

Number 13 – July 30, 2012

Seedcorn Beetles

Seedcorn beetles, *Stenolophus lecontei*, have been reported in large numbers in turf in Michigan, Ohio, Kentucky, and California. The adult beetles are slightly over one-quarter inch long, oval, and yellowish-brown to brown with two large, black oval spots on the back. In the past, only adult beetles were found burrowing into golf greens in September and October. Recently, larvae were found in a green in Kentucky.

Seedcorn beetle larvae are predators that feed on other insects in the soil. The adults are primarily predators on other insects. They get their name from feeding on germinating corn and other seeds in the soil, particularly those that are slow in germinating in cold soil. No damage has been associated with these beetles in turf, so control is not recommended. (*Phil Nixon*)

Pearleaf Blister Mite

Pearleaf blister mites, *Phytoptus pyri*, has been reported on ornamental pears. This is an eriophyid mite that attacks not only apple and pear fruit and ornamental trees, but also other rose family trees including serviceberry, cotoneaster, hawthorn, and mountain ash.

Eggs overwinter under bud scales, hatching in the early spring. The young

mites crawl to the leaves to feed. Being eriophyid mites, they are elongate, cigar-shaped mites with only two pairs of legs at the anterior end. They are much smaller than spidermites, being too small to be seen without a hand lens. They suck juices out of cells on the leaf underside, causing them to rupture. The mites then crawl inside the ruptured cells to lay their eggs. Successive generations cause pinhead-sized pimples to form on the leaf underside that coalesce to form gall-like swellings. These appear as reddish to brownish streaks extending at angles from the midvein. Although the damage is most evident on the leaf underside, similar, lesser damage also appears on the upper leaf surface. Heavily damaged leaves curl and drop from the plant.

Various miticides may be effective in controlling these mites, but abamectin (Avid) is more effective than some other miticides against eriophyid mites. It is also translaminar; it moves systemically into the leaf tissue which should make it more effective than others against these mites. (*Phil Nixon*)

Pyrethroid Label Change Videos

FMC has just released three short videos concerning label changes associated with Talstar, their bifenthrin product. Similar changes appear to be in store for other pyrethroid insecticides. Although

the videos are directed more towards structural Pest Management Professionals (PMP's), the label changes affect liquid applications to turf, trees, shrubs, and other ornamentals and granular applications to turf. In addition to explaining label changes, the videos cover other best management practices (BMP's) for pesticide application. These videos can be accessed at <http://www.agprofessional.com/newsletters/dealer-update/articles/FMC-video-explains-EPAs-new-pyrethroid-guidelines-163689786.html> Click on the blue letters "liquid insecticides" and "granular insecticides" as links to the pertinent videos. (*Phil Nixon*)

Cicada Killer

Cicada killer continues to be very numerous in many parts of Illinois this summer. These wasps are about 2 inches long, black with yellow markings, and have reddish, transparent wings. The females dig 1/2-inch-diameter burrows that extend about seven to twenty inches into the soil. This results in mounds of loose soil around the burrow openings. Annual (dogday) cicadas are captured, stung to paralyze them, and dragged down into the burrows. Eggs laid on the prey hatch into wasp larvae that eat the paralyzed but still living prey. Pupation occurs in the burrow with adults emerging the next summer.

Male cicada killers establish aerial territories where the females are located. Because bee, wasp, and ant stings are modified egg-laying devices, males cannot sting. However, they are intimidating to people entering their territory, by buzzing and hovering

around one's head. They may even butt you with their head as they do this to intimidate other male cicada killers.

Females are very unlikely to sting, with the only stings that I have heard of due to stepping on them barefoot or grabbing them barehanded. Thus, the main concerns are people's reaction to the wasps. Their burrows are also disruptive to sand traps and turf areas. Cicada killers tend to prefer sandy soil and areas with sparse turf or other ground cover for their burrows.

Reduce their numbers in turf areas by using cultural methods to improve turf coverage and density. Mulching bare soil areas should also discourage female burrows. Carbaryl, sold as Sevin Dust, and deltamethrin, sold as DeltaDust, are effective in eliminating females when the dust is sprinkled next to the burrow opening. As with many other species of animals, once the females are gone, the males leave. (*Phil Nixon*)

White Grubs

White grubs should be hatching or have hatched throughout the state. Our normal first date for determining grub numbers through scouting is around August 6. However, adults emerged ten to fourteen days early this year, so all of the eggs should have hatched. Fewer people appear to be irrigating their lawns this year, so the grubs will be concentrated in the few highly irrigated turf areas. In Issue 11 of this newsletter published on July 2, I shared some data explaining the lack of grubs in hot, dry turf.

Scout for white grubs by using a sharp, heavy knife to cut through the thatch

and pull up a square foot of turf. Count the number of grubs in the root zone by looking for those exposed on the soil surface, ones hanging in the roots, and those popped out by using the knife to till the underlying three to four inches of soil. If there are fewer than ten per square foot, treatment should not be necessary. However, raccoons, skunks, and birds will tear up the turf, seeking the grubs as food. Grub numbers as low as three per square foot have been known to attract them. Areas with high numbers of these animals may require treatment to avoid damage.

Raccoon damage appears during the night as strips of sod (6 inches to 1 foot wide) pulled back to expose the grubs. Their damage is very obvious and impressive. Skunks also go after grubs at night. They open circular holes about 3 inches in diameter through the thatch. A single skunk makes about 100 of these holes per night. Insectivorous birds such as starlings and robins scratch open the soil to expose the grubs, causing brown, rough areas.

