

## A flying biological predator of red spider mite!

### BIOLOGY

*Feltiella acarisuga* is a gall midge, similar to the aphid predator *Aphidoletes*. The adult *Feltiella* lays yellow-coloured eggs of about 0.25 mm amongst red spider mite colonies. After about two days, a creamy brownish yellow larva hatches from this egg, and devours red spider mites. *Feltiella* has four larval stages. After about one week, the larvae pupate. The fully-grown larvae are 1.7 to 1.9 mm long and have a diameter of 0.4 mm. The pupae of *Feltiella* look like white fluff and are usually found near the veins of the leaf. They are 1 to 1.5 mm long. The total life cycle varies with temperature, but generally takes about 2 to 4 weeks.

*Feltiella* is also found endemically, and can be often seen in crops towards the end of the summer.

### FIELD OF APPLICATION

*Feltiella* has already proved its use in extensive practical experiments in cucumbers and tomatoes. In particular for tomatoes, where the biological control of red spider mite has so far been very difficult, *Feltiella* is a welcome improvement.

### ADVANTAGES

*Feltiella* will become an important component of the biological control of red spider mite, particularly because of the following advantages:

1. In contrast to the predatory mite *Phytoseiulus persimilis*, *Feltiella* is able to effectively control red spider mites in tomatoes.

In case of heavy infestations of red spider mite, *Feltiella* can be used in combination with the special tomato-*Phytoseiulus* (*Phytoseiulus*-T-System).

2. *Feltiella* also controls overwintered red spider mite, which may be important in spring and autumn.
3. The toxic carmine spider mite (*Tetranychus cinnabarinus*), which can cause great damage in crops, like carnations and tomatoes, can be effectively controlled with *Feltiella*.
4. The adult *Feltiella* are capable, while flying, of tracking colonies of red spider mite. The great detective capacity of *Feltiella* is an important advantage in comparison with *Phytoseiulus*, which can only spread by walking. Scouting crops for the presence of *Feltiella* is easy since both the larvae and the adults are visible.
5. Because of its excellent flying capacity, distributing *Feltiella* in the crop requires very little work.
6. *Feltiella* larvae eat eggs, nymphs and adults of red spider mites. *Feltiella* eats at least 5 times as many red spider mites per day as *Phytoseiulus*.
7. Field tests show that *Feltiella* is also active in cold and dark weather in spring and autumn. That is an important advantage in strawberries and soft fruits.
8. *Feltiella* can easily be detected in the crop. Both its larvae and its pupae are conspicuous.

### SIDE EFFECTS

Experiments have shown that Thiovit (sulphur), Rubigan and Rovral are safe to use. Torque can influence the population build-up of *Feltiella* because the red spider mite is killed. For more information, check the side-effects list.

## FELTIELLA-SYSTEM

*Feltiella* is supplied as pupae on paper pieces in 1L pots. One pot contains 250 pupae. These pots are very user-friendly. By piercing the paper disc in the cover, the adult gall midges can escape after emergence. The pots are simply placed in the shade on the ground, in the crop at the beginning of a row.

## FELTIELLA-SYSTEM LV

Biobest can also deliver this beneficial gall midge in a reduced package. Feltiella-System LV (Low Volume) contains 250 pupae on paper pieces, packed in a small plastic dish. By opening the dish in the crop, adult gall midges can easily escape and search for spider mite hot spots.

## BIOBEST ADVISORY SCHEDULE

1. In **spring**, when the red spider mites come out after hibernation, introduce 2-3 pots per hectare weekly. It is best to place the pots where colonies of red spider mites are commencing.
2. Heavy infestations across the entire greenhouse in **spring** are best controlled by putting out 10 pots (250 pupae) per hectare weekly, during six successive weeks. The purpose is to build up a *Feltiella* population across the entire crop as soon as possible.
3. In **summer**, the number of introductions can be limited to 4, because the life cycle of *Feltiella* becomes shorter at increasing temperatures.

We recommend the application of *Feltiella* during the building-up period in combination with *Phytoseiulus* or Tomato-*Phytoseiulus*.

In the beginning, *Feltiella* will be concentrated in larger colonies of red spider mite. As the *Feltiella* population increases, *Feltiella* will distribute to smaller colonies of red spider mite.

### ADVANTAGES

- Also applicable in tomatoes;
- Applicable in crops where scouting is difficult, such as ornamentals;
- Also kills red spider mite and the toxic spider mite *Tetranychus cinnabarinus*;
- Excellent detective capacity;
- Spreads while flying;
- User-friendly & labour-saving;
- Can be used in cold and dark weather in spring and autumn;
- Provides long-lasting protection;
- Can be easily seen in the crop.