

Number 16 - September 19, 2016

Summer Patch in Lawns

The Plant Clinic has received a lot of turf samples this year, and recently many of them have been diagnosed with Summer Patch, a root rot caused by the fungus *Magnaporthe poae*. Kentucky bluegrass and fescues are the most commonly-affected types of lawn grass affected by this pathogen. As the name implies, Summer Patch usually becomes noticeable between June through September. Early infections may occur, but usually escape detection due to the turf recovering.

Summer Patch causes medium to large, circular or irregular, yellow or tan areas of dead and dying plants in the lawn. Healthy green grass may remain in the middle of the patch, resulting in a ring-like pattern of damage. These dead patches can coalesce, leading to large, splotchy areas of dead grass scattered across the lawn. The roots and crowns of the plants become dark brown and rot, leading to the death of the aerial parts of the grass.

Management consists of keeping plants healthy through good lawn care, including core aeration, using the proper mowing height, appropriate fertilization, good watering practices, and reducing thatch. Symptoms of Summer Patch are worse when grass is kept mowed low, and during periods of drought stress. Consider choosing less susceptible species or varieties of grass when installing or overseeding a lawn.

If the disease is severe during the summer, a fall fungicide application followed by a spring application is recommended. From the 2014 Commercial Landscape and Turfgrass Pest Management Handbook: "Both applications should be made when the average soil temperature (2-in. depth at 10 a.m.) reaches about 68 to 70 F. Water the turf thoroughly the day before application with 0.25 to 0.5 in. (150 to 300 gal) of water per 1,000 sq ft. Unless directed otherwise, drench the fungicide into the root zone immediately after application using 0.5 to 1.0 (300 to 600 gal) of water per 1,000 sq ft. Rake out dead patches and re-seed with a mixture of turf species and / or varieties." (*Diane Plewa*)

Aeration of Turf

September and early October is an ideal time to rejuvenate lawns, whether you want to work on a small area or a large acreage. As cool weather starts to become more common, the cool-season bluegrasses, ryegrasses and fescues will recover and start to fill in.

Aeration is one of the best things to do if the soil is hard and compacted such as a suburban clay soil, or filled with lots of cracks due to the heat. Under those conditions, grass roots won't grow quickly. Turf just kinds of sits there and doesn't do much even with fertilizing.

Aerating pokes penny to nickel-size holes in the lawn usually two to four inches apart. The best aerators pull a plug of soil out, and deposit it on the turf's surface. Negatively, it gives the illusion of geese or small dogs visiting your yards.

Most of the plugs are typically about 2 to 4 inches in length. However, when mowed the following day or two, they will be pulverized and filter down between the grass blades to the soil below. Think of the plug and lawn mower as a carrot in a food processor, but not as hard.

The advantage of plug or core aeration is that it creates a hole in the soil. The soil surrounding the hole soon collapses with watering and fertilizing, or is filled by the pulverized plug. A looser soil means better root growth. Better root growth means better top growth, which means better root growth. It's a perpetual circle.

Over the years, we've come to believe that yearly aerating can be one of the best things you can do to a lawn, particularly where there is clay soil, clay with sod, kids, pets, or any combination of the four. If the lawn is adequately growing, aerating every three to four years may be enough. Watch out for buried sprinkler heads and tree roots which can be damaged by the tines and vice-versa.

Aerating should occur when the turf starts to recover, which is in September. Unlike seeding, we have a relatively wide window of opportunity, starting now and going until mid-October.

There are machines that just punch holes in the turf; while a hole is created,

the surrounding soil has been compressed by the machine. Aerating spikes attached to shoes and boots are more "feel good" for the person than providing any benefit to the turf. Removing the plug is really the best course of action.

Fertilizing should occur after aerating to make sure the grass is stimulated to grow. (*David Robson*)

Ragweed vs. Goldenrod

With ideal growing conditions, ragweed is in full bloom this autumn. That means those with allergies will be suffering tremendously.

There are two main forms of ragweed in Illinois: common and giant. Both carry the scientific genus of *Ambrosia*, which is somewhat odd concerning the historic Greek nature of the word. Most allergy sufferers would say the plant is far from the food of the Gods.

Common ragweed (*Ambrosia artemisiifolia*) has fern-like foliage, reaching about 2 to 3 feet in height. Stems are fuzzy and tinged pink. The plant is a summer annual, dying down with the first frost. The plant starts to bloom in July or August, with peaks in September. Flowers are green and non-showy. Seeds are brown with a high concentration of oils, making them attractive to birds. This allows for the plant's spread. Seeds may stay viable for 5 years. Bees and caterpillars are known to feed on this native plant.

Giant ragweed (*Ambrosia trifida*) reaches 6 to 7 feet in height, though under ideal conditions it may soar 10 to 12 feet high. Leaves can be singular or have up

to five palmate lobes, generally opposite on the plant. Leaves can be larger than a human hand, and usually are serrated along the edges. Leaves right under the flower spike are often hairy. Stems are covered with fine white hairs. The plant, while an annual, appears woody toward the base. Flowers are also green. Seeds have a small bur; animals, people and machinery can move the seed from one location to another. Few, if any, animals feed on giant ragweed.

Both ragweeds are wind pollinated. Their pollen is extremely small and easily blown by the wind. It's the pollen's size that irritates allergy-suffers.

Common and giant ragweed are on the Illinois Noxious Weed Act list, with one caveat. Plants must be controlled, which essentially means eradicated, but only within municipality boundaries including villages, towns, and cities. Rural control is not required.

