



The Plant Doctor's LANDSCAPE TIPS

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ANTHRACNOSE OF TREES AND SHRUBS

INTRODUCTION:

Anthracnose is a class of plant disease caused by various fungi (*Colletotrichum*, *Gnomonia*, etc.). Many woody plants and herbaceous plants are susceptible. Anthracnose diseases typically cause irregular leaf blotches on the foliage (Photo 1). These leaf blotches may cause leaves to become deformed. Often, leaves affected by anthracnose diseases fall from the tree or shrub; sometimes the leaf loss may appear severe (Photo 2a). The loss of leaves from woody plants is not necessarily detrimental to plants. If leaf loss is significant, plants will usually re-leaf within several weeks (Photo 2b). Anthracnose may be confused with other problems, especially frost injury, which may affect the most recently expanded, tender leaves.

In some cases, the anthracnose fungi may invade, and cause cankers on, twigs and branches of some trees (Photo 3). White oak family members, maple and sycamore are predominant examples. Although slightly more serious than leaf loss, twig/branch cankers do not necessarily severely harm plants over the long term. Twig cankers often cause branches to appear twiggy or exhibit what is known as a witches broom appearance.

In most cases, anthracnose diseases are not lethal to plants. However, there are some exceptions. Anthracnose on native flowering dogwood (*Cornus florida*), for example, is lethal to this species of dogwood because this particular strain of fungus was introduced into North America. Like Dutch Elm Disease on American elm, our native dogwoods have little natural resistance to this new invasive anthracnose fungus. Anthracnose diseases on herbaceous plants are sometimes lethal. An example is anthracnose on creeping phlox (*Phlox subulata*).

DISEASE CYCLE:

The anthracnose fungus overwinters on twigs and fallen leaves. Fungal infections are promoted by cool rainy weather in the spring; hence, the incidence of anthracnose in any given season is related to the conditions during the early spring. The fungus releases spores in the early spring and if wet conditions are prevalent, infection of the newly emerging leaves and shoots may occur. Symptoms are usually noted in the late spring and early summer, when leaf blotches and/or defoliation occurs.

ANTHRACNOSE MANAGEMENT:

Cultural Management: Minimize abundant or excessive irrigation, which can promote anthracnose development in landscapes. Avoid excessive fertilization, which can stimulate too lush growth of susceptible new leaves and shoots. Moderate fertilization and supplemental irrigation during dry periods may increase vigor and assist plant recovery from previous infections. Raking and disposing (composting, etc.) of fallen leaves in the fall may help reduce some potential disease propagules and infections the following spring; however, there are usually plenty of fungal propagules from neighborhood trees to promote the disease. In some cases, use of genetically different plants will provide control. For example, Kousa dogwood is resistant to dogwood anthracnose while the introduced fungus is lethal to native flowering dogwood. And, London Plane Tree is less susceptible than American sycamore.

Chemical Management: Anthracnose diseases for many plants are a natural, yearly cycle of nature. As such, many anthracnose situations require no treatment. Regardless, when the effects of anthracnose are witnessed, it is too late in that season to treat; treatment will have to wait until next season, when treatments must be applied in the early spring at bud break and shoot expansion, **before** any symptoms are noted. Treatments with broad spectrum fungicides may be helpful in some instances particularly those where the particular anthracnose disease is serious for the health and survival of the plant. Several treatments of a broad spectrum fungicide in the early spring, spaced 10-14 days apart may be sufficient. There are also some tree injections available.

For more information, please feel free to email me at robertsd@msu.edu or contact a professional plant health care provider. The author, MSU or MGIA do not endorse any particular products. If using pesticides, be sure to read and follow label directions.



Photo 1: Anthracnose on ash trees appears as irregular leaf blotches. Leaf loss from anthracnose on ash may be erroneously attributed to the Emerald Ash Borer.



Photo 2a: Sometimes, leaf loss from anthracnose is severe and trees may appear dead. Photo of this sycamore was taken in late May after a severe spring infection and defoliation.

Photo 2b: Photo of the same sycamore tree as in Photo 2a, but taken several weeks later. Tree has fully recovered on its own, without human input.



Photo 3: Anthracnose on sycamore causes irregular blotches that usually follow leaf veins. The fungus may also cause twig cankers which may kill twigs, resulting in a witches broom appearance (proliferation of twigs). Note canker on twig.



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