

This Month In Pests



Whiteflies are gaining importance as we discover new pesticide-resistant biotypes of pests we thought we understood. The ability of these insects to become resistant to our insecticides is well-known but, unfortunately, not always recognized. Greenhouse whitefly (*Trialeurodes*), silverleaf whitefly (*Bemisia*) and even giant whitefly (*Aleurodicus*) are each a concern for many ornamental producers.

— A.R. Chase



Silverleaf whiteflies on poinsettia. (Photos: Dan Gilrein)

Sanitation tips:

1. Remove crop debris and pet plants.
2. Allow a fallow time in the greenhouse if possible.
3. Keep the greenhouse free of weeds inside and outside.
4. Check cuttings for infestation as soon as they are received.
5. Use insect screening when possible or necessary.
6. Watch for symptoms of broad mite infestation — whiteflies can transport broad mites to new areas.

5 Symptoms of whitefly infestation

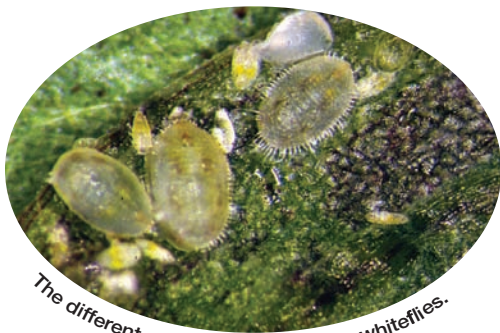
- ▶ Obvious whiteflies flying when plants are disturbed.
- ▶ Scale-like nymphs (immature phase) on leaf undersides.
- ▶ Sticky honeydew and sooty mold.
- ▶ White, waxy filaments (giant whitefly).
- ▶ Bleaching of new growth on poinsettia (silverleaf whitefly).



Closeup of a greenhouse whitefly.

Crops commonly susceptible to whiteflies:

- | | | |
|---------------|----------------------------|-----------------|
| Poinsettia | Exacum | Hibiscus |
| Gerbera daisy | Fuchsia | Salvia |
| Verbena | Flowering cabbage and kale | And many others |



The different stages of greenhouse whiteflies.

5 Conditions that promote whiteflies

- Temperatures around 86-91° F (silverleaf whitefly), 64-75° F (greenhouse whitefly).
- Introducing infested cuttings or other plants.
- Poor air circulation.
- Crowded plants.
- Failure to scout plants or use sticky cards routinely.

Insecticides best for controlling whiteflies

- Abamectin (Avid)
- Acephate (Orthene TTO) + pyrethroid tank mixes for silverleaf whitefly
- Acetamiprid (Tristar)
- Azadirachtin (Azatin and Ornazin)
- Buprofezin (Talus)
- Clothianidin (Celero)
- Dinotefuron (Safari)
- Imidacloprid (Marathon)
- Pymetrozine (Endeavor)
- Pyriproxyfen (Distance)
- S-Kinoprene (Enstar II)
- Spiromesifen (Judo)
- Thiamethoxam (Flagship)

Natural enemies for whitefly control:

- *Eretmocerus eremicus*
- *Eretmocerus mundus*
- *Encarsia formosa* (greenhouse whitefly)
- *Amblyseius swirskii*
- And others

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Flagship®—dial-in control of whiteflies.

- With dial-in rates for application flexibility, Flagship delivers the length of protection needed against a wide spectrum of sucking and chewing pests (including whiteflies, aphids, mealybugs and fungus gnats). It works through contact and ingestion activity.

For support, call 1-866-SYNGENTA or visit syngentaprofessionalproducts.com.

- Flagship is a systemic insecticide, which allows the option of soil drench or foliar spray applications.

- For whitefly residual control:
 - Foliar spray at 2-4 oz/100 gal or 4-8 oz/acre
 - Drench for longer residual at 8 oz/acre



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