PennState Extension

Anthracnose On Shade Trees

Many deciduous hardwoods are susceptible to a leaf disease called anthracnose that is caused by various species of the fungus Apiognomonia.

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The asexual stage (the reproductive stage that does not require mating) looks so very different from the sexual stage (the reproductive phase that requires mating) that early scientists thought they were totally different organisms not related to *Apiognomonia*. It is now known that some of the fungi previously named *Colletotrichum, Gloeosporium*, and *Discula* are just the asexual stage of *Apiognomonia*.

Symptoms Include

- Small dead spots on leaves
- Dead leaf margins and tips
- Brown, dead areas along leaf veins
- Large dead blotches between leaf veins
- Premature defoliation
- Twig death
- Bud killing early in the season resembling frost damage
- Often the lower and inner leaves and branches of the canopy show most severe symptoms

Signs

With a magnifying glass, examine the underside of infected leaves for pimple-like fungal fruitings structures, especially along the leaf veins.

Examine dead twigs near the ends of branches for pimple-like fruiting structures peppering discolored, slightly sunken bark areas.

Favorable Conditions

Cool weather (50° to 55° F, average daily temperature) during leaf bud break and emergence greatly favors disease development whether it is wet or dry. Although wet weather tends to favor this disease, temperature is the most important factor. If daily temperatures average above 60° F at bud break, anthracnose is usually not severe.

The fungus survives the winter dormant primarily in cankers on infected branches and twigs. To a small extent, the fungus also survives in fallen leaves. Wind carries the fungal spores from the cankers to developing leaf and twig tissue. Infected young twigs are girdled and killed. The fungus forms new spores on the infected leaves and twigs. These spores are then blown or splashed to nearby foliage where they germinate, penetrate and cause additional spots if weather conditions are favorable. Infected leaves shrivel and fall.

Management Of Anthracnose

1. Prune out and destroy dead branches and twigs.
2. Rake and destroy fallen leaves around susceptible trees that have branches close to the ground.
3. When a specimen tree must be protected, fungicides can be applied. Spraying must begin at bud break and be repeated on a weekly or biweekly schedule until the weather warms, daily temperatures averaging above 60°F. There are some cases where a fungicide can be injected into a tree in order to protect it for more than one year.
4. Most hardwoods develop new leaves quickly enough to prevent serious damage when defoliated early in the summer. If defoliation is not severe and twig death is has not occurred or if defoliation does not occur frequently or if the tree is not of very great value, spraying is not recommended.

Dogwood anthracnose

Ash anthracnose

Oak anthracnose

Sycamore anthracnose

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