



Arkansas Plant Health Clinic Newsletter

Follow us on social media



Mulberry

Mulberry trees are large, fast-growing trees that produce fruit for humans and wildlife. The white mulberry has been cultivated for centuries for use in silk production. The fruit resembles a blackberry in appearance but has a much blander flavor and somewhat mealy texture. The fruit is used in jellies, jams, wines, and as a fresh fruit. Mulberries are easy to grow, being tolerant of poor soils, and growing in a variety of habitats. However, they grow best in deep, well-drained soils with a pH of 5.5 to 6.5. There are three species of mulberry commonly cultivated for fruit: red mulberry (*Morus rubrum*); black mulberry (*Morus nigra*); and white mulberry (*Morus alba*). The red mulberry is native to the United States. The black mulberry is native to Iran, and the white mulberry is native to Japan and China. The most important insect pest of mulberry is White Peach Scale, *Pseudaulacaspis pentagona*. White Peach Scale has an enormous host range, including, plum, peach, persimmon, walnut, papaya, mulberry, paper mulberry, catalpa, chinaberry, privet, lilac, and many others. Adult females are up to 1/16 inch in diameter, white with a yellowish or reddish spot, and roughly oval. Female nymphs lack the spot. Adult males are

white, elongate in shape and up to 1/32 inch long. Eggs are laid underneath the adult female scale covering. There are two to four generations a year depending on climate. Infestations can occur on leaves, fruits, twigs, branches, and trunks of afflicted plants. Heavily encrusted plants suffer early leaf drop, twig dieback, stunting, and sometimes death of the entire plant. Superior oil applied during the dormant season smothers scale insects and gives decent control. Cherry, Plum, and Peach growers may also use Apollo or Esteem or Assail or Aza-Direct, or Movento. For ornamentals, homeowners may use products containing acephate, or acetamiprid, or bifenthrin, or cyfluthrin, or horticultural oils, or insecticidal soaps, or malathion, or pyrethroids.

Mulberry White Peach Scale- *Pseudaulacaspis pentagona*



Photo by Eric R. Day, Virginia Polytechnic Institute and State University, Bugwood.org



Mulberry White Peach Scale- *Pseudaulacaspis pentagona*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Pumpkin

by Blake Burrows

Bacterial Wilt of cucurbits, caused by the bacterium *Erwinia tracheiphila*, occurs throughout the United States. It affects all cucurbits including cucumbers, muskmelons, squash, pumpkins, white gourds, wild gourds, wild cucurbits, and watermelon. Cucumbers and melons are the most susceptible with watermelon rarely seriously affected. Bacterial Wilt is principally spread by the striped cucumber beetle, *Acalymma vittatum*, and the spotted cucumber beetle, *Diabrotica undecimpunctata howardi*. Both species of cucumber beetle are common in Arkansas. Cucumber beetles have an enormous host range, attacking over 270 plants in 29 families. For example, they feed on asparagus, broad beans, eggplants, potatoes, certain fruit trees, tomatoes, peas, squash, corn, cucumbers, potatoes, and fruits, as well as cucurbits. Overwintering beetles already contaminated

with the bacterium transmit it to uninfected plants during feeding in the spring. Wilting of individual leaves or entire vines is the most obvious symptom. Affected leaves become a characteristic dull green. Sticky, stringy, sometimes milky sap is exuded when infected stems are cut. Bacterial Wilt is not curable. Fields and gardens should be scouted twice a week for the beetles, especially when plants have less than five leaves. Be sure to check the underside of the leaves. Admire applied as a pre-plant soil drench is highly effective against cucumber beetles. Foliar treatments of Sevin, or Karate Z, or Hero, or Lanate, or Mustang Maxx may also be used for control. Follow the label as there are certain crop restrictions with some of these compounds. Homeowners have fewer options, but may use Sevin, or sticky traps. Sevin is highly toxic to bees so care must be taken to apply during late afternoon or evening when bees are less likely to be foraging. Wilted plants should be destroyed to prevent beetles from feeding on them and spreading the disease to healthy adjacent plants.

Striped Cucumber Beetle- *Acalymma vittatum*



Photo by Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org



Spotted Cucumber Beetle- *Diabrotica undecimpunctata howardi*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Pumpkin Bacterial Wilt-*Erwinia tracheiphila*



Photo by Ron Matlock, University of Arkansas Cooperative Extension

Apple

The larvae of several small moths feed on apple leaves. Broadly speaking, these insects are known as leaf skeletonizers or leaf folders. Severely infested trees may present a scorched appearance due to the larvae of these moths eating the outer layer of leaf tissue. The remaining inner tissue turns brown when exposed to air and light. Upon closer inspection, small larvae may be found either feeding directly on the exposed leaf surface or between folded leaves that has been stitched shut by the larvae. Premature leaf drop will sometimes occur when leaves are heavily damaged. Orchard sprays containing malathion may be used at the first sign of damage. Fallen leaves should be cleaned up and removed from the orchard.

Apple Leafroller-Unidentified insect



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Apple Leafroller-Unidentified insect



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.

"This work is supported by the Crop Protection and Pest Management Program [grant no. 2017-70006-27279/project accession no. 1013890] from the USDA National Institute of Food and Agriculture."

Apple Leafroller-Unidentified insect



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension