



Arkansas Plant Health Clinic Newsletter

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Blackberry

Blackberry Anthracnose

Anthracnose, caused by *Elsinoe veneta*, can occur on leaves, petioles, pedicels, flower buds, fruit, and canes. On canes, reddish-purple circular to elliptical spots occur on primocanes in the spring. As the spots age, they enlarge and the centers become sunken, turning buff or ash gray, with purple margins. The lesions may merge, forming irregular blotches that girdle the cane. The cane may crack and die at that spot. Tip dieback may occur. The first signs of infection on the leaves are minute purple spots, which later develop white centers. The center of the holes may later drop out, giving a shot hole appearance. Infected fruit are small, pitted, and slow to ripen. Control measures include the avoidance of excessive rates of nitrogen, and overhead irrigation. It is recommended that plants should be kept in rows 10-12 feet wide and thinned to allow for better air circulation. Weed control should be a priority as weeds reduce air movement in the planting. All pruned canes should be removed from the planting and destroyed as the fungus overwinters on both dead and live tissue. Liquid lime sulfur applied when the plants are breaking dormancy to when

there is no more than 15mm of green tissue showing. Additional fungicides are recommended when canes are 5-7 inches tall and at 14-day intervals thereafter. Captan, Pristine, and Switch are labeled for anthracnose on blackberry.

Blackberry Anthracnose- *Elsinoe veneta*



Photo by Sherri Sanders, University of Arkansas Cooperative Extension

Blackberry Anthracnose on fruit- *Elsinoe veneta*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Blackberry White Drupelet

The Plant Health Clinic has received several complaints about discolored fruit in blackberries. White drupelet is a tan to white discoloration of individual drupelets on blackberry or raspberry fruits. This condition is caused by UV radiation and appears when there has been an abrupt increase in temperatures accompanied by a drop in humidity, especially when wind is also present. Hot, dry air allows more direct UV rays to reach the fruit. Most varieties of blackberry and raspberry are susceptible to White Drupelet. However, Apache and Kiowa, and the Caroline red raspberry seem to get the disorder more frequently. While White Drupelet does not make the fruit inedible, it makes it unmarketable.

Blackberry White Drupelet- Abiotic



Photo by Richard Klerk, University of Arkansas Cooperative Extension

Blackberry Orange Felt

Blackberry Orange Felt or Orange Cane Blotch is caused by the alga *Cephaleuros virescens*. This organism has been reported as a pathogen of nearly 300 species of plants, causing stem spots or lesions as symptoms on 80 of these plant species. Initially whitish-yellow disk-shaped spots appear on the canes, usually more prevalent near the base of the canes. Later in the season, the spots become orange and velvety in appearance. The orange pigmentation results from the production of reddish pigments by mature spore producing structures of the alga. Under wet humid conditions, the spots often merge, nearly covering the entire cane. Orange felt may be seen on the canes from spring to fall but is more prevalent throughout summer and fall. Although the lesions themselves are superficial, they open the canes to infection by pathogenic fungi such as *Botryosphaeria*. The first line of defense in preventing or treating Orange felt is to plant only in well-drained fields. Old floricanes should be removed immediately after harvest. Blackberries planted on plastic with drip irrigation have been shown to have fewer problems with Orange felt. Since stressed plants are more susceptible to infection, care should be taken to ensure optimum growing conditions, with attention paid to pH and nutrients. Copper fungicides have been known to provide some control. Read labels carefully.



Blackberry Orange Felt- *Cephaeleuros virescens*



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension

Physocarpus (Ninebark)

Physocarpus is a native shrub with lovely exfoliating bark. They prefer sunny to lightly shaded locations with a slightly acidic soil and adequate moisture. They grow three to 12 feet tall depending on cultivar. Leaf color ranges from green to purple to copper to gold, also depending on cultivar. Ninebarks have attractive bloom and fall color. They are deer and drought resistant and require little maintenance once established. We see few disease problems, but some cultivars are susceptible to Powdery Mildew. Symptoms begin as small powdery white spots on leaves, stems, and flower structures. The spots spread to cover the surface of the affected tissues. Light pink to white colored, thickened shoots with stunted leaves (Witches' brooms) may also occur. Powdery Mildew infections may lead to leaf death and premature defoliation. High humidity and poor air circulation favors disease development. The best defense is to plant resistant cultivars. Susceptible cultivars include Dart's Gold, Morning Star, Nugget, Center Glow, and Coppertina. Witches' brooms and infected stems and leaves should be removed. Fungicide sprays containing myclobutanil, or thiophanate-methyl, or sulfur, or triadimefon are labeled for control of Powdery Mildew in Ornamentals. Homeowners may use Fertilome Broad Spectrum Lawn and Garden Fungicide, (chlorothalonil), or Hi-Yield Vegetable, Flower, Fruit, and Ornamental Fungicide, (chlorothalonil) or Ortho Maxx Garden Disease Control, (chlorothalonil), or Ortho Disease B Gon Garden Fungicide,



Sherrie Smith
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(chlorothalonil), or Garden Tech Daconil Fungicide, (chlorothalonil), or Bonide Fung-onil Multipurpose Fungicide, (chlorothalonil), or Spectracide Immunox Plus, (myclobutanil & permethrin), or Bonide Rose Rx Systemic Drench, (tebuconazole), or Bayer Advanced Garden-Disease Control for Roses, Flowers, Shrubs, (tebuconazole), or Bayer Advanced Garden-All-in-One Fungicide/Insecticide/Fertilizer, (tebuconazole & imidacloprid), or Fertilome 2-N-1 Systemic Fungicide, (tebuconazole & imidacloprid), or Bonide Infuse Systemic for Turf and Ornamentals, (thiophanate-methyl), or Ortho Rose and Flower Insect and Disease Control, (triticonazole & acetamiprid).

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."

Ninebark Powdery Mildew- *Podosphaera aphanis* var. *physocarpis*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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