

Number 12 - July 26, 2015

Cherry Leaf Spot on Cherry and Plum Trees

We've had a larger-than-normal number of stone fruit samples with cherry leaf spot. This disease is caused by the fungal pathogen *Blumeriella jaapii*. Disease development is favored by humid weather, which is one reason we've seen more of it this year than usual.

The fungus can infect production and ornamental cherry and plum trees. Symptoms start to develop in early summer as small, round, purple spots on the upper surface of older leaves. Eventually, the spots turn reddish brown, and they may coalesce to form larger, irregular dead areas on the leaf. The center of the spots may dry and fall out of the leaf, causing a "shot hole" appearance. Leaf tissue near the older spots turns yellow, and the leaves start to die and fall from the tree by mid-summer.

Because the fungus overwinters on infected leaf material, removing the fallen leaves and burning or disposing of them is important to reduce the amount of inoculum in the environment. Fungicides can be applied to highly susceptible trees, or trees that were badly affected in previous years. Fungicides containing chlorothalonil, chlorothalonil + thiopantate-methyl, copper + mancozeb, mancozeb, myclobutanil, propiconazole, and pyraclostrobin + boscalid are labeled for use against this disease. Applications should begin in

spring at petal fall, with two applications with a 2-week interval between. If symptoms continue to develop, or if the spring application was missed, later applications in summer may be warranted especially if the summer has been particularly wet or humid. Make sure to check that the fungicide you choose is labeled for use on production (edible) cherry or plum trees before applying anything to a tree you plan to harvest.

Because this disease and the resulting defoliation can cause severe stress to the tree, we recommend increasing the vitality of infected trees by mulching the base of the tree, applying a fertilizer in late fall or early spring, watering at the base during periods of dryness lasting for more than 2 weeks in summer, and pruning out dead wood during dry weather. (*Diane Plewa*)

Oak Wilt

The plant clinic has received several questions on Oak Wilt and recommended control strategies. Oak wilt is a devastating fungal disease that essentially plugs up the vascular system and disrupts the water and nutrient flow within oak trees. The disease progresses rapidly, killing mature trees in the red oak group within one season.

Leaf symptoms vary depending on the oak species involved. Generally, species

within the red oak group (pointed leaf lobes) develop discolored and wilted leaves at the top of the tree or at the tips of the lateral branches in late spring and early summer. The leaves curl slightly and turn a dull pale green, bronze, or tan, starting at the margins followed by a rapid defoliation. In some years, we have seen red oaks progress from scorched foliage to total defoliation in as little as 3 weeks.

Species within the white oak group (rounded leaf lobes) show symptoms on scattered branches of the crown. The disease is often confused with general dieback and decline. Leaves on infected white oaks become light brown or straw-colored from the leaf tip toward the base. The leaves curl, but often remain attached to the branches. This tree group may die in one season but is much more likely to survive for many years with dieback and stressed appearance.

Accurate diagnosis and confirmation of the disease is essential. An incorrect diagnosis will often lead to the unnecessary removal of a tree as well as expensive treatments to protect nearby trees. A plant diagnostic laboratory can confirm or rule out the presence of oak wilt. The University of Illinois Plant Clinic receives an average of 50 oak wilt samples per year. Of those sampled, only a small number, 10-15 trees, are confirmed to have the disease. The samples not found to be infected with oak wilt either had symptoms that were caused by other less threatening pests and diseases or the test results were inconclusive due to poor sample quality (too dry, wrong portion of the tree sampled, not shipped correctly, etc.). Inconclusive results can be avoided by reviewing the tips and suggestions for oak wilt sampling pro-

vided within [Issue 10 of the 2013 Home Yard and Garden Pest Newsletter](#).

There is no cure for oak wilt. Control strategies focus on preventing the disease from spreading to nearby healthy oaks. Oak wilt moves from diseased to healthy trees in two ways – through root grafts formed between trees and through fresh wounds via sap-feeding insects. Root grafts are common between oaks of the same species that are growing within close proximity of each other. All possible root grafts between healthy and infected trees should be severed mechanically *before* the diseased tree is removed. This can be accomplished by using a trenching machine or vibratory plow that will cut or break the roots to a depth of 3-5 feet.

Diseased and dead oaks should be removed as soon as possible. The use of diseased oaks for firewood is not recommended because the firewood is frequently not burned before the following spring. At that time, the diseased wood begins to produce fungal spore mats that attract insect vectors. If diseased wood is to be used, it should be debarked, cut to the proper length, split, stacked off of the ground, and protected from moisture in order to hasten drying. Firewood that has been debarked or stored in a dry place is not a source of infection.

