

Preliminary Information on Chilli Thrips

(*Scirtothrips dorsalis*)

You may be aware that the presence of Chilli Thrips in Southern California was confirmed by a CA State Laboratory in early August, 2015.

Here is an overview of information as of now.

Hosts: We know that roses host this pest, but many more plant types are vulnerable to them. Chilli Thrips feed on more than 100 plants from about 40 different families which include vegetable, fruit and ornamentals. Many of these are common in our area. Here are SOME of them.

(Some particularly common or important in our area are highlighted.)

Acacia arabica,
Acacia spp. (acacia);
Acer sp. (maple);
Amaranthus blitum (purple amaranth);
Ampelopsis brevipedunculata (porcelain berry);
Anacardium occidentale (cashew);
Arachis hypogaea (peanut);
Asparagus officinalis (asparagus);
Banana,
Beans,
Begonia,
Calotropis gigantea (bowstring hemp);
Camellias: (*japonica* and *sasanqua*)
Camellia sinensis (tea);
Capsicum frutescens (Tabasco pepper);
Castanea crenata (Japanese chestnut);
Cayratia japonica (bushkiller);
Cherry Trees
Chilli peppers,
Chrysanthemum;
Citrus;
Cleyera,
Coccoloba uvifera (sea grape);
Cocoa,
Conocarpus erectus (buttonwood);
Coreopsis,
Corn,
Cotton,
Crape myrtle,
Cuphea hyssopifolia (Mexican heather);
Dahlia
Diospyros kaki (Japanese persimmon);
Distylium racemosum (isu tree);
Duranta,
Eggplant;
Ericaceae
Euonymus;

Eurya japonica (eurya);
Fabaceae
Fagopyrum esculentum (buckwheat);
Figs (*Ficus carica*, Edible Fig);
Ficus elastica (rubber plant);
Ficus,
Fragaria x ananassa
Gardenias,
Ginkgo biloba (ginkgo);
Glycine max (soybean);
Gossypium herbaceum (Levant cotton);
Grape;
Grasses,
Hevea sp. (rubber);
Holly,
Ilex crenata (Japanese holly);
Ilex integra (Mochi tree);
Indian hawthorn,
Japanese pepper.
Jasmine,
Kiwi,
Laguncularia racemosa (white mangrove);
Lamium barbatum (dead nettle);
Laurus nobilis (bayleaf);
Ligustrum japonicum (Ligustrum);
Litchi,
Longan,
Mango,
Melanoxylum sp. (brauna);
Mimosa pudica (Sensitive Plant);
Mung Bean;
Murraya paniculata (orange jasmine);
Nelumbo sp. (Lotus);
Odontonema strictum (Firespike);
Oleaceae
Onion,
Peach,
Peanut,

Pear
Pepper,
Phaseolus vulgaris (bean);
Photinia glabra (Japanese photinia);
Pieris japonica (Japanese pieris);
Pittosporum
Plumbaginaceae
Plumbago (It's ALL OVER THE PLACE HERE!)

Podocarpus
Prunus mume (Japanese apricot);
Prunus salicina (Japanese plum);
Purple Amaranth
Pyracantha
Quercus glauca (Japanese blue oak);
***Quercus virginiana* (live oak);**
Rhaphiolepis indica (Indian hawthorn);
Rhaphiolepis umbellata (Yeddo hawthorn);
Rhododendrom
***Ricinus communis* (castor bean);**

Damage:

Chilli thrips attacks all the above ground parts of its host plants. It prefers young leaves, buds and fruits. Thrips feed by roughly rubbing (rasping) emerging and new plant parts. The rasping breaks plant tissue that oozes sap on which the insect feeds. Feeding may cause leaves to curl upward and become distorted appearing much like herbicide damage. Feeding also causes leaf, bud, and fruit tissue to turn bronze in color. Newer leaves are often shiny and older ones are frequently scarred from rasping. Infested plants become stunted and severe infestations can result in total defoliation of the host. The symptoms may be confused for a fungal disease. This was particularly true with **plumbago** before chilli thrips was identified as the culprit responsible for blackened leaves and leafless stems. Despite severe damage on its many hosts, it can be a challenge to collect more than a handful of chilli thrips even from many infested plants.

