



Arkansas Plant Health Clinic Newsletter

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Redbud

Eastern Redbud, *Cercis canadensis*, is a much-loved native ornamental tree. It is found naturally in eastern North America from Southern Ontario, Canada south to northern Florida. A mature Redbud will be 20-30 feet tall with a 25–35-foot spread. Redbuds are grown primarily for the thousands of small rosy-pink flowers they produce in the spring. They are prone to several leaf diseases as well as trunk cankers. One leaf disease commonly found in Arkansas is Bacterial Leaf Spot caused by *Pseudomonas syringae*. Trees are most susceptible during cool, wet springs when planted in shaded areas with poor air circulation. Symptoms are numerous, small, irregular spots, often with a water-soaked or yellow halo. Fallen leaves should be raked up and disposed of off the property. Copper fungicides applied during the dormant season and at bud break help control Bacterial Leaf Spot.

Redbud Bacterial Spot- *Pseudomonas syringae*



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension

Redbud Bacterial Spot- *Pseudomonas syringae*



Photo by Sherrie Smith, University of Arkansas
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Sherrie Smith
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Strawberry

Strawberry Charcoal Rot

Today, the Plant Health Clinic received two separate strawberry samples from two different counties infected with Charcoal Rot, caused by the fungus, *Macrophomina phaseolina*. *Macrophomina phaseolina* is a common, soilborne pathogen in Arkansas, with a broad host range. Squash, cantaloupe, peppers, soybeans, and other legumes are among those crops susceptible. Susceptible vegetable crops are often planted as second crops after strawberries, with the potential to increase inoculum levels in the field. High temperatures and low soil moisture have been traditionally associated with Charcoal Rot. Plants with Charcoal Rot initially show signs of water stress and eventually collapse. When the crowns are dissected, a reddish-brown to orange necrotic area may be observed on the margins and along the vascular ring. Black microsclerotia may be seen with a hand lens or under a dissecting scope embedded in the crown, root, or runner tissue. No fungicides are currently labeled for the control of Charcoal Rot in strawberries. Field fumigation where still allowable reduces inoculum levels. Cultural practices that minimize plant stress help plants resist infection.

Strawberry Charcoal Rot- *Macrophomina phaseolina*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Strawberry Charcoal Rot- *Macrophomina phaseolina*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Strawberry Charcoal Rot *Sclerotia-Macrophomina phaseolina*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Strawberry Anthracnose

Four species of *Colletotrichum* cause anthracnose diseases of strawberry. Flower buds, sepals, pedicels, peduncles, leaves, crowns, and fruit may all be infected. The most common species found is *Colletotrichum fragariae*. It causes crown rot, petiole and runner lesions, and black leaf spots. Infection usually starts in the newly opening flower buds. The flower dries up and a dark lesion runs down the petiole. If infection occurs after pollination, a small hard fruit will develop with a dark brown lesion. Masses of salmon to orange conidia may be observed during moist, warm conditions. Lesions also occur on vegetative stems, where they may girdle the stem, resulting in wilting and death of the plant parts above the lesion. Leaf lesions are small (<1/4"), round, and black, often resembling ink spots. Spots may become abundant on leaflets without killing the leaf and often appear first on expanding leaves of runner plants. Primary sources of

inoculum are infected nursery plants and contaminated soil on transplants. The spread of disease can be limited by culling of diseased plants and fruits, avoidance of overhead irrigation, and the use of fungicides. It should be noted that minimal amounts of nitrogen should be used in problem fields as high rates of nitrogen encourage anthracnose development. Captan, Abound, Pristine, and Cabrio are labeled for anthracnose on strawberry.

Strawberry Anthracnose- *Colletotrichum* spp.



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Strawberry Anthracnose- *Colletotrichum* spp.



Photo by Sherrie Smith, University of Arkansas
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Strawberry Anthracnose on runner-*Colletotrichum* spp.



Photo by Sherrie Smith, University of Arkansas
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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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