



### Greenhouse Pest Message June 27, 2024 Leanne Pundt, UConn Extension

I hope everyone is looking forward to the cooler temperatures today and tomorrow after surviving the recent heat wave.

Here are some online resources on plants and heat stress:

Nick's Tip of the Week: Growing Mums in High Heat Tech on Demand Newsletter  
<https://www.growertalks.com/Newsletters/View/?article=4603>

Managing Heat Stress in Nursery and Landscape Plants <https://plant-pest-advisory.rutgers.edu/managing-heat-stress-in-nursery-and-landscape-plants/>

Managing Heat Stress in Vegetable Crops – UMass Vegetable Notes newsletter:  
<https://ag.umass.edu/vegetable/newsletters/vegetable-notes/vegetable-notes-2024-vol-3612> (for commercial growers but may be helpful to those of you answering vegetable gardeners questions)

#### Summer Pest Spider Mites

The two-spotted spider mite (*Tetranychus urticae*) has a wide host range and feeds on more than 300 different species of plants.

Some favorite hosts include: Angel's trumpet, bee balm, catmint, butterfly bush, cordyline, crocosmia, dahlia, fleece flower, ivy geraniums, mandevilla, New Guinea impatiens, marigolds, roses, Russian sage, and verbena. Spider mites also feed upon many different herbs, such as lemon balm, lemon verbena, lemon grass and mints. With increasing temperatures, their development from egg to adult decreases. For example, at 54F, it takes 40 days for spider mites to develop from egg to adult. At 70F, it decreases to 14 days and at 86 it is only 7 days! Two spotted spider mites lay more eggs and develops faster at lower relative humidity levels. Females can produce more than 10 eggs per day! At 77F populations can double in 3 days!

**Symptoms** | Spider mites feed within the leaf cells, reducing the chlorophyll and moisture content of the leaves and their ability to photosynthesize. At first, you will see a slight flecking or stippling (chlorotic spot) on the leaves. As spider mite feeding continues, leaves can turn yellow, bronzed, and drop from the plant. When high populations develop, fine webbing is extensive on plant leaves and stems.



Figures 1 & 2: Damage from spider mite feeding on passion vine (on left) with stippling and bronzing on crocosmia (on right). Photos by L. Pundt

### Prevention tips

- Inspect incoming plants for signs of spider mites or their damage.
- Promptly remove unsold or “pet plants” and weeds that often “harbor” spider mites.
- Inspect plants regularly for spider mites. Pay close attention to warm and dry locations.

Overhead watering may help to wash some of the spider mites off the leaves.

Two-spotted Spider mites develop resistance to miticides very rapidly. Use miticides with different modes of action (i.e. from different pesticide classes, plus work differently).

Follow long-term rotations. Follow all label restrictions regarding the amount and frequency of use, and carefully read and follow all plant safety precautions.

Never apply treatments to plants that are stressed by extreme temperatures, humidity levels or insufficient moisture levels.

### A few options for spider mites include:

For knockdown: Floramite SC (20D), Shuttle O (20B), Akari 5SC (21A), Sanmite SC (21), Sultan (25), Pylon (greenhouse use only) (13), Magus (21) or SuffOil X.

For residual control: Hexygon IQ (10A), Savate (23), Notavo (10A), TetraSan (10B), and Kontos (Drench) (23).

The REI exempt 25B product from BioWorks, [EpiShield](#) is labeled for spider mites as well as aphids. Because it works by contact, good coverage to the underside of the leaves is important. EpiShield contains less oil, with less chance of phytotoxicity. It can also be used on spider mite hot spots with ability for work or shipping to continue. If using SuffOil X, Triact 70, Ultra Fine Oil follow all plant safety concerns on the label. If you are buying in plant material from more southern regions, it is very possible you are also buying resistant mites. If you can obtain good coverage, apply an oil-based material to knock down the spider mites before releasing predatory mites.

See [New York and New England Management Guidelines for Greenhouse Floriculture and Herbaceous Ornamentals](#) for more information.

*Consult and follow pesticide labels for registered uses. To avoid potential phytotoxicity problems, spot test before widespread use. No discrimination is intended for any products not listed.*

More growers are using biological controls as part of their resistance management plan. Different species of predatory mites are adapted to different environmental conditions, so work with your biological control supplier to select the best mite predator for your situation.

One of the most widely used is *Phytoseiulus persimilis* that only feeds upon two spotted spider mites, but many other predatory mite species feed on alternative prey or on flower pollen including *N. californicus*, *A. andersonii*, and *N. fallacis*.

If you are using *Orius spp.* against thrips, this generalist predator will also feed upon spider mites.

Disclaimer The information in this document is for educational purposes only. The recommendations contained are based on the best available knowledge at the time of publication. Any reference to commercial products, trade or brand names is for information only, and no endorsement or approval is intended. UConn Extension does not guarantee or warrant the standard of any product referenced or imply approval of the product to the exclusion of others which also may be available. The University of Connecticut, UConn Extension, College of Agriculture, Health and Natural Resources is an equal opportunity program provider and employer.