - use a 10x hand lens to see the mites
- Webbing on the tips of leaves in severe cases, especially on young leaves



A bright red *P. persimilis*



Mite-E™ feeding on a two-spotted spider mite

## The Solution – Mite-E™

**Mite-E™** is a small highly active predatory mite, orange to bright red in appearance. Adult females are 0.5-0.6 mm long.

Adult female **Mite-E™** lays her eggs amongst colonies of two-spotted spider mites.

Both nymph and adult predatory mites actively search for their prey and will feed voraciously on all stages of spider mite from eggs through to adults.

Under optimal conditions (20°C and 65% RH) **Mite-E™** has the potential to devour up to five adult spider mites and twenty eggs and larvae per day, thus reducing two spotted spider mite populations over several weeks.

**Mite-E™** is almost entirely dependent on two spotted spider mite as a source of food; once all prey has been consumed they will go out in search of a new food supply. If no food is found, the mites may become cannibalistic.

Under optimal conditions, **Mite-E™** has a substantially faster life cycle than two spotted spider mite. The sex ratio of adult **Mite-E™** is four females to each male, and females are capable of laying up to 60 eggs in their life time. These factors contribute to the success of **Mite-E™** as a predator.

**Mite-E™** is not considered harmful to humans and animals, and no environmental impacts are expected.

## Environmental Conditions

Favoured conditions for **Mite-E™** are temperatures above 20 °C for a time during the day and a relative humidity of 65%.

**Mite-E™** will consume two spotted spider mites and reproduce at temperatures and humidity that are not ideal, but at a slower rate.

## Release Rates

|                  |                                       |                                |
|------------------|---------------------------------------|--------------------------------|
| Greenhouse crops | 4 predator mites per square metre     | 1 bottle per 250m <sup>2</sup> |
| Field crops      | 1 predator mite per 2.5 square metres | 1 bottle per 400m <sup>2</sup> |
| Strawberry crops | 1 predator mite per 2.5 square metres | 1 bottle per 400m <sup>2</sup> |

## Packaging

**Mite-E™** is supplied as 1000 adult mites in vermiculite.

## Release and Storage Instructions

**Mite-E™** is dispatched via courier and should reach you within 1 to 2 days.

Once received:

- Do not expose to direct sunlight
- Keep in darkness and in a cool environment – ideal temperature 10-12 °C.
- DO NOT REFRIGERATE
- Apply to the crop as soon as possible, ideally within 1-2 days
- Gently rotate each container to mix the contents
- Open the container in the infested area
- Open one container at a time and apply the contents immediately
- Distribute the product evenly over infested plants throughout the crop

## Post Release

After 2-4 weeks, following the release of **Mite-E™**, you should be able to see signs of the predator working.

Two-spotted spider mites that have been eaten change from pale green to brown and appear shrivelled. Use a 10x hand lens to check, as live and dead mites can appear similar to the naked eye.

Before introducing **Mite-E™** into your crop please check residual chemical affects and ensure you know chemical compatibilities of products that may be applied.

A list of compatible pesticides and withholding periods can be found in the publication 'The Good Bug Book' Second Edition (2002), Editor Richard Llewellyn. Excerpts of the book can be obtained from the Persimilis page of the Australasian Biological Control Association website.

## Price

**PRICE: \$35.00 per 1000 mites (minimum order) plus GST and Freight**