



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.

## Watermelon

Bacterial fruit blotch, caused by *Acidovorax avenae* subsp. *Citrulli*, can attack all members of the cucurbit family, including honeydew, musk melons, cantaloupe, pumpkin, citron, squash, and watermelon. However, watermelon is the primary host for Bacterial fruit blotch.

Symptoms on cotyledons are irregularly shaped, water soaked lesions that become red-brown with age. Infection can cause seedlings to collapse and die. Leaf lesions begin as small, water-soaked, irregular spots that enlarge, and turn brown to black with angular edges. The fruit develop irregularly shaped water-soaked lesions that are dull gray-green to dark green that rapidly enlarge to cover most of the fruit. Older lesions may become brown to red-brown, and necrotic with white colored bacterial oozing from the lesion. These areas may turn black as secondary decay organisms colonize the fruit. Watermelon cultivars with dark green striped rinds tend to have smaller lesions on the lighter green stripe. This is a seedborne pathogen. Only seed that has been tested and found to be free of the fruit blotch bacterium should be planted. Transplants with suspicious symptoms should be destroyed. Practices in the greenhouse should include hand washing before and after handling plants; decontamination of plant containers, and tools; and avoidance of overhead irrigation. Greenhouses with contamination should be disinfected with a 10% bleach solution and remain empty of plants for a minimum of two to three weeks. All plant debris in the field should be plowed under. Wild cucurbits and volunteer watermelons should be destroyed. Working in the field while foliage is wet must be avoided. Fungicide applications of copper have reduced the incidence of Bacterial fruit blotch symptoms when applications were started prior to fruit set. At least two to three copper applications and thorough coverage of the foliage are essential for good disease control. Applications should begin at first flower, or earlier, and continue until all fruit are mature. Fungicides applied after fruit is infected are ineffective. Include symptomatic leaves when submitting a sample to the Plant Health Clinic.

### **Watermelon Bacterial fruit blotch (fruit symptoms)- *Acidovorax avenae* subsp. *Citrulli***



Sherrie Smith University of Arkansas Cooperative Extension

### **Watermelon Bacterial fruit blotch (fruit symptoms)- *Acidovorax avenae* subsp. *Citrulli***



David Freeze University of Arkansas Cooperative Extension



**Watermelon Bacterial fruit blotch (leaf symptoms)-*Acidovorax avenae* subsp. *Citrulli***



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**Watermelon Bacterial fruit blotch (bacterial ooze on fruit)-*Acidovorax avenae* subsp. *Citrulli***



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**Peach**

Two species of *Colletotrichum*, *C. acutatum*, and *C. gloeosporioides* have been found to cause Peach anthracnose. Symptoms on fruit are circular, sunken, tan to brown, necrotic spots with concentric rings. Ripe fruit is the most susceptible. Lesions are large, and firm to the touch. Masses of orange colored spores occur in the center of the lesions. Warm, wet weather favors disease development. Spores are primarily disseminated by rain and wind. Anthracnose also occurs on plum and sour cherry. Captan is the fungicide of choice for control of Peach anthracnose. Captan can be used in combination with Elite, Indar, or Orbit, and can be alternated with Abound as long as there is no possibility of Abound drift onto any nearby apple trees. The orchard floor and nearby environs should be kept free of weeds and wild prunus.

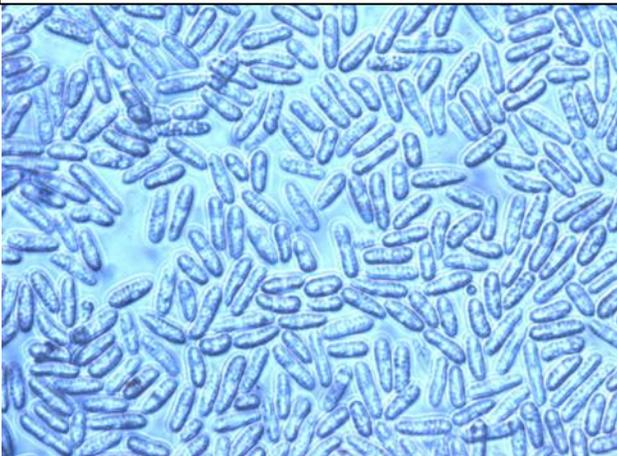


**Peach anthracnose-*Colletotrichum gloeosporioides***



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**Peach anthracnose-(spores)  
*Colletotrichum gloeosporioides***



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**Oak**

Oak anthracnose may be caused by several different fungi: *Apiognomonia quercina* or *Elsinoe quercus*. All species of oak are susceptible, with white oak being the most susceptible. Symptoms of infection by *Apiognomonia quercina* are necrotic, irregularly shaped lesions along the veins and margins of the leaves; puckering, curling, and leaf distortion. Newly emerging leaves in the spring are the most susceptible. Spores from twigs that were infected the previous season are splashed onto the new growth. Older leaves are more resistant, but may develop small brown lesions in the summer during prolonged wet weather. Twig death and defoliation may occur if infection is severe. The tree will usually put on new leaves to replace those lost. Spot anthracnose caused by *Elsinoe quercus* attacks the foliage of red oaks. The lesions are small, about 1mm, blackish-brown with a lighter color in the center of the lesion. Leaves with severe infections will yellow and fall prematurely. It is rare for Oak anthracnose to cause permanent damage to healthy trees. Control consists mainly of good sanitation. Leaves should be raked and removed from the planting in the fall. Trees that have been defoliated for consecutive seasons may benefit from fungicide applications. Applications should begin at bud break in the spring. Fungicides labeled for oaks include Cleary's 3336 (thiophanate-methyl), Mancozeb, and copper. Additionally, products containing chlorothalonil may be used on red oaks.

**Oak anthracnose-*Apiognomonia quercina***



Joseph O'Brien, USDA Forest Service, Bugwood.org.jpg



**Oak Spot anthracnose-*Elsinoe quercus***



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