



Arkansas Plant Health Clinic Newsletter

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Cucurbits

Phytophthora fruit rot of cucurbits is caused by *Phytophthora capsici* and other *Phytophthora* species. All cucurbits are susceptible. We have seen *Phytophthora* fruit rot so far this season on cucumber, squash, and cantaloupe. Initial symptoms are a water-soaked spot on the fruit. The side touching the ground is often first affected. Symptoms usually follow rain or overhead irrigation. The fruit spot becomes somewhat sunken and covered with a white yeast-like growth, followed by complete collapse of the fruit. *Phytophthora* survives in the soil between crops. Other crops susceptible are pepper, tomato, and eggplant. Rotation with non-host crops is recommended. Other controls are providing well-drained fields, avoiding low-lying areas, sub-soiling, and providing raised beds for non-vining crops, and avoiding overwatering. Lengthening the time between in-furrow irrigation has been found to be helpful. Culled fruit and other plant debris should be disposed of away from planting sites.

Cucumber *Phytophthora* Fruit Rot- *Phytophthora capsici*



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension

Cucumber *Phytophthora* Fruit Rot- *Phytophthora capsici*



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Cucurbit Anthracnose is a common disease of watermelon, melon, pumpkin, and cucumbers grown in our humid region. Lesions can occur on seedlings, petioles, stems, and fruits. Lesions on cucumbers usually first appear near veins, are roughly circular, and are light brown to reddish in color. The leaves may become distorted by large numbers of lesions, and the centers of lesions may crack and fall



out. On petioles and stems, the spots are shallow, elongated tan areas. Fruit lesions are circular, sunken, water-soaked spots that turn black and become covered with pink spore masses. The lesions on melons are darker and may have red exudates. The fungus, *Colletotrichum obiculare*, survives between crops on infested plant residue, volunteer plants, and on seed. Deep plowing of crop residue immediately after harvest effectively reduces levels of inoculum. This should be combined with a rotation schedule. Resistant cultivars are available and should be used when possible.

Cucumber Anthracnose- *Colletotrichum obiculare*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Melon Anthracnose- *Colletotrichum obiculare*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Tomato

Phytophthora causes a disease of tomato known as Buckeye Rot. The fungus *Phytophthora capsici* causes root and crown rot as well as fruit rot. Brown spots appear on the fruit. The lesions have alternating bands of light and dark brown. Although the lesion itself remains firm, the flesh underneath rots and becomes mushy. White, cottony mycelia may appear during wet conditions. Young green fruit is often mummified. Fruit touching or close to the soil are most likely to become infected. Roots may also have brown, water-soaked lesions with extensive rotting. Grow tomatoes on raised beds in well-drained soil. Try to prevent the fruit from touching the ground by



staking and/or mulching plants. Avoid frequent irrigations that keep the ground wet. Ridomil Gold may be applied as a ground surface spray under the vines 4-8 weeks before harvest. Alternatively, it can be applied as a foliar spray beginning when crown fruit are 1/3 their final size. Home gardeners must use cultural remedies and keep the fruit off the ground. As always, we recommend a 3-year rotation between tomato crops.

Tomato Buckeye Rot- *Phytophthora capsici*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Mimosa

Mimosa or Silk trees are common trees in the south. They give a tropical feel to the landscape, but are short lived, messy trees. A major reason for their short life span is disease. Mimosa wilt is a vascular wilt caused by *Fusarium oxysporum* f. sp. *perniciosum* and is the most serious disease affecting Mimosa in

landscape plantings. Symptoms are leaf yellowing and leaf wilt by midsummer. Most infected trees die branch by branch over several months, but some die within a few weeks of starting to wilt. Almost all infected trees die within a year of first wilting. In advanced stages, infected trees ooze a frothy liquid from cracks and grow sprouts on trunks. Brown streaks may be seen in the roots on the side of the tree where branches first begin to wilt. This is a soilborne disease, and unfortunately, not much can be done for a tree with vascular wilt. Never use high-nitrogen fertilizers. A balanced fertilizer (10-10-10) may help alleviate symptoms in infected trees that aren't too far gone. Infected trees should be watered frequently to decrease wilt symptoms, and dead branches should be removed and burned. Two wilt-resistant varieties are available, Charlotte, with light-colored flowers, and Tryon, with deeper red flowers.

Mimosa Wilt- *Fusarium oxysporum* f. sp. *perniciosum*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Blackberry

Botryosphaeria cane canker, *Botryosphaeria dothidea*, is one of the most serious canker diseases of thornless blackberry. It often kills canes and reduces fruit yields significantly. Cankers usually develop around one or more buds on the main stem of second year floricanes. The lesions appear as reddish to dark reddish brown discolorations below or to one side of the subtending leaf petiole. The bud at that node is often killed. Lesions spread and girdle the cane. The disease becomes apparent at fruit ripening as leaves in the cankered sections begin to wilt, turn yellow, and then brown. Entire canes may wilt. Fruit production ceases on the affected canes. A zonate pattern of darker and lighter coloration may be observed on developing cankers. Old cankers become light colored to silvery gray on dead canes. Pycnidia, (small black fruiting bodies), may be observed with a hand lens scattered along the length of the canker. Cankers can also develop at wound sites such as at the base of the canes injured by weed eaters or mowers. The use of excessive amounts of nitrogen fertilizers should be avoided. No fungicide recommendations have been established for control of *Botryosphaeria* canker in Arkansas. Some cultivars are more susceptible than others.

Blackberry Botryosphaeria Canker- *Botryosphaeria dothidea*



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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