e-GRO Alert
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Time for Thrips Already?

Good thrips management starts with cultural controls

There have been several early inquiries about thrips this spring. Just to be clear, we're talking about western flower thrips (WFT), which owe their notoriety to both insecticide resistance and ability to carry tospovirus, to say nothing of the actual direct damage they cause to plants. (Chilli thrips and other species can also be troublesome but are not as widespread and generally easier to manage). WFT seem to know the worst time for putting in an appearance – flowers are in full bloom, sales are hot, and Mother's Day is around the corner. A WFT infestation can be difficult to manage – and expensive. This winter growers have been asking about how to avoid problems with thrips especially on hanging baskets and crops where few controls options are labeled like vegetable transplants. Those who prepare in advance and monitor the population will have a much easier time.

In my experience, in most enclosed northern greenhouses thrips infestations arise from infested pot crops held over into bedding plant production and/or infested cuttings. There are certainly some exceptions. In one operation we've determined the source to be late-summer invasions from outside the greenhouse – WFT populations outdoors in my area

Western flower thrips damage in gloxinia flower

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Western flower thrips damage to mum flowers in Long Island trial. Flowers on left show heavy damage from thrips; those on right were protected from budbreak onward.

have been unusually high the last couple of years. Southern growers may also have trouble with outdoor thrips coming into the range especially in more open-production situations. In enclosed greenhouses where growers have a little more control the following is a review of suggestions to avoid a serious problem.

- Discard old infested plants. They aren't worth the trouble. Tap flowers and foliage over a white paper or board to look for thrips. Even low numbers mean trouble later on.

- Use sticky cards. They help indicate when low numbers are present in an area. Blue cards are best, but yellow is fine and will attract more kinds of insects for monitoring purposes. Set vertically just above the crop canopy where there is good air movement. Track counts weekly. If you're not sure what you're looking at show some to your Extension specialists or consultants. Cards can even be mailed covered in clear plastic wrap. Until we saw the cards, one grower was unaware the greenhouse had a large population of helpful predatory hunter flies and fungus gnat parasitoids.

- Segregate new plants from old, cutting-grown from seed-grown, vegetable transplants from ornamentals if possible.

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Vegetable transplants and others grown from seed will stay clean unless sabotaged by infestations from elsewhere.

- Scan flowers and foliage for distortion or scarring from thrips feeding. Lightly blow into open blooms, which often draws them out. Tap flowers or foliage over a light-colored surface to dislodge thrips. Remove early blooms with thrips inside if practical – WFT finds most flowers irresistible and control in flowers is likely to be relatively poor in most cases anyway.

- Have a low tolerance for any thrips, especially early in the crop. Remember pollen boosts WFT reproduction five times. Good coverage inside flowers is nearly impossible too.

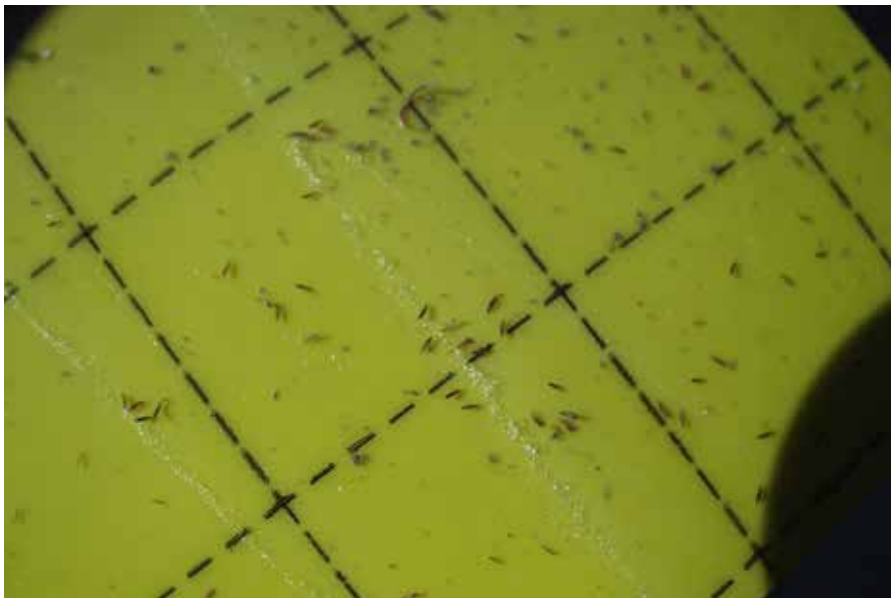
- Consider biocontrol. Predatory *Neoseiulus cucumeris* mites and Orius minute pirate bugs appreciate some pollen too; the mites feed on the first thrips stage after hatching and need humidity around 70% or above with temperatures above 68F for some periods. Orius needs daylengths of 12 hours or more. *Beauveria bassiana* (in BotaniGard) can work much better when humidity stays high (80%+) for 24 – 48 hours. That may not be acceptable with flowers or Botrytis present, but there are times when it may occur naturally. Results with *Beauveria* will be improved if thrips

Mum leaves showing WFT damage (L) and symptoms of tospovirus (R) transmitted by WFT

are exposed on foliage and not in flowers. Preferal, another fungal-based insecticide, will also be best under similar humid conditions.

- Using insecticides. There has been widespread resistance in WFT to Conserve, so best to rotate where control is poor (don't boost the application rate). Overture, Pylon, Mainspring, and (not for NY) Hachi-Hachi are among the latest products showing good results against WFT – they are only for indoor use. Mesurol continues to work reasonably well but has 24-hr REI. Caution: some plants are sensitive to Hachi-Hachi such as poinsettia (bracts), impatiens (all types), salvia, gypsophila, and petunia flowers. Labels note temporary injury to ageratum, colocasia, geranium, lobelia, pansy (flowers), verbena, and vinca. Pylon is not for dianthus, kalanchoe, poinsettia, rose, salvia, or zinnia. Test new products first on any new plant. Kontos, Pedestal, and various azadirachtin products (Azatin XL, Ornazin, Aza-Direct, Molt-X, etc.) are primarily active against immature stage thrips (not adults), so better in combination with other products. TriStar, Marathon/Discus (or generic), Avid (or generic), Safari, Flagship, DuraGuard, and M-Pede are other labeled options that may be useful particularly in tank mixes or a rotation.

Pepper transplant showing severe foliar damage from WFT



WFT trapped on sticky card from a greenhouse with a heavy infestation