Cooperative Extension

ORNAMENTALS

• H O T L I N E •

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Issue 16

INSECTS

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TWO SPOTTED SPIDER MITES (*Tetranychus urticae)* prefer a hot, dry environment, and recently we have had lots of both. This miteis a pest of landscapes and greenhouses. Plants attacked include roses, *Euonymus*, *Baptisia*, dogwood, pear, butterfly bush, marigolds, cannas, viburnum, chrysanthemums and many others.

Spider mites inject their mouthparts into plant cells and suck out cell contents causing a flecking or stippled appearance. Heavy infestations build webs, decrease plant vigor, and can cause premature leaf drop. Two-spotted spider mites feed on the underside of the leaves, are yellowish green with a spot on either side and adults are active 437 – 3518 [1894 peak] GDD. Females lay an average of about 140 eggs when temperatures exceed 80˚F and a generation can be completed in a week.

Sample for spider mites by shaking plant material over a white sheet of paper on a clipboard. Mites will appear as rapidly moving dots and will smear when smashed. Sample at least every other week during the summer. Look for stippling on leaves or webbing found on heavily infested plants. Reflective heat from the sides of buildings or impermeable surfaces can further stress plants and increase spider mite populations; thus scout plants in these situations.

(Continued)

DISEASES

Nancy Gregory
Plant Diagnostician
Jen Rushton, Intern

FOLIAR NEMATODES are very small non-segmented roundworms common in soil, usually in the genus *Aphelenchoides*. Symptoms on leaves include yellow/brown to purple spots that look water-soaked or greasy, bounded by the leaf veins. Plants susceptible to damage from foliar nematodes include hosta, peony, ferns, columbine, begonia, Cyclamen, gloxinia, Dahlia, Gerbera, Hibiscus, Lantana, geranium, and iris. The nematodes have a needle-like mouth part called a stylet; a structure characteristic of plant parasitic nematodes and lacking in free-living and animal parasite nematodes that is inserted into plant cells. Enzymes go through the stylet into the cell and digest contents, so nutrients are drawn back into the nematode. Free water on the stems and leaves provides an environment for nematode movement and infection. Splashing water during irrigation/rain moves nematodes around. Plants with symptoms occur in patches because of the splashing of nematodes to neighboring plants. Certain types of begonias can develop large populations without showing symptoms. Optimum temperatures for foliar nematode development are between 21 and 24C (70-75F). Nematodes reproduce by laying eggs that hatch

(Continued)

What's Hot!

Fall webworm nests from first generation may be evident now.

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Armyworm (probably true armyworm) has been reported feeding on lawns

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Waxy stems from hopper fecal material is becoming more common. No treatment is warranted but customers may be alarmed by the amount they can see.

Insects (Continued)

Spraying plants with a strong stream of water dislodges some mites and provides relief to water-stressed plants. Predatory mites and other predators feed on two-spotted spider mites, but they may have difficulty keeping populations low under ideal conditions. Horticultural oil, Hexygon, Floramite, Forbid Avid, Kontos, and Sanmite are some of the miticides

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Foliar nematode on maidenhair fern. Photo credit: N. Gregory

For more information on pests & practices covered in this newsletter, call your County Extension Office

Helpful numbers to know:

Garden Line (for home gardeners only)	831-8862
New Castle County Extension	831-2506
Kent County Extension	730-4000
Sussex County Extension	856-7303

View more pictures at http://extension.udel.edu/ornamentals/

Diseases (Continued)

to release a larva. Management of foliar nematode includes cultural strategies such as clean planting material, good spacing between plants, discarding infected plants, and avoiding overhead water on leaves. Mixed species plantings will avoid bed decimation when one species planted in a monoculture is affected by foliar nematodes.

PINEWOOD NEMATODE affects two-needle pine such as Japanese black pine, Scotch pine, and Austrian pine, resulting in a disease called pine wilt. Pine wilt results from beetle infection, the nematode and infection by a fungus, which affects the water flow in pines resulting in death in several years. There is no cure, but early infections may be pruned out. For diagnostic samples, collect sections of dying or dead branches up to 5" in length and greater than 1" in diameter, close to the main trunk. Sample multiple branches due to random distribution of the nematodes in the trunk and symptomatic branches. Place samples in plastic bags and take to a county Extension office or the Plant Diagnostic Clinic along with a sample submission form.

Insects (Continued)

that provide control. Pyrethroids and Merit (imidacloprid) are documented to cause increases in mite populations. Use these products only when necessary and closely monitor mite populations after use.

Two spotted spider mite

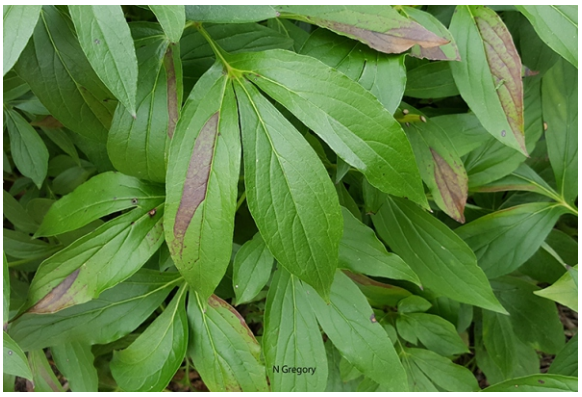
Photo credit: Frank Peairs, Colorado State University

Editor: Susan Barton
Extension Horticulturist

GROWING DEGREE DAYS

AS OF July 10, 2018

- Swarthmore College (Delaware County, PA) = 1583 ('17 =1588)
- Fischer Greenhouse (New Castle County) = 1571 ('17 =1599)
- Research & Educ. Center, Georgetown (Sussex County) = 1692 ('17 = 1819)



Foliar nematode on peony. Photo credit: N.Gregory