

WHITEFLY CONTROL: UNDERSTANDING INSECT LIFECYCLE & ID

For those of you who have poinsettias on the bench or have started other long-cycle seasonal potted plants for winter or early spring sales, it's critical to keep whitefly populations in-check now to avoid a season-long uphill battle against them.



PHOTO: As fields are combined or tilled and average daily temperatures begin to drop, expect an influx of pests into your greenhouses.

Basic Whitefly Lifecycle

Despite being named “whiteflies,” they are not members of the *Diptera* order. A key distinction for whiteflies is that, unlike true flies, they do not have a pupal stage; only egg, nymph (with several instars) and adult phases of their life cycle—much like aphids.

- Eggs are very small, translucent, and are laid on the undersides of leaves, oftentimes tucked along the midrib or raised veins. In small numbers, they are hard to spot and often go unnoticed unless greater scrutiny is placed on inspection of the undersides of leaves.
- Nymphs are similarly translucent but take on an off-white color and increase in size as they mature, but they never grow appreciably larger than adults. They are mobile for a short time after they hatch, but eventually anchor themselves in-place to feed and develop further. Nymphs are sometimes confused with scale insects, so size and coloration are key ID factors if you’ve dealt with scale in the recent past.

- Compared to pests like two-spotted spider mites, which can complete their life cycle in as little as about five days, whiteflies have much slower life cycles. It takes approximately 30 to 45 days for them to go from egg to reproductive adult, so populations often grow steadily under the radar if initial adult influxes aren't managed, and immatures are not found early on.

Which Whitefly Is Which?

A few different kinds of whiteflies can appear in your greenhouse, so first make sure you know which one you're dealing with. Check out this [UCANR article](#) for a nice summary of how to differentiate which species of whitefly you've got in your greenhouse.

- Silverleaf whitefly (*Bemesia tabaci*; a.k.a. sweet potato whitefly) and greenhouse whitefly (*Trialeurodes vaporariorum*) are the main species of concern on poinsettias and other potted crops.
- Bandedwing whiteflies (*Trialeurodes abutilonea*) can often be found alongside the others on a sticky card, but they are basically just passing through. As such, many growers often exclude bandedwing from their bug counts.

While there are subtle differences between eggs and nymphs of these three species, it is very difficult to differentiate them from one another with the naked eye and without special training. As such, if you find eggs or immatures while scouting, treat the outbreak with broader control measures until the species of whitefly can be identified correctly.

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