

**SWIRSKII-SYSTEM
SWIRSKII-BREEDING-
SYSTEM
SWIRSKII-LONG-LIFE-
SYSTEM**

TECHNICAL DATA SHEET



Targets

- Greenhouse and Tobacco whitefly (*Trialeurodes vaporariorum* and *Bemisia tabaci*)
- Thrips (*Frankliniella occidentalis*)
- Spider mites (2° effect)
- Tarsonemid mites (2° effect)

Crops

- Vegetable crops: i.e. pepper, eggplant, cucumber, bean
- Soft fruits: i.e. raspberries, strawberries
- Ornamental crops: gerbera, poinsettia, chrysanthemum, roses

Registration number

Swirskii-system

AUT-Pfl. Reg. Nr. 3004
ESP-Nº MDF: OCB 0395
GRC-Αριθμός εγκρίσεως 7458/82428/18-7-2016
LVA-Svirski sistēma (Swirskii-System) (Reg. Nr. 0441)

Swirskii-Breeding-System

AUT-Pfl. Reg. Nr. 3076
ESP-Nº MDF: OCB 0395
GRC-Αριθμός εγκρίσεως 7459/82430/18-7-2016
LVA-Svirski sistēma (Swirskii-Breeding-System) (Reg. Nr. 0441)

TUR-Ruhsat Tarihi ve No'su 8727

Swirskii-Long-Life-System

ESP-Nº MDF: OCB 0526
GRC-Αριθμός εγκρίσεως 7460/82431/18-7-2016

Key features

- Predatory mite
- *Amblyseius (Typhlodromips) swirskii*
- Highly voracious
- Very mobile
- Wide range of preys
- Can survive on pollen
- Can adapt to high temperatures
- Rapid development, no diapause

Mode of action

- Mainly predate on:
 - o young eggs, crawlers and 2nd instar larvae of the greenhouse and tobacco whitefly
 - o young larvae of the western flower thrips, onion thrips and chilli thrips
- To a certain degree feeds on spider mites and tarsonemids
- Consumes generally 5-10 preys a day

Product specifications

| Product | Package | Package content |
|-------------------------------|-------------|-----------------------------|
| Swirskii-System-25.000 | 500 ml | 25.000 predatory mites |
| Swirskii-System-125.000 | 5 l | 125.000 predatory mites |
| Swirskii-Breeding-System-100 | 100 sachets | 250 predatory mites/sachet* |
| Swirskii-Breeding-System-500 | 500 sachets | 250 predatory mites/sachet* |
| Swirskii-Long-Life-System-500 | 500 sachets | 250 predatory mites/sachet° |

*Approx. 1.500 mites walk out over a 6 week period

°Approx. 2.500 mites walk out over a 8 week period

Note: all mites are on bran carrier

Storage

Use immediately upon receipt. If not possible, product can be briefly stored horizontally in a dark room with enough ventilation at 15°C/59°F and 75% RH. Always respect the use-by-date.

Dose rate

| Mode | Dosage | Area | Repeat |
|--|------------------------------|----------------------|----------------|
| Swirskii-System | | | |
| Preventative | 20 ind./m ² | Full field on leaves | When necessary |
| Curative | Min. 100 ind./m ² | Where pest detected | When necessary |
| Swirskii-Breeding-System/ Swirskii-Long-Life-System | | | |
| Preventative | 1 sachet/2m ² | Full field in plant | Every 4 weeks |

Instructions of use

Release moment

Release when plant starts flowering (before is possible only with additional feeding, see below). *A. swirskii* doesn't feed on adult stages of its prey, therefore preventative releases are recommended early in the crop cycle before pest shows up. Curatively when pest is detected in high numbers. Complement its action with parasitic wasps (Encarsia-System and Eretmocerus-System) for older larval stages of whitefly and with pirate bugs (Orius-System) for older thrips larvae and adults.

Release method

Bulk material: Gently rotate the bottle horizontally to ensure homogenous distribution. Press the lid to open the sprinkler cap. Sprinkle the content on the horizontal leaves. Prior to this, blow Nutrimite™ in the crop to boost and maintain the population of *A. swirskii* (see also Technical sheet Nutrimite™).

Breeding sachet: Hang the sachets in the crop inside the canopy, protected from direct sunlight. Pinching the sachets may damage the predatory mite. Handle the sachets by the cardboard hook. Do not perforate the sachet or tear it open, as the sachet have already a small exit hole.





Additional feeding:

Blow Nutrimite™ in the crop at 500 g/ha every 2 weeks to boost and accelerate the population development of *A. swirskii* or to support an existing population at periods of low prey densities. It also allows early installation of the mite before flowering.

Release conditions

Optimal development temperature is between 25°C/77°F and 28°C/82°F but mites stay active even up to temperatures of 40°C/104°F. Under 15°C/59°F however mites remain inactive. The critical relative humidity is about 50%. Because of the absence of diapause, *Amblyseius swirskii* can also be applied during periods with less light. *A. swirskii* feed also on eggs of Phytoseiulus-System and Aphidoletes-System. Take care when released in the same crop.

Life cycle and appearance

| Egg | Larva | Nymph | Adult |
|---|---|---|--|
| <ul style="list-style-type: none"> - 2 – 3 eggs per day* - Oval shaped, white - 0.14 mm diameter - Hatch in 1.7 days* | <ul style="list-style-type: none"> - Pale white to nearly transparent - 3 pair of legs - Do not feed - Duration: 1 day* | <ul style="list-style-type: none"> - Darker than larvae - 4 pair of legs - Duration: 4,5 days* | <ul style="list-style-type: none"> - Pear shaped - Pale yellow to tan - 0.5 mm - Life span: 25.8 days* |
|  |  |  |  |

*(25°C/77°F)

Monitoring

- Eggs and mobile stages can be found on the undersides of leaves. Eggs are laid on leaf hairs near the junction of veins. Mobile stages walk along veins and aggregate on the lower surface of the leaves, in between the leaf hairs at the juncture of the midrib and the veins. Plants with hairless leaves may hamper the population establishment of *A. swirskii*.
- Adults may also be found in flowers, feeding from its pollen and present thrips larvae.
- After 1 week of introduction mites and eggs can be observed on some leaves in the introduction plants. At the 3rd-4th week *A. swirskii* covers more leaves in the release site and overlapping plants.
- The establishment will be faster in pollen bearing crops and with sufficient prey level, or when Nutrimite™ is applied.
- *A. swirskii* is impossible to distinguish from *A. cucumeris*, *A. californicus* or *A. andersoni* with the naked eye or loupe.

DISCLAIMER: Use plant protection products safely. Please read the label and product information before use. Please consult the instructions for use to prevent potential harm to people and environment.