Anthracnose in Shade Trees

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Tree owners often become concerned about the possibility of permanent damage to tree health when anthracnose develops. In most cases, although symptoms may appear serious, damage caused by anthracnose is minimal and does not seriously harm established shade trees.

Anthracnose is caused by a number of different but closely related fungi in the genera *Gnomonia* and *Gloeospotium*. Each fungus is specific to the host tree it affects. This means that a fungus that attacks one tree genus will not infect other tree genera or groups of plants. For example, the walnut anthracnose fungus affects only walnut and will not spread to other tree species, shrubs, or plants.

Symptoms caused by the anthracnose fungi are often confused with symptoms of wilt, canker, or other foliage diseases. Recognizing anthracnose symptoms and understanding how the disease develops should help home owners and tree care specialists manage the disease properly and minimize its impact in the future.

Small (less than 1/16 inch in diameter) to large (1/2 inch and greater) black spots that often merge together appear in midsummer. Yellowing of foliage and extensive leaf loss or defoliation occurs in the latter part of the summer. Symptoms also appear on the husks and may cause nutmeats to shrivel. Small black bumps, the fruiting bodies of the fungus, may be evident when lesions are observed with a hand lens.

Anthracnose fungi overwinter in infected leaves on the ground. Large numbers of microscopic spores are produced from these tissues in April, May, and June. These spores can be carried long distances by air currents or spread shorter distances by splashing rain.

Water is required for spores to germinate and infect buds, leaves, branches, and other tree parts. Major spore release and infection periods are closely related to weather conditions and the stage of development of the particular tree host.

Healthy, established shade trees can survive even severe attacks by anthracnose. In fact, in years when anthracnose is severe, a tree may lose a large portion of its foliage in the spring, but produce a second flush of leaves later in the spring. This gives the tree a recovery period for the remainder of the growing season. Defoliation from walnut anthracnose occurs in the latter part of the growing season. Some research has shown that the loss of leaves at the end of summer also has little impact on the health and growth rate of black walnut.

The following suggestions will aid in decreasing the severity of anthracnose and minimizing its impact on tree health.

- Clean up and destroy as many of the fallen leaves as possible in the fall. This will help reduce the overwintering population of anthracnose fungi.
- Prune the tree to remove diseased twigs and branches (primarily for sycamore anthracnose) and to open up the canopy for better air circulation and light penetration.
- Maintain tree vigor with proper watering, fertilization (if needed), and other cultural practices, such as wrapping the main stem of young trees in the fall of the year, avoiding damage to the tree bark by lawn mowing equipment, and making proper pruning cuts.

For further information please contact the local K-State Research & Extension Office.