Beneficial Insects
TECHNICAL DATA SHEET

SUSTAINABLE CROP MANAGEMENT

PLANTPRODUCTS®
A member of Biobest Group

SWIRSKII-SYSTEM
and
SWIRSKII-BREEDING-SYSTEM
Amblyseius swirskii

Swirskii is a highly mobile predatory mite with a broad range of pests, it can also survive and reproduce on pollen. It is considered a generalist predatory mite. It mainly preys on eggs and young stages of whiteflies and thrips. To a certain degree they also feed on spider mites and tarsonemids. They consume generally 5-10 prey a day.

Product Specifications

Commercial name	Specifications
Swirskii-System - 25,000	• 500 ml bottle: 25,000 mites • Carrier: bran and factitious prey
Swirskii-System - 125,000	• 5 L bucket: 125,000 mites • Carrier: bran and factitious prey
Swirskii-Breeding-System - 100	• Swirskii sachets: 100 sachets • Carrier: bran and factitious prey
Swirskii-Breeding-System - 500	• Swirskii sachets: 500 sachets • Carrier: bran and factitious prey

Storage

Use immediately upon receipt. If not possible, product can be briefly stored horizontally in a dark room with enough ventilation at 59˚F (15˚C).

Rates

Mode	Dosage	Area	Repeat
Swirskii-System			
Preventative	25-75 ind./m²	Full field on leaves	Before pest presence
Curative	75-150 ind./m²	Where pest detected	When necessary

Features

- Predatory mite
- Very mobile
- Wide range of preys
- Survives and reproduces on pollen
- Adapted to high temperatures
- Rapid development, no diapause
- Suitable for food supplementation with Nutrimite™

Targets

- Greenhouse and Tobacco whitefly *(Trialeurodes vaporariorum and Bemisia tabaci)*
- Western flower thrips, onion thrips, chilli thrips, citrus thrips
- Spider mites (2˚ effect)
- Broad mites / Cyclamen mites *Eriophyid mites

Crops

- Vegetables / Herbs
- Soft fruits
- Ornamentals
- Cannabis / hemp

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SWIRSKII-SYSTEM and SWIRSKII-BREEDING-SYSTEM

Rates

Mode	Dosage	Area	Repeat
Swirskii-Breeding-System			
Preventative	1 sachet/hanging basket 1 sachet/linear meter 0.5-1 sachet/linear meter	Full field in plant	Every 4 weeks

Instructions

Release moment

Sachets

- Hang sachets by the hook at the desired height in the plant, out of direct sunlight and away from overhead irrigation or direct sprays.
- Sachets are water resistant, however water can still enter through the exit hole.
- Do not puncture the sachet or make the exit hole bigger.
- Contents of sachet will continue to breed for 4-6 weeks.
- To protect multiple plants, canopy needs to be touching. If plants are not touching, hang one sachet per plant.
- Feed A. Swirskii with Nutrimite™ for increased reproduction. (*See additional feeding)

Loose

- Warm the tube to room temperature, keeping it in a horizontal position.
- Before applying, gently roll or rotate the container a few times, so that the mites are evenly dispersed within the carrier.
- Product comes in tubes and buckets, apply accordingly:
  - To open the cardboard tube, turn the dial and push through the plastic cutout.
  - To open the bucket, pull on the plastic strap to remove it and open the lid.
- Release bulk material preventively or curatively over crop canopy of susceptible varieties and surrounding plants.
- Apply manually (sprinkling/broadcasting) or by using a Makita blower with Nutri-App (speed level 1-2 only)
- If plant canopies are not touching or connected, make sure to apply onto every plant.
- If carrier over foliage is undesirable, use Bio-Boxes, hang them from the crop or pots and add the desired amount of product inside.
- Feed A. Swirskii with Nutrimite™ for increased reproduction. (*See additional feeding)

***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. (Or 250 gr/ha weekly if crop is overhead watered or multiple spray applications take place).

Release conditions

Optimal development temperature is between 77˚F (25˚C) and 82˚F (28˚C) but mites stay active even up to temperatures of 104˚F (40˚C). Under 59˚F (15˚C) however mites remain inactive. With temperatures below 68˚F (20˚C) the mites will fail to reproduce. The critical relative humidity is about 50%. Because of the absence of diapause, Amblyseius swirskii can be applied year round, provided temperature and RH conditions are met. A. swirskii heavily feeds on eggs of Degenerans-System and Aphidoletes-System. Introduction of other non affected biocontrol agents may be necessary. Take care when released in the same crop.

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 establishment of A. swirskii.
- Adults may also be found in flowers, feeding on pollen or thrips.
- After 1 week of introduction mites and eggs can be observed on some leaves in the introduction plants. Three to four weeks after release, A. swirskii could be readily seen in and around release points
- 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.

SWIRSKII-SYSTEM and SWIRSKII-BREEDING-SYSTEM

Life cycle and appearance

Egg	Larva	Nymph	Adult
• 2-3 eggs per day* • Oval shaped, white • 0.14 mm diameter • Hatch in 1.7 days*	• Pale white to nearly transparent • 3 pair of legs • Do not feed • Duration: 1 day*	• Darker than larvae • 4 pair of legs • Duration: 4,5 days*	• Pear shaped • Pale yellow to tan • 0.5 mm • Life span: 25.8 days*
			

*77˚F (25˚C)