TENNESSEE STATE UNIVERSITY
College of Agriculture

Amblyseius swirskii

Vivek Ojha and Karla Addesso

Amblyseius swirskii (Swirski) is a generalist predator that is commercially available for biological control of thrips, whiteflies and mites in greenhouse and field production. Swirski is similar in size to its prey and may vary in color from deep red to pale yellow depending on prey items eaten. Swirski has five life stages: eggs, larva, protonymph, deutonymph and adult. All mobile stages consume prey.

Preferred Food.

- **Western Flower Thrips.** Thrips are ubiquitous pests that vector diseases and causes feeding damage to over 200 vegetable and ornamental crops. Thrips can damage plants directly through feeding or by transmitting viruses. They can cause leaf discoloration as well as deformation of buds and flowers.
- **Greenhouse and Silverleaf Whitefly.** Whiteflies are common pests in the greenhouse with a broad host range. These insects suck plant sap, primarily phloem, and secrete honeydew as a byproduct. Whiteflies cause damage directly by feeding and indirectly by transmitting viruses and inducing the growth of sooty mold which feeds on honeydew.
- **Broad and Spider Mites.** Broad mites are extremely small (0.2 mm), making them difficult to see even with a hand lens. They feed on new growth causing stunting and twisting of foliage similar visually to 2,4-D damage. Spider mites are destructive in both outdoor and indoor production. Adults spider mites are larger then broad mites and vary in color by species. The spider-like webbing they produce distinguishes them from other mites. Feeding damage by spider mites results in silvering of foliage.
- **Pollen.** *A. swirskii* can be established without prey because it can feed on pollen. Pollen can be provided to predators as a supplement or via flowering plants (ex. ornamental pepper) dispersed through the target crop.

www.arbico-organics.com

Spider mite. © Gilles San Martin

Thrips. © Jack T. Reed, Mississippi State University, Bugwood.org

Whitefly. © Weisse-Fliege

Visit our website
www.tnstate.edu/agriculture/extension
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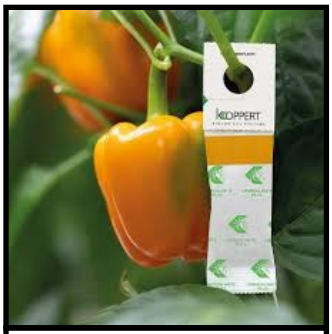
How to Apply.

After receiving any beneficial, read the directions carefully. Swirski works best at temperatures ranging from 68-70°F and a minimum of 63°F. Before applying, check that mites are alive and active. Mites can be stored at 50°F until use (in a cooler with an ice pack). Apply mites as soon as possible. Avoid temperature extremes by applying mites in the early morning or late evening. Allow the container to warm to room temperature one hour before application. Lightly spray foliage with water to aid in sticking of mite carrier to plants. Repeated applications of swirski may be required to achieve control of pests.

Beneficial Insect and Mite Suppliers.

- Applied Bio-nomics (www.appliedbio-nomics.com)
- Beneficial Insectary (www.insectary.com)
- BioBee (www.biobee.com)
- BioBest (www.biobestgroup.com)
- BioWorks (www.bioworksinc.com)
- Koppert (www.koppertonline.com)

Shaker bottle, www.koppert.com



Slow-release sachet, www.koppert.com

*Contact your local extension agent for more information on beneficial mites and insects

** Company names are provided for information purposes only and do not constitute an endorsement by Tennessee State University

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