

Greenhouse Insect Management

David Smitley
Michigan State University
March 12, 2007



Starting clean: Do not carry-over insects from one crop to another. Keep thrips numbers down to less than 10/card/week in the fall and winter on poinsettias and *Dracaena*. Avoid keeping houseplants or allowing weeds to grow in the greenhouse. When each batch of media arrives for a new crop, check it for fungus gnats by filling a 1 gal Zip-lock bag 1/2-full with moist soil. If fungus gnat adults emerge within 2 weeks, consider applying a fungus gnat treatment at planting time. Check incoming plant material carefully for insects.

Scouting: Monitor thrips and whiteflies with yellow sticky cards. Change cards once per week. Use at least one card per house or one per 2,000 sq ft. Check the first plants to flower for thrips. For spider mites and aphids, check susceptible plants like marigold (mites) and pepper (aphids), weekly. Potato wedges can be stuck in soil and checked 24 hours later for fungus gnat larvae.

Systemic insecticides: Use Marathon, Tristar, Flagship, Safari, or Aria in poinsettia pots, lily pots, or in hanging baskets prone to problems with whiteflies, aphids, mealybugs or soft scales. Note: Aria does not work on silverleaf whitefly.

Preventing outbreaks: If yellow sticky cards or scouting indicates an increase in aphids, mites, thrips, fungus gnats or whiteflies, apply the following materials once per week until populations decrease to acceptable levels.

Thrips:	Avid, Conserve, Mesurol, Orthene 97, Safari, Sanmite, Tristar
Aphids:	Aria, Azatin, BotaniGard, Celero, Decathlon, Discus, Distance, Endeavor, Enstar II, Flagship, Marathon, Ornazin, Orthene 97, Precision, Safari, Talstar, Tristar
Whiteflies:	Azatin, BotaniGard, Celero, Decathlon, Distance, Endeavor, Enstar, Flagship, Marathon, Ornazin, Orthene 97, Precision, Safari, Sanmite, Talus, Judo, Tame, Tristar (Note: Q biotype may be resistant to Marathon, Flagship, Tristar, Safari, Distance and Talus)
Mites:	Akari, Avid, Floramite, Hexygon, Judo, Ovation, ProMite, Pylon, Sanmite, Shuttle, Tetrasan, Ultiflora
Broad mites:	Avid, Akari, Judo, Pylon, SanMite, Ultiflora
Fungus gnat (drenches)	Azatin XL, Adept (not on poinsettias), Distance, Marathon (perhaps other nicotinoids; not yet tested), Mesurol
Mealybugs/ Soft scales:	Aria, Celero, Flagship, Orthene, Safari, Talus and Tristar.