Amblyseius (Neoseiulus) cucumeris
Thrips predator

ACTIVE INGREDIENT:
Amblyseius (Neoseiulus) cucumeris ........................................................................................................100%

ATTENTION:
No hazard to humans or domestic animals No hazard to plants
No risk to employees or customers No re-entry delays
Lethal for plant pests Not harmful if swallowed

TARGET PEST
Western flower thrips (Frankliniella occidentalis)
Onion thrips (Thrips tabaci)
Other impacted pests include cyclamen, bamboo and broad mites

DESCRIPTION
Cucumeris is a species of predatory mite that feeds on immature stages of thrips. It also feeds on pollen, two-spotted mites and other species of mites. Adults are pear-shaped, tan in color, and less than 0.5mm (1/50th in.) long. Eggs are round, transparent, and 0.14mm in diameter.

USE IN BIOLOGICAL CONTROL
Cucumeris is mainly used to control western flower thrips on greenhouse vegetable and flower crops. Cucumeris will also feed on pollen in the absence of thrips, which makes for great use as a preventative measure.

Optimum conditions are 68-77°F (20-25°C) with relative humidity of 66-70%.

MONITORING TIPS
Use a 10-15x hand lens to inspect for mites. They are most often found along veins on the underside of leaves or inside mature flowers.

LIFE CYCLE
The complete life cycle takes 10-12 days at 68°F. Cucumeris populations have somewhat more females than males (64% female). Females will lay 1-3 eggs per day, with an average of 35 eggs over a lifetime. Eggs are laid on leaf hairs along the veins on the lower surface of leaves. They will hatch in about 3 days.

Newly hatched larvae do not feed until they moult at 2 days old. They feed for another 7 days before becoming adults. Adults live for up to 30 days and eat an average of 1 thrips per day.

While outdoor populations of Cucumeris in northern climates will diapause in response to short days, the cucumeris sold for greenhouse use are non-diapausing strains that may be used year round.

PRODUCT INFORMATION
Cucumeris adults and immature mites are shipped mixed with a bran carrier. They are available in two types of packaging- bulk cartons and slow release bags.

Bulk cartons contain 10,000-50,000 predators. The contents are gently shaken onto leaves throughout the greenhouse or placed on the rockwool block or growing media in contact with the plant stem. Upon receipt, active predators should be visible at the top of containers at room temperature.

Slow release bags contain approximately 1/8 cup (30 mL) of carrier with predators and a food source. The bags act as miniature breeding units and are hung on plants throughout the greenhouse. Over four weeks, each bag can produce over 1,000 predators under good conditions.

INTRODUCTION RATES
Relatively high introduction rates are required because thrips can reproduce nearly twice as fast as cucumeris, who also only feed on immature thrips (not adults).
General Introduction Rate: 5-50 each per square foot every 3 to 4 weeks depending on crop.

Bulk Container:
Greenhouse peppers: 10 cucumeris per plant. One introduction is sufficient early in the growing season if pollen is available as an alternate food source.

Greenhouse cucumbers: As a starter culture for young plants, apply 25 cucumeris per plant by placing a small pile of media touching the base of the stem as soon as they are planted. On larger plants, use 50-100 cucumeris per plant, weekly, until the percentage of leaves with predators is greater than that of thrips.

Greenhouse tomatoes: 25 cucumeris per plant, weekly for two weeks, when thrips are detected.
General: 5 cucumeris per square foot.

Slow Release Bags:
Greenhouse cucumbers: 1 bag per 5 plants, every 1-2 weeks until there is one on every plant in infested areas.

Interior plantscapes: 1 bag per large plant, every 6-8 weeks.

Hang bags within 10 inches (25 cm) of the growing point on greenhouse crops, ensuring good contact with the stem and leaves. Bags should not be exposed to direct sunlight or overhead watering. Do not tear open prepunched bags as they will become too dry.

Establishment of cucumeris requires 4-8 weeks, so it should be applied before thrips problems develop. Because cucumeris feed only on immature thrips stages, a decrease in future adult thrips populations will not occur for about 3 weeks. Adult thrips have a long life cycle (30+ days) and will continue to cause damage. Adult thrips should be controlled by releases of Orius spp. or by using sticky traps.

FOR BEST RESULTS
Where Persimilis is being used for control of spider mites, avoid heavy applications of cucumeris. Cucumeris feed on spider mite eggs, which may limit the food supply for immature Persimilis and reduce their effectiveness. Use cucumeris along with other thrips predators such as Orius spp. on flowering plants and Stratiolaelaps to control thrips pupae in the growth media.

Source: Applied Bio-nomics Ltd.