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Thrips: Fight that the Living Dread

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Spring is in the air … and so are thrips. They're out there, you know it, even if you don't see them. Like a bad penny they keep turning up each year, and usually at the worst time when crops bloom and time is scarce.

Usually we're talking western flower thrips (WFT) here. All but the newest growers will recall how scary WFT were some years ago, with few effective products to control them. Lots of flower and leaf damage was common, and even worse were severe losses from tomato spotted wilt and impatiens necrotic spot tospoviruses, which they can spread to other greenhouse plants including tomato and pepper transplants. The virus may arrive Trojan horse-like, within cuttings taken from infected mother plants, symptoms appearing later. The thrips then spread it to new host plants. Conserve insecticide changed much of that – a naturally derived product with a natural fit in greenhouses: high plant and worker safety, strong efficacy, not restricted, short re-entry interval, and virtually no visible residue on flowers or foliage. Resistance to spinosad, the active ingredient, appears to be widespread now, so growers are turning to other products – and strategies, so a review is in order.

WFT injury on gloxinia

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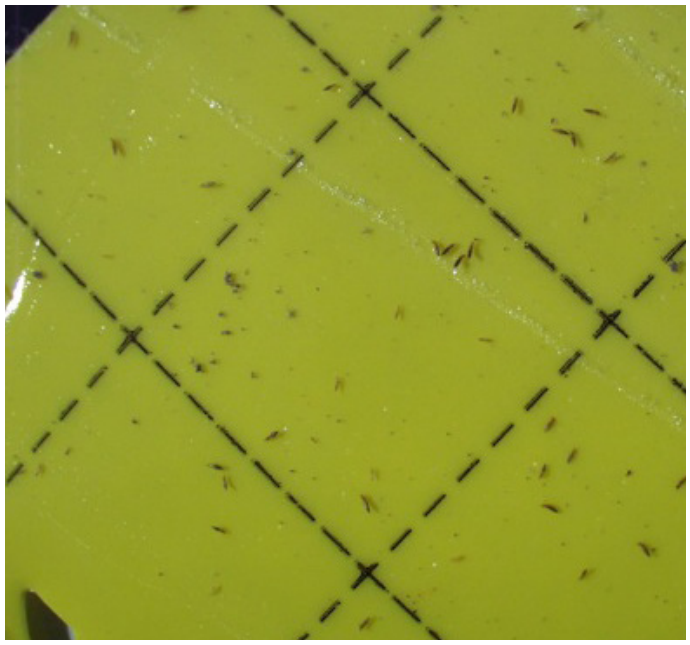
- Discard old infested plants. They aren't worth the trouble.
- Use sticky cards. They help indicate when low numbers are present in an area. Blue cards are best, but yellow is fine and will attract more kinds of insects for monitoring purposes. Set vertically just above the crop canopy where there is good air movement. Track counts weekly.



WFT on Yellow Sticky Card

- Segregate new plants from old, cutting-grown from seed-grown, if possible.
- Scout plants for distortion or scarring on flowers and leaves; lightly blow into open blooms, which often draws them out. Tap flowers or foliage over a light-colored surface or paper to dislodge thrips. Remove early blooms with thrips inside if practical – 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. Trouble really blossoms at bloom: 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*

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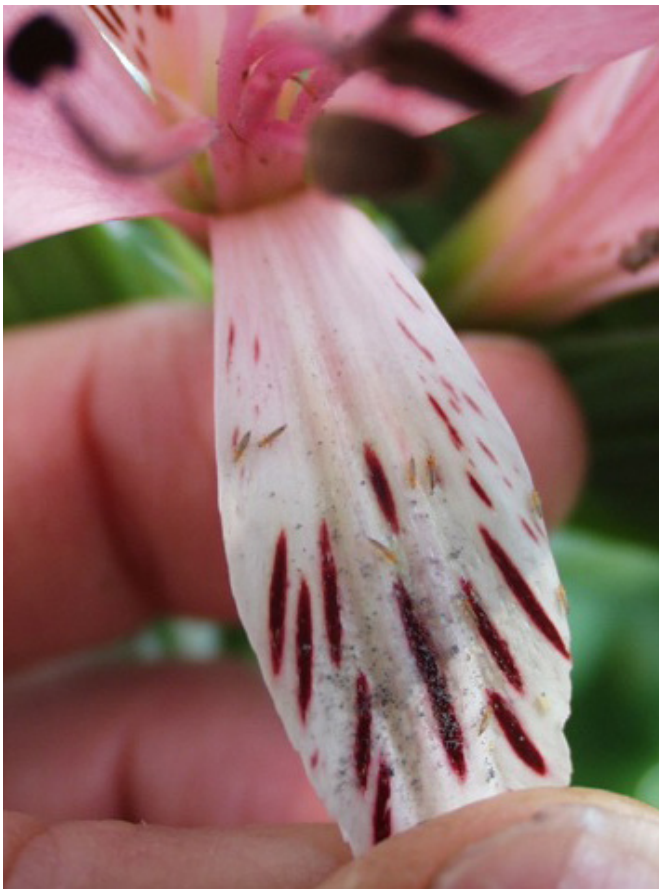
needs daylengths of 12 hours or more. Recent research shows *Beauveria bassiana* (in BotaniGard) can work much better when humidity stays high (80%+) for 24 – 48 hours. That may not be acceptable with flowers or Botrytis present, but there are times when it may occur naturally. Results with *Beauveria* will be improved if thrips are exposed on foliage and not in flowers.

- Using insecticides. Give Conserve a rest if it's not working. Overture, Pylon and Hachi-Hachi are labeled only for indoor use and among the latest products showing good results against WFT. Caution: some plants are sensitive to Hachi-Hachi such as: poinsettia (bracts), impatiens (all types), salvia, gypsophila; 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. Mesurol, TriStar, Marathon/Discus (or generic), Avid (or generic), Safari, Flagship, Azatin (or other azadirachtin), Safari, Pedestal, DuraGuard, and M-Pede are other labeled options that may be useful particularly in tank mixes. (Note that some of the products listed above are not registered for use in all states.)



WFT on alstroemeria flower

WFT injury on mum flower