Chemical Control:

Without a good control strategy, chilli thrips can be a difficult pest to manage. There are a number of insecticides available to control this pest. **Foliar applications of systemic insecticides have proven more effective in controlling this pest than soil drenches.** Since chilli thrips feed on new growth, it is important to spray when the plant is actively growing. The thrips are generally not present on older damaged leaves. Thus, pruning of infected plant to stimulate new growth may be warranted. Systemic insecticides should be applied as a foliar spray.

Resistance management strategies must be used. Such strategies may include, but are not limited to, rotation of products with different modes of action, avoid treatment of successive generations with the same products. On severely infested plants, an initial spray program may include a treatment with Spinosad, followed 7 to 10 days later by a neonicotinoid, and 7 to 10 days afterwards by the application of an organophosphate. Non-chemical alternatives such as beneficial arthropods and various cultural practices are recommended.

Roses

Saraca indica (ashoka);
Sauropus androgynus (sweetleaf bush);
***Schefflera arboricola* (schefflera);**
Snapdragon,
Sonchus asper (sowthistle);
Soybean,

Strawberry

 (A HUGE crop in Ventua County!)

Syzygium malaccense (Malay apple);
Tamarind
Tamarindus indica
Tamarindus indica (tamarind);
Tea,
Tobacco,
Tomatoes,
Verbena,
Viburnum,
Zinnia,

Active Ingredient	Chemical Family	Brand Names
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Acephate	Organophosphate	Orthene Contact & systemic. Six to 9 Days residual activity. Foliar
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Acetamiprid	Neonicotinoid	Tristar	Contact and systemic. Long lasting and fast acting. Foliar
Dinotefuran	Neonicotinoid	Safari	Contact and systemic. Systemic activity is through the roots. Foliar
Imidacloprid	Neonicotinoid	Merit, Discuss	Contact and stomach poison systemic. Good root systemic activity. Shorter systemic activity when foliar applied. Foliar
Spinosad	Spinosyn. Derived from soil bacterium	Conserve, Precise	Translaminar**. Stomach poison. Not absorbed from the soil. Quick knock-down. Foliar
Abamectin	Avermectins. Derived From Soil bacterium	Avid	Translaminar. Stomach poison. Not absorbed from the soil. 7-10 days residual

For information on chili thrips go to:

<http://www.doacs.state.fl.us/pi/enpp/ento/chillithrips.html>

<http://www.learn2grow.com/problemsolvers/insectanimals/insectdamagecontrol/NewThripInTown.aspx>

http://www.lsuagcenter.com/en/our_offices/research_stations/Hammond/Features/Landscape_Horticulture/Pest+Management/Chilli-Thrips.htm

<http://www.learn2grow.com/problemsolvers/insectanimals/insectdamagecontrol/NewThripInTown.aspx>

http://www.lsuagcenter.com/en/our_offices/research_stations/Hammond/Features/Landscape_Horticulture/Pest+Management/Chilli-Thrips.htm

Chilli Thrips: (From Malcolm Manners)

They're no fun, but they are controllable (chemically).

Symptoms that you have them:

Black veins on leaves and black patches on stems (not raised nor sunken; just discolored), followed by dieback if severe.

Some varieties (the entire Knock-Out series, Belinda's Dream) are insanely susceptible -- it seems as though their carefree attitude to all other things makes them susceptible. *(Fortunately for us, the Knock-Out roses aren't sold much here, because they have a tendency to mildew in our climate. JMJ)*

Other varieties are highly resistant or tolerant -- *Mrs. B. R. Cant, Smith's Parish, Trinity.*

The usual natural thrips biocontrols work, although the thrips can build up so fast that it's hard for the biocontrols to keep up with them in some seasons, and that's when you have problems.

Spray oils help, but not long-term, and of course in hot weather, you risk the danger of doing more damage with the oil than the bug was doing. *(I never chance using spray oils in temps hotter than about 75 deg. JMJ)*

We get pretty much complete control in our gardens, with soil-applied imidacloprid, along with alternating foliar sprays of Conserve and some pyrethroid, and occasionally in a class unrelated to any of those.

It is very important here to rotate unrelated materials to avoid resistance.

Chilli Thrips are less than 1/2 the size of a "normal" thrips, so they're hard to spot. The best way is to whack a young branch over a sheet of white printer paper, and look quickly for tiny moving dots on the paper.

Obviously it is important not to spread them around when distributing cuttings or plants to others. For that, we always spray the day before, with a mix of orthene, Avid, and sometimes one more unrelated material (notice that those materials are not chemically related to anything we are "normally" using).

*Chilli thrips is both singular and plural Common Name Species Family