Sap-feeding insects are responsible for the aboveground movement of the pathogen. The insects are attracted to fungal spore mats produced on trees killed during the previous year. Freshly wounded trees are also attractive to these spore contaminated insects. The wounds serve as an entry point for the pathogen. Wound infections are most

likely to occur during the spring and early summer between the time the buds begin to swell and full leaf development. Pruning oak trees, especially oaks within the red oak group, should be avoided from April to October. The risk of this type of infection decreases by mid-July. However, those erring on the side of caution may choose to postpone any pruning until dormancy.

Finally, fungicide injections of propiconazole can be used to protect high value, healthy trees. If used, fungicides should be in combination with the strategies mentioned above. Therapeutic injections can also be effective on species within the white oak group when used early in the infection (less than 30% crown affected). Therapeutic injections are not recommended for infected trees within the red oak group.

For more information about oak wilt, consult *Report on Plant Disease*, no. 618, "[Oak Wilt and Its Control](#)" (Adobe PDF).

Examples of common oak pests and problems can be found within the [Plant Clinic Report on Oak Problems](#). (Travis Cleveland)

Japanese Beetle

Japanese beetle adults are numerous throughout Illinois. Damage has been reported on linden, crabapple, and various other trees and shrubs. Heavy feeding is likely to continue until about mid-August.

The respite that we have had the last few years from Japanese beetle appears to have ended. Spotty heavy feeding damage is even being seen in east cen-

tral Illinois where damage has been very low for many years.

Droughts in 2012 and 2013 greatly reduced the number of larvae. Japanese beetle grubs require eleven inches of water from egg hatching in late July and early August until descending deeper into the soil for the winter in October and November. The season-long drought of 2012, and the drought from July into fall in 2013, caused high larval mortality. Most people allowed their turf to go brown and dormant those years, so irrigation water was not available to save the grubs.

Cold weather during the winter of 2013-2014 resulted in an extended period of deeply frozen soils in the northern half of the state, causing additional Japanese beetle grub mortality. Unlike masked chafer grubs, which continue to tunnel deeper as soils cool, Japanese beetle grubs generally tunnel no deeper than eleven inches. Although white grubs can tolerate freezing, they start to die after being frozen for three weeks.

Refer to the June 27, 2016 issue of this newsletter at <http://hyg.ipm.illinois.edu/article.php?id=826> for adult Japanese beetle control recommendations. (Phil Nixon)

White Grubs

Large numbers of Japanese beetle adults along with sporadic rainfall makes it necessary to treat preventatively for white grubs in irrigated turf in some areas of the state. Much of southern and central Illinois continue to be dry, creating conditions where white grub damage is likely in irrigated turf. Much of the

rest of Illinois has had sufficient rainfall that non-irrigated turf is generally green and attractive to egg-laying Japanese beetle and masked chafers.

In areas with more rainfall and naturally green turfgrass, infestations are likely to be low with only spotty infestations requiring treatment. Scouting in early August will identify hot spots and is typically a better option economically and environmentally than is widespread preventive insecticide application.

Refer to the previous issue of this newsletter for white grub control recommendations located at <http://hyg.ipm.illinois.edu/article.php?id=834>. (Phil Nixon)

Syrphid Flies

Large numbers of syrphid, or flower, flies are being seen. They are small flies, usually 1/4 inch or shorter, with yellow and black or brown bands on the abdomen. They hover around your arms when you have been perspiring and land to lap up the sweat. This hovering also gives them the name of hover flies. They are called flower flies because they are commonly found on flowers, pollinating as they move from flower to flower. They are called syrphid flies because they are in the fly family Syrphidae.

Illinois sweat bees are 1/4-inch-long, metallic green, brown, or black bees that are also attracted to perspiration. The only yellow and black stinging insects

commonly attracted to perspiration are yellowjackets. These wasps are about 1/2 inch long and easily recognized by most people. Although commonly referred to as sweat bees, syrphid flies cannot sting. While they are feeding on perspiration, their mouthparts can usually be felt; and on sensitive areas, a person may feel a slight pinch. These insects have one pair of wings instead of the two pairs characteristic of bees and wasps. Like many people in the Midwest, I grew up being told that these insects were sweat bees. Only when I went to college did I learn the difference.

Syrphid flies are a diverse group, with the larvae being primarily feeders on dead organic matter and predators of aphids. The white to gray, legless larvae may have become abundant, feeding on aphids and other small, soft-bodied, slow-moving insects. A possibility is that the larvae have been feeding on the aphids that are very common on corn in Illinois at this time of year.

In any case, the adult insects are common around flowers and in shady areas. Control efforts are not recommended because these flies are, at the least, pollinators or non-pests and, at the most beneficial, useful in controlling aphids. Insecticide application is problematic because hovering flies easily avoid sprays aimed at them; large-surface spraying of insecticides is not recommended, and the effects are very short-lived. Put up with the flies. They will probably decline naturally within a week or two. (Phil Nixon)