

## Effective use in Commercial Cannabis cultivation:

Rates with *Stratiolaelaps Scimitus* (SS) in cannabis seem to vary a little from what the traditional, registered rates would indicate. Instead of treating in meters, and as a row crop, we recommend that each plant have direct attention paid to them, for optimal results. The climate fluctuation and temperature and humidity variations, along with the plant's rapid growth pattern, necessity to ensure proper air movement, and hairiness/stickiness of the plant all combine to make cannabis a complex and difficult crop to treat.

For Commercial Cannabis Rates, please fill out our [Commercial Cultivation Inquiry](#) for a discrete, personalized Chemical-Free Pest Management plan.

Formerly *Hypoaspis miles*, SS is a soil dwelling generalist mite that feeds on fungus gnat larvae, pupating thrips, immature root aphids, and small insects. Used as a preventative, this soil mite will help to protect your rooting system from many common pests.

Applications of SS soil mites, together with *Dalotia rove* beetles, is an effective combination to prevent against root aphids.

## For Best Results

Fungus gnat prevention in cannabis is a little different than traditional agriculture or horticulture, as growers are continually transplanting new clones, or are transplanting to larger containers. New soil may mean new pests being introduced in your garden.

Do not mix predators into the growth media before potting plants because they do not survive. Apply SS shortly after, i.e. within the first few weeks of, planting and before fungus gnat levels reach more than 20 adults per trap, per week. To control high numbers of fungus gnats, use of SS can be integrated with insect parasitic nematodes, which control the larval stage of fungus gnats.

Do not water soil or growing medium 10 minutes before and a few hours after release. To release, rotate the canister (to distribute mites inside), then open the lid and remove the filter paper. Place the lid back on, and tap the mites out of the canister evenly onto the soil. Also distribute on floors, greenhouse weeds, under benches, and places where fungus gnat larvae will develop. Leave the canister and filter paper in the treatment area to ensure release of all mites. Release product within 1 week of being received. Store canister on its side at 60-70° F.

Please apply SS within the first week of planting for optimal results.

## Description

*Stratiolaelaps scimitus* is a native species of soil-dwelling mite, which feeds on small insects and mites (e.g. springtails, root mealybug crawlers, and spider mites). Adults are tan in color, less than 1 mm long (1/20th in.) and move rapidly over the soil surface. They live, eat, and reproduce in the soil medium and walkways, on the greenhouse floor.

## Biological Control

This product has been the cornerstone of the industry for over 25 years, where it has been known as *Hypoaspis miles*. It is an accomplished generalist soil predatory mite, capable of controlling Fungus Gnat larvae, thrips pupae, pathogenic nematodes, Spring Tails, Black Vine Root Weevil, Strawberry Root Weevil, and Cactus Root Weevil to name a few. Though not listed, because SS is considered a generalist they may help with root aphid prevention also.

SS are used primarily to control young larvae of fungus gnats in the soil or planting media. They also help control soil stages of thrips and may account for up to 30% of thrips control. They do not control shore flies or moth flies, but will feed on other soil organisms, such as springtails and root mealybugs. They have been used successfully in bedding and potted plant production, seedling and cutting propagation, and poinsettia stock. SS adapt well to the various growth media and capillary mats used in plant production, but do not survive freezing or flooding conditions.

## **Life Cycle**

The complete life cycle takes about 18 days at 68°F. The sex ratio is an equal 1:1, females to males. Eggs hatch in 2-3 days into young nymphs, which are also fierce predators that consume eggs and small larvae. Each adult SS will consume 1-5 prey per day. It can also survive as a scavenger in the absence of pests, feeding on algae and plant debris. Populations will naturally fluctuate throughout the growing season.

## **Introduction Rates**

Apply 25,000 mites per 1,000 - 2,000 square feet

SS is most effective when applied before fungus gnat populations become established or when numbers are still low (below 10 per trap, per week). Two applications of SS per crop cycle are usually sufficient if used early in the season. The second application should be made 2-3 weeks after the first.