



Hypoaspis (*Stratiolaelaps miles*) - Fungus Gnat Predator

Hypoaspis is a soil dwelling mite which feeds on small arthropods and nematodes. It is harmless to plants and people. It gives excellent control of fungus gnats when used preventatively and helps to control thrips by attacking thrips pupae in the soil.

Description & Life Cycle:

The adult mite is brown and about 1mm long. Young stages (a larval stage and two nymphal stages) are pale and smaller. Optimum temperature for development is 25°C. At this temperature development takes about two weeks and each female lays 2-3 eggs/day in the soil. Minimum temperature for development is 12°C (with a much longer lifecycle); while a soil temperature above 30°C is harmful.

Target Pests:

The main target for *Hypoaspis* is the larvae of fungus gnats (sciarids). The larvae are generally found in the upper level of soil close to the root zone. Sciarid larvae damage plants by tunnelling into the roots and occasionally plant stems.

Hypoaspis can reduce thrips populations by 30% by feeding on pupae in the soil. This is not sufficient to control thrips on its own, but can be very important when used in conjunction with *Neoseiulus cucumeris* which targets thrips larvae in the plant canopy.

Suitable Crops:

Fungus gnats are primary pests in bedding plants, propagation nurseries, crops such as tomatoes, strawberries, cucumbers, and flowers like gerbera, poinsettia, and cyclamen. *Hypoaspis* will establish in most greenhouse conditions and most growing media, including potting mixes, soil, rock wool and perlite. It will not tolerate flooding or water logged areas, but will not be harmed by regular watering provided the media has good air porosity.

When to Release:

Best results are achieved when used preventatively (before pests are observed) or when pest populations are low. Where there is a history of fungus gnat infestation, *Hypoaspis* should be released into each container at the time of planting and again 2 weeks later. Monitor fungus gnat levels with yellow sticky traps and release at the first sign of adult gnats. Areas of greater infestations must be identified for more concentrated treatment or possible alterations to practices. If fungus gnats are already high, lower the population level with a treatment of parasitic nematodes (*Steinernema feltiae*) before releasing *Hypoaspis*. Only use insecticides as a last resort if pests are extreme.

How to Release:

Hypoaspis are packaged in a pasteurised peat and vermiculite mix and are sold by the litre. Each litre contains at least 15,000 mites of all life stages. *Hypoaspis* should be released as soon as possible on receipt. Thoroughly mix the contents of the bag to evenly distribute the mites. Place a small amount of material into each container. Each litre will treat 100-150m² of bedding or 200 to 300 pots (150mm) preventatively. Double release rates if fungus gnats are already present.

Pesticides:

Hypoaspis are more tolerant of many pesticides than most other beneficial species provided the chemicals are not drenched through the soil media. However some, particularly pyrethroids are toxic and should be avoided. Refer to the Good Bug Book, or contact us for more information on chemical compatibility.

Ordering & Accounts:

Orders are sent via Express Post on Monday or Tuesday of each week, and usually arrive within a couple of days. Orders received after noon on Tuesday are sent the following Monday. Prices are on a sliding scale i.e. the more that is purchased over a monthly period the less their price will be per litre. Postage is charged at Australia Post rates. Accounts are sent at the end of each month, and can be paid by cheque, BPay, or postal order.

For further enquiries please telephone our office between 8am and 4-30pm, Mon Fri.

