



Neoseiulus cucumeris - Thrips Predator

Neoseiulus (= *Amblyseius*) *cucumeris* is a predatory mite that will feed on many greenhouse pests, but is particularly effective against thrips.

Description and Life Cycle:

N. cucumeris mites are less than 1mm in length. They can be distinguished from most pest mites by their shape and mobility. Cucumeris is teardrop shaped and moves rapidly along the underside of leaves and in flowers.

Development of the mite takes from 8-11 days at (25-20° C). *N. cucumeris* mites can live up to 32 days and females produce around 28 eggs. Cucumeris prefer environments with greater than 65% relative humidity (RH), but eggs can survive as low as 40% RH. Microclimates within the greenhouse crop appear to be important for their survival.

Cucumeris feeds on small (1st and 2nd instar) thrips on the foliage and flowers, but will not control large larvae or adult thrips.

Target Pests:

The primary target of cucumeris is thrips species including western flower thrips, onion thrips, and plague thrips. Cucumeris is a generalist predator, and will also feed on other mites and pollen and has been valuable in the control of broad mite.

Suitable Crops:

Cucumeris is suitable to most greenhouse crops. It can survive on pollen in the absence of the pest and thus can be used preventatively in crops such as capsicums which produce pollen. *N. cucumeris* has successfully been used for thrips control in cucumbers, capsicums, and eggplants, as well as in ornamental crops gerbera, rose, chrysanthemum, and other potted plants. It is not effective on tomatoes or geraniums due to leaf structure and toxic plant exudates.



Thrips IPM:

Cucumeris should be used as a part in a thrips IPM programme. Heavy thrips populations should be treated with a short residual insecticide such as Vertimec® or Success® prior to the introduction of Cucumeris. Hypoaspis predatory mites should also be used in the soil to help control thrips pupae. Control weed hosts in close proximity to the greenhouse where thrips may breed.

How to Release:

Cucumeris should be released at a rate of 50-100 predators/m². A second release should occur after 2 weeks to ensure even establishment. In highly susceptible or valuable crops, continue low rate releases monthly. Otherwise reintroduction may only be required 2-3 times per year.

Cucumeris is supplied from the insectary at approximately 40,000 predators per litre of substrate. Each litre of insectary material should cover 400-800 m² of greenhouse area (12-25 litres/ha).

This material should be evenly spread over the foliage of the crop. Where seedlings are inoculated 1-2 mL of insectary material should be placed at the base of the plant after transplant, or sprinkle over seedling trays prior to transplant.

Insectary material can be diluted to aid even distribution as follows:

1. Prior to arrival prepare some moistened vermiculite to aid as a carrier. Use 3L of No. 2 Fine grade vermiculite for each litre of cucumeris ordered. Place into a large GARBAG and add 50ml water/L vermiculite. Tie off top of bag and mix material. Place in cool dark place for 24 hours for moisture to be evenly absorbed.
2. Mix vermiculite several more times before adding *N. cucumeris*.
3. Place 3L moistened vermiculite and 1L of Cucumeris in a bucket and mix by tipping the mixture from one bucket to another several times. The new mixture can be distributed at a rate of 1L every 100-200m².