Blooming at the same time is goldenrod (*Solidago sp.*) Like the ragweeds, it's a member of the Asteraceae family, but has bright yellow showy flowers. In a case of "guilt by association", goldenrod is often blamed for allergies. However, the plant is insect-pollinated since the pollen is quite heavy and sticky. Think the difference between a ping pong ball (ragweed) and a giant metal wrecking ball (goldenrod.) When blooming, the pollen drops to the ground or whatever is underneath the flowers, and is not blown in the wind. There are many cultivars of *Solidago* on the market for late-season flowering in the perennial garden.

Ideally, the best control of ragweed is mowing or hoeing them out when in the young stage in early summer before

plants start blooming. Preemergence herbicides can be used in the spring if you have a history of the plant in a particular location. Herbicides this late in the season aren't practical. Grubbing out plants and burying or burning (where allowed) is the best option. (*David Robson*)

Carpenter Ants in Trees

Carpenter ants normally do not need to be controlled in trees because they usually cause little or no damage to the tree. They are very numerous. I commonly say that if you stare at the trunk of an older tree for at least 30 seconds during the growing season and don't see a carpenter ant climbing up or down, you probably have your eyes shut.

Carpenter ants vary in size and color. The black carpenter ant is probably the most noticed species in landscapes. Worker ants are non-reproducing females that are wingless and black. Workers come in two size ranges. Minor workers are approximately 1/4 inch long and do much of the food foraging, nest construction, and larval feeding; they also attend the queen. Major workers are also wingless and black, but are about 1/2 inch long and play a major role in defending the nest and minor workers.

The black carpenter ant is the only carpenter ant in Illinois that commonly locates its nests in buildings. They tunnel out wood that is damp or decaying from roof or water-pipe leaks. Main nests in trees also establish satellite colonies in nearby buildings.

The red carpenter ant is another common species, with red, wingless workers

that are about 1/4 inch long. They are commonly seen on flower blossoms. Other, smaller species of carpenter ants are also common in Illinois.

Carpenter ants build their nests by hollowing out rotting wood; they do not eat the wood. Workers take mouthful-sized chips of wood to the nest entrance, where they deposit the chips. This results in a pile of coarse sawdust at the base of a tree. The nest itself consists of meandering, 1/4-inch-diameter tunnels that are free of sawdust. Egg laying, larval rearing, and pupation take place within these tunnels. Nests may be present in rotting wood in trunks, limbs, or roots. They do not nest in sound wood.

Nests that are at least five years old will contain winged reproductives. Black carpenter ant males are 1/4 inch long and have two pairs of clear wings. The queens are approximately 3/4 inch long and also have two pairs of clear wings. Both sexes emerge from the colony in early morning and fly towards the light to escape the colony. Mating occurs, and the reproductives break their wings off at abscission sites near the wing bases. Then they tunnel into damp, rotting wood to start a new colony.

Carpenter ant nests in trees are an indication of rotting wood. Such trees should be checked to determine whether the rot has weakened the tree enough that it becomes a hazard. Nests in trees close to a house may result in ants entering the house to forage. This nuisance can be eliminated by spraying a labeled pyrethroid insecticide such as permethrin or cyfluthrin into the nest or by pruning overhanging limbs at least three feet back from the roof. Otherwise, car-

penter ant nests do not directly weaken the tree and do not usually require control. (*Phil Nixon*)

Chinch Bug

Chinch bug damage is being found in NE IL as reported by Harold Enger, Spring-Green Lawn Care. Numbers of chinch bugs build under drier conditions, allowing bugs to survive which would be killed by fungal disease under higher rainfall. Thatchy turf allows the bugs to escape fungus attack by living in the thatch, not coming into contact with the soil where the fungus is living, and waiting.

Chinch bug is attacked by a naturally occurring fungal pathogen, *Beauveria bassiana*. This causes all stages, eggs, nymphs, and adults, to be killed and covered with fine white fungal strands. In Illinois, we typically get enough rainfall throughout the season that the fungus controls the chinch bugs for us, free of charge.

The other factor in chinch bug abundance is nitrogen. Chinch bugs, along with many other sap-sucking insects, are healthier and reproduce more on plants containing high levels of nitrogen. Excess nitrogen fertilization results in many more chinch bugs than would normally be present. In addition, excess nitrogen tends to result in increased thatch.

Damaged turf is light tan in color, looking like straw. Adjoining lawns that have not received as much nitrogen fertilization typically show no damage. To find the chinch bugs, push the grass blades to the side with your fingers to reveal the crowns of the grass plants, and the bugs

will be evident at the base of the shoots. Another way to scout for chinch bugs is to push a coffee can or similar can down into the turf and fill it with water. The bugs will pop to the water surface and accumulate around the edge of the can. The threshold for treatment is a solid line of chinch bugs where the water meets the can.

Two species of chinch bugs attack Illinois turfgrass. Hairy chinch bugs are found in northern Illinois, where they attack Kentucky bluegrass, fine fescues, perennial ryegrass, bentgrass, and zoysiagrass. Common chinch bug occurs in central and southern Illinois and feeds on the same grass species, as well as field grain crops such as wheat, corn,

and sorghum. Both are similar in appearance and habits.

Adult chinch bugs overwinter in the crowns of grasses. They become active in the spring. They are about 1/8 inch long, long oval-shaped, and are black and white, due to wing coloration. Some adults have short wings and appear black. Nymphs are bright orange with a white band, turning to black as they go through five instars (stages). First-instar nymphs are about 1/32 inch long and grow up to be 1/8 inch-long fifth-instar nymphs.

Control chinch bugs with a spray of bifenthrin (Onyx, Talstar), deltamethrin (DeltaGard), lambda-cyhalothrin (Scimitar), or trichlorfon (Dylox). (*Phil Nixon*)