The treatment of choice for grubs at this time of year is trichlorfon, sold as Dylox, or chlorantroniliprole, sold as Acelepryn. They kill the grubs within three to five days. Irrigation a day or two before insecticide application brings the grubs closer to the surface, resulting in better control. (*Phil Nixon*)

***Rhizoctonia* Root Rot**

When the ornamentals in your backyard are slowly dying off or developing poorly, this poor growth and decline may be symptoms of a *Rhizoctonia* root rot. Whether it is an ornamental,

vegetable, or a field crop; a wide range of plants are subjected to *Rhizoctonia* root rot disease. The disease is caused by a soilborne fungus of the *Rhizoctonia* spp. Though a root rot pathogen, *Rhizoctonia* infections are not limited to roots. Other species of *Rhizoctonia* can extend their infection to the foliage and stems of the plants.

This pathogen is favored by warm, moderately wet environment, but can also infect without moisture. This disease is most prominent around midsummer, when conditions tend to be hot and dry. *Rhizoctonia* has the ability to survive in the soil for long periods of time. Due to this fact, susceptible plants should not be planted in previously infected and problematic sites

Symptoms

Symptom expression of *Rhizoctonia* can vary depending on the severity of the disease and the susceptibility of the host. Some of the most common symptoms include poor growth, stunting, discoloration and wilting. The affected plant will appear less healthy, with smaller leaves and flowers. This is because the fungus disrupts the plant's root system, rendering the water transport ineffective. Sometimes discoloration can be observed on the stem near the soil line. Comparing the roots of a healthy plant to a diseased one will reveal brown, water-soaked roots on the diseased plant. When the seeds are infected, damping off can occur. Another way to confirm the plant is infected with root rot is to look at the infected tissue under the microscope. The fungus forms characteristic hyphae with 90-degree angled branching and constrictions near the branching points. The hyphae may or may not be

pigmented. *Rhizoctonia* doesn't form any spores and spreads by forming a mycelial network that extends to nearby plants, which leads to further infection and colonization.

Management of the Disease

- Prevention and sanitation are the best ways to approach *Rhizoctonia* root rot control. Promptly remove any diseased plants and debris so that disease doesn't spread to nearby healthy plants.
- When purchasing plants, avoid unhealthy, diseased plants. Any heavily discounted bargain plants should be approached with caution as they may harbor diseases.
- Heat treatment can sometimes be used to kill the fungus in the soil.
- Proper soil drainage can also help to prevent disease development. If need be, organic matter can be added to assist with the drainage.
- Another suggestion is to rotate the plants every 2 to 3 years to prevent the *Rhizoctonia* fungus from building up.
- While fungicides are available, they do not necessarily kill or inhibit the growth of this pathogen. They are mostly only used as protectant for uninfected plants. It is best to check the labels of the fungicides carefully if you want to apply them.

If you suspect your plant has root rot disease, it is best to send it to the U of I Plant Clinic for identification or have a plant pathology expert inspect it to confirm the presence of *Rhizoctonia*. Other fungal pathogens such as *Fusarium* and *Phytophthora* or even environmental stress can cause similar symptoms. It is easy to misdiagnose the disease.

For more information, please consult http://web.aces.uiuc.edu/vista/pdf_public/615.pdf or <http://hyg.ipm.illinois.edu/pastpest/200214c.html>.

(Stephanie Porter and Zu Dienle Tan)

Powdery Mildews

Powdery mildews are one of the most easily recognized diseases in the landscape. Unfortunately, they are equally as common and can be a problem on annuals, perennials, shrubs, and even trees. Powdery mildews flourish when the days are warm to hot, the nights are cool, and humidity is high. They are often more severe on crowded plants growing in the shade where air circulation is poor.

Powdery mildews are caused by fungal pathogens. Many different species are responsible. The species are grouped in six closely related genera. Most powdery mildews are fairly host specific. Those who are curious about matching a host to the likely powdery mildew involved should consult Table 1 of RPD No. 617: Powdery Mildews of Ornamentals (http://web.aces.uiuc.edu/vista/pdf_public/617.pdf).

As mentioned, the disease symptoms are easily recognized and these symptoms also appropriately match their disease name because they first appear as distinctive white powdery patches on shoots, buds, flowers, or stems. The disease progresses to form a felt-like, white mildew growth. Large portions of the plant, especially leaves, may be infected. Late in the season, small spherical, dark brown-to-black fungal

structures (cleistothecia) may be seen mixed within the felt-like mildew. Some infected leaves may display symptoms of stunting, curling, chlorosis, and premature leaf drop.

Damage from powdery mildew is mostly aesthetic and in most situations will not harm the long-term health of the plant. Death of infected plants is rare. However, flowers may be reduced in number and quality due to this disease. The powdery mildew covering the leaves may also lower the plant's photosynthetic efficiency, resulting in reduced growth. Infections have also been associated with increased winter injury to perennials.

Control Recommendations

- Purchase plants that are healthy and disease free. When available, select cultivars that are resistant.
- Avoid planting susceptible species in shady areas with poor air movement.

- The pathogen thrives in humid conditions.
 - Dense plants may need to be pruned to promote airflow.
 - Improper watering can promote the disease. Focus watering from below and avoid splashing water on the leaves. Water early in the day to allow the foliage to completely dry.
- Fungicides can be used to preventatively to control powdery mildew. Applications should be started at first appearance of the disease and reapplied according to product label directions. Fungicides labeled for homeowners **can be found in the University of Illinois Extension Pest Management for the Home Landscape book**. Commercial applicators should consult the 2010 Commercial Landscape and Turfgrass Pest Management Handbook for approved fungicides.

(Travis Cleveland)