

# Hypoaspis-System

Soil insects can cause a lot of damage in various crops. Thanks to the predatory mite *Stratiolaelaps scimitus* (previously named *Hypoaspis miles*) an effective biological control is recently possible. *Hypoaspis-System* has already shown good potential as a control for sciarid flies (Sciaridae), but it surely has a lot more to offer.

## SCIARID FLY

Sciarid larvae can cause a lot of damage in various crops, such as in the culture of pot plants, as well as to the breeding of basic plant material.

Very often the growth of the plant can slow down due to an attack of soil insects and the plant might even wilt because of this. Fungi and bacteria can easily enter the plant through damaged plant parts.

*Hypoaspis* can be introduced without any problem in combination with insect parasitic nematodes.

Trials have shown that this soil-dwelling predatory mite is a very efficient beneficial for the control of sciarid fly larvae.

## *STRATIOLAELAPS SCIMITUS*

*S. scimitus* is a brown-coloured predatory mite, growing to 1 mm in length. This predatory mite naturally inhabits the top layer (at a depth of 1 to 4 cm) of the soil and feeds on harmful soil insects, such as springtails, thrips pupae and sciarid fly larvae (sciarid fly = fungus gnat).

Females lay their eggs in the soil. At 25°C this mite takes 10 to 13 days from egg to adult, passing through three immature stages. It feels very good at home in moist potting compost and can live for up to 7 weeks in the absence of food. This predatory mite is very active at temperatures exceeding 10°C and can become 140 days old under favourable circumstances.

## INTRODUCTION RATES

The quantity of *S. scimitus* that is introduced depends on the kind of crop, the length of time and the infection pressure.

- \* At a low infection pressure and/or a longer length of time 50 to 500 mites/m<sup>2</sup> are introduced.
- \* At a high infection pressure and/or a short length of time 500 to 1000 mites/m<sup>2</sup> are introduced.

Apart from that, it is clear that *S. scimitus* is preferably introduced when only a small amount of harmful insects is present in order to get a good biological control.

In practice, *S. scimitus* seems to be effective as well in controlling millipedes and root aphids as well as some other harmful soil organisms. It still has to be investigated, however, whether the control of these insects is sufficient enough.

## HYPOASPIS-SYSTEM

Biobest delivers 10.000 or 25.000 *S. scimitus* in 1 liter tubes and 125.000 predatory mites in a 5 liter bucket. The carrier is a mixture of vermiculite and peat with a factitious prey. It is possible to store *Hypoaspis-System* for a short time at a temperature of 12 - 18°C on a moist substance.