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HORTICULTURE EDUCATION

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Anthracnose Is a Common Leaf Disease of Certain Trees

Tree leaves with black spots on them catch our attention, especially on newly emerged leaves in the spring. Eventually, the leaves fall off and litter the ground. A common spring fungal disease causing these blotches is anthracnose. Dr. Nicole Ward, University of Kentucky plant pathologist, provides information about the disease and its management.

The term anthracnose refers to the symptoms of dark blotching and often leaf distortion. Leaves drop from the tree during severe infections. The disease is not fatal to the tree, but puts stress on it. A new flush of foliar growth may immediately follow. Twigs and branches infected with the fungi develop cankers and girdled stems.

Anthracnose diseases on different species of trees are not caused by the same fungi. The pathogens that cause the disease are host specific which means the anthracnose pathogen on sycamore will not infect ash, etc. The appearance of the blackened area and severity of disease differs with each host and weather conditions.

Even though different, the fungal pathogens that cause anthracnose diseases have similar life cycles. Spore production occurs during periods of spring rain. Anthracnose fungi release

spores to infect deciduous trees when leaves emerge. Mature leaves are resistant to infection, but slow emergence in spring exposes tender leaves to fungal spores for an extended period of time.

Maple anthracnose symptoms begin as leaf spots with dead tissue and may progress into shoot blight and shoot cankers. The way the disease looks on the leaves varies in size and shape depending on the maple species. At least two different anthracnose fungi may be involved, *Discula* sp. and *Kabatiella apocrypta*. On Norway maple, lesions or spots are purple to brown and follow the veins. Leaves of Japanese maple blacken and shrivel up. Brown to reddish brown lesions form along or between veins of sugar maple. Symptoms on sugar maple can be confused with scorch symptoms. Twig infections result in blighting and death of shoot tips.

Ash anthracnose, caused by *Discula umbrinella,* infects buds, leaves, and sometimes twigs. In early spring, infection of buds or expanding leaves results in irregular brown blotches and leaflet distortion. These blotches are frequently associated with leaf margins. Infections that occur once leaves have already expanded result in small brown circular lesions. As these lesions enlarge, they may come together forming one big brown area. Infected leaflets often drop. Although shoots may become stunted, infection on ash does not result in obvious twig or branch cankers.

Sycamore anthracnose on young, expanding leaves develops irregular dark, necrotic blotching centered along leaf veins or edges. These dark blotches may turn tan-colored as the diseased areas of the leaves dry out. Blighting of twigs or shoots may follow. Trees produce new foliage rather quickly, but affected branches may remain crooked because lateral shoots behind the terminal or end shoot, become dominant when terminal shoots are killed.

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For most trees, anthracnose disease is not lethal, but repeated defoliation can be stressful. Additionally, persistent rains and disease spread can lead to infection of twigs and branches. Good cultural practices are important to reduce the disease. Some important points are listed in managing this disease.

Anthracnose is favored by a moist environment. Select a planting site with a sunny eastern exposure to promote rapid foliage drying early in the day.

Remember to rake and destroy fallen leaves, as they can be a source of inoculum or fungal spores. Do not compost infected leaves. Remove dead twigs and branches which serve as an overwintering site for the fungi.

Avoid wounding tree trunks, such as bumping with lawn equipment and making jagged pruning cuts.

Maintain mulch 2-3 inches thick over the root zone and beyond the drip line but not against the trunk to maintain soil moisture and protect trees from lawnmower injury.

Protect trees from dry weather and drought. Water the trees at least once a week during hot, dry months using soaker hoses or drip irrigation. Avoid overhead sprinklers; wet foliage favors sporulation and infection.

Diagnose and treat insect and disease problems as soon as possible if appropriate.

Fungicides are often not recommended to manage anthracnose. They can be costly, and it is difficult to effectively cover large trees. These chemicals are protectants and therefore must be applied before infection occurs. Once symptoms develop, it is too late to apply fungicides for controlling anthracnose. However, if the tree is valuable or if it has been attacked year after year,

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a fungicide spray program may be justified. Three sprays should be applied in spring: at bud break, when leaves are half-expanded, and when leaves are fully expanded. Good coverage with the fungicide is needed.

For more information about anthracnose on shade trees, contact the Daviess County Cooperative Extension Service at 270-685-8480 or annette.heisdorffer@uky.edu.

Annette's Tip:

When looking for information about growing plants in the garden and landscape, consider looking for information through the University of Kentucky at https://daviess.ca.uky.edu. On that site, click on horticulture. A variety of topics and links for resources are presented.

Also, past gardening programs I have presented at the Daviess County Public Library on gardening are available through their Facebook page.

On-Going Event:

The state-wide Horticulture Webinar Wednesdays is offered from 11:30 a.m. to noon. The next topic I present is "Putting the Kibosh on Squash Bugs". The site to register is https://kentuckyhortnews.com/. Presentations are recorded and more topics are found there as well.

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