DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network
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Arkansas Plant Health Clinic Newsletter

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Cucumber

Root-Knot Nematode

Root-Knot Nematodes, *Meloidogyne* spp., have a wide host range, attacking over 2000 species of plants. Although a few nematodes do little noticeable damage, large numbers severely damage roots and prevent plants from utilizing water and fertilizers effectively. The results of Root-Knot Nematode infestations are poor growth, reduced quality and yield, and increased susceptibility to diseases and drought stress. Above ground symptoms include stunting, yellowing, wilting, and death. The main below ground symptom is roots with swollen galls and knots. Nematicides and soil fumigants are still available for commercial growers. Homeowners must rely on crop rotation, sanitation, resistant cultivars, and soil solarization. When using soil solarization, clean up crop debris and till the garden area. Thoroughly wet the area being treated. Lay clear plastic (2-4ml) over the area, and bury the edges to seal. Leave plastic on for at least 2 months. Soil solarization is most effective during the hot months of the year. Broccoli and cauliflower crops grown in the problem area and plowed under after harvest naturally inhibit nematodes, as do French marigolds.

Cucumber Root-Knot Nematodes-*Meloidogyne* spp.

Photo by Mike Hamilton, University of Arkansas Cooperative Extension

Anthracnose

Anthracnose caused by *Colletotrichum orbiculare,* can be a serious disease on susceptible cucumber cultivars. All aboveground parts of the plant may be infected, including leaves, petioles, stems, and

fruits. Lesions begin as yellowish water-soaked spots that turn brown to black. The spots enlarge and dry out. The centers of older lesions fall out leaving a shot hole effect. Infected fruit have sunken circular black spots of different sizes. Crop rotation and destruction of old vines go a long way toward controlling this problem. Fungicide applications of Quadris Top, or Quadris 2.08Fl, or Cabrio 20EC, or Quadris Opti, or Bravo Ultrex, or Bravo Weatherstik, or Equus 720, or Mancozeb 80W, or Maneb 80W, or Pristine may be used by commercial growers. Homeowners may use products containing chlorothalonil or mancozeb.

Cucumber Anthracnose-
Colletotrichum orbiculare

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Cucumber Anthracnose-
Colletotrichum orbiculare

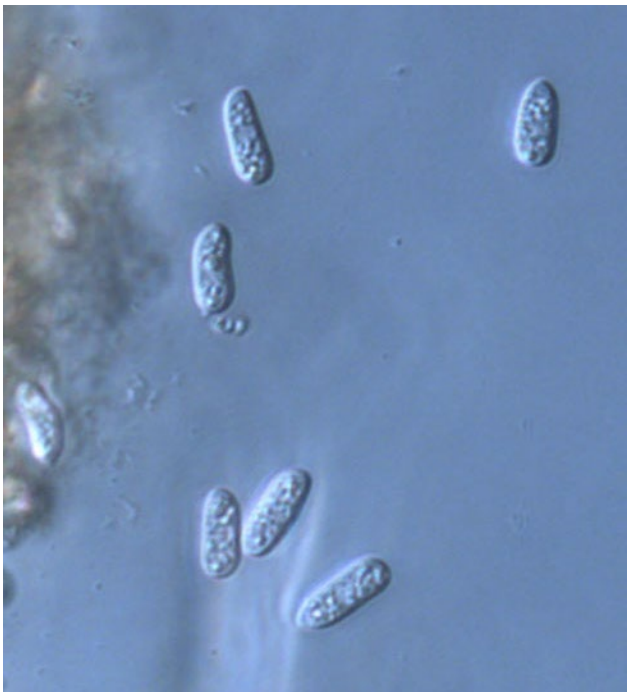

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Oak

Several types of insects cause galls on oak trees. Vein Pocket Gall, caused by the larval stage of tiny flies in the *Cecidomyiidae* family of gall midges is one that we see frequently in oak leaf samples. Galls are elongate, pocket-like swellings along veins and midribs of the leaves. The female gall midge lays eggs on the newly emerging leaves in the spring. After the eggs hatch, the maggots move to the leaf veins where they begin to feed. The feeding causes the plant to start forming galls around the feeding sites. Within a few days the maggots

are entirely enclosed within the galls, where they remain protected from predators until they emerge as mature larvae about mid-spring. Upon emergence, the larvae drop to the ground and remain there until next spring when they fly up to the newly emerging leaves as adult flies and begin the cycle again. Control is difficult and not usually necessary. However, since the mature larvae spend most of the summer in the ground, lawn insecticides may reduce the population.

Oak Vein Pocket Gall-*Macrodiplosis quercusoruca*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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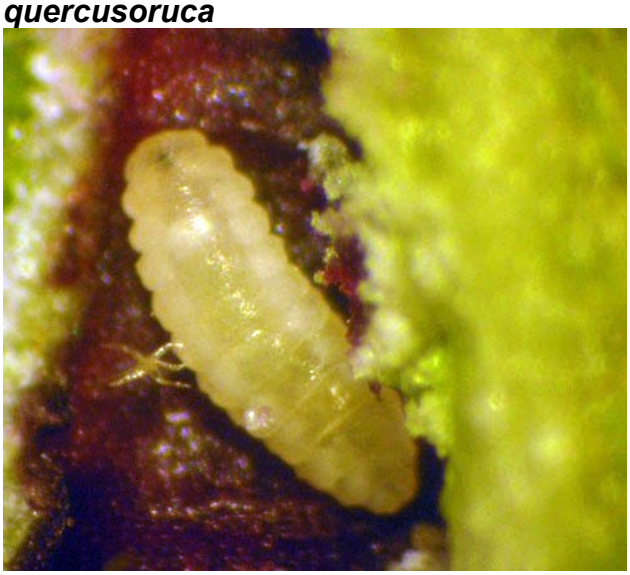

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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