



Home, Yard, and Garden Pest Newsletter

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White Grubs

White grub is a common name for the larvae of June beetles, chafers and Japanese beetles. They are white, C-shaped larvae, about 1 inch long and have 6 jointed legs attached close to their small brown head capsule. The grubs can be found in the first 8 inches of soil beneath turfgrass where they feed on grass roots. Excessive root feeding by white

grubs can leave turfgrass poorly anchored to the soil and can result in brown patches in a lawn that can be pulled back like a rug. This can impact the aesthetics of a lawn and, in some cases, can make sports fields less safe for children and athletes.

Scouting is the most important step in determining whether a treatment is necessary or economical. August is the best time to scout for grubs because young grubs are hatching and beginning to feed on grass roots. To scout for grubs, choose a location in the turfgrass that is near pavement and away from trees. Cut a 1 sq.ft. patch of turfgrass and roll it back to expose the grubs below. If you find 10 – 12 grubs or more in those patches, you have enough insects to cause significant injury and can apply a treatment to the turfgrass.

Chemical Controls:

Neonicotinoids (Merit, Arena, Meridian) are systemic insecticides, meaning they are taken up by and transported within the grass plants. When grubs feed on grass roots they take in the insecticide and are killed. These systemic insecticides can remain active within the turfgrass for up to 3 months. Because these products are transported within the plant, they have the potential to harm pollinators visiting treated plants. It is important to avoid applying neonicotinoids to flowering plants (including clover and weeds) to prevent pollinator exposure.



White grub, Alton N. Sparks, Jr., University of Georgia, Bugwood.org



White grub scouting, Phil Nixon, University of Illinois

Trichlorfon (Dylox) is an effective and short acting treatment for white grubs. It can be purchased as a granular formulation that must be incorporated, watered-in to the turfgrass.

Chlorantraniliprole (Acelepryn) is a more selective insecticide that can provide control for white grubs and some caterpillars that feed on turfgrass but has a lower risk of harming pollinators like bees. It can be applied as either a spray or granular formulation.

If a treatment without synthetic active ingredients is preferred, biological or cultural controls can be used.

Biological Controls:

GrubGone!® is a microbial product that can be an effective option in controlling white grubs. The active ingredient, Bt galleriae (*Bacillus thuringiensis galleriae*), is a soil microbe that damages the gut of beetle larvae when it is consumed.

Cultural Controls:

Another strategy is to make turfgrass less attractive by reducing irrigation during late July and early August. At this time, adult beetles are actively mating a depositing eggs and well-irrigated turfgrass is the most attractive location for egg-laying. This is the safest and cheapest option but may result in some browning from lack of water during the hottest part of the summer. This option may not be possible in locations like golf courses, where green grass is required.

Sarah Hughson

Chicory

Chicory (*Cichorium intybus*) is an erect perennial growing from a large, fleshy, dark brown taproot. It has a rosette of basal leaves and tall, wiry stems that are sparsely leaved and branching. Chicory grows to about three to four feet tall. It is especially noticeable this time of year when in full bloom and can be found easily statewide along many Illinois roadsides.

The basal leaves are formed early in the growing season. They are lobed, arranged in a rosette, 6-8 inches long, and are commonly confused with that of dandelion. However, dandelion leaves will always point toward the leaf base and Chicory leaves will

not always. Also, Chicory leaves are rougher to the touch. These basal leaves may not be present late in the season.



Less commonly seen white Chicory flowers along a roadside, Scott Wiesbrook, University of Illinois



Chicory basal leaves, Michelle Wiesbrook, University of Illinois

The stems, produced later in the growing season, also have leaves which are smaller and not as deeply lobed as the basal leaves. They are alternate on the stem, lanceolate in shape and rough on the upper surface. The leaf base clasps the stem. The leaf margins are coarsely toothed to pinnatifid. The stems are typically sparsely leaved, wiry, and branching. The flowering stems are erect, hollow, and round. Both the stems and leaves exude a milky sap when cut.



Chicory hollow stems, Michelle Wiesbrook, University of Illinois



Chicory flowers, Michelle Wiesbrook, University of Illinois

The flowers are ray flowers with each being square-tipped and fringed. Chicory has no disk flowers. Flowers are stalkless and typically bright blue but may be pink, purple, or white. They are about 1 inch

wide, appearing June through October. Flowers are commonly open in the morning hours but closed in the afternoon making them less noticeable during that time. Reproduction is by seed.

This native of Europe was brought to the United States by early settlers. It has been grown as a vegetable and as a substitute for coffee. Chicory can be found in lawns, meadows, and pastures and along roadsides and railroads. It thrives in dry, low fertility soils. It can be a problem in low maintenance turf. The stalks are rigid and can resist mowing. In frequently mowed lawns, Chicory may grow prostrate



Turf with large Chicory population, Michelle Wiesbrook, University of Illinois

with flowering stems unaffected by mower blades.

To help eliminate Chicory from a lawn, use practices that would encourage the lawn to be healthy and thick. Proper fertilization and irrigation practices can result in turfgrass that is better able to compete with Chicory. Mowing higher can help to shade this weed. Chicory may be removed by hand but be sure to remove all of the root. This method may work well for smaller gardens and areas. For larger areas, use of a herbicide may be necessary. For turf areas, a 3-way broadleaf killer may be your best option. Reportedly, glyphosate does not do well on this species. Be sure to read and follow all product label directions.

[*Michelle Wiesbrook*](#)

Tar Spot of Maple

Tar spot of maple appears in this newsletter on a somewhat regular basis. Disease outbreaks have been more frequent in recent years, likely due to moist spring weather with above-average rainfall. Last week, I observed several trees with tar spots and received multiple questions about the disease.



Tar spot on Freeman maple (Urbana, IL, July 2022), Travis Cleveland, University of Illinois



Tar spot on Norway maple, Travis Cleveland, University of Illinois

Tar spots of maple are caused by fungi in the genus *Rhytisma*. The disease is appropriately named for the raised, black spots that develop on the upper surfaces of affected leaves, which resemble splattered tar.

The symptoms initially appear in mid-June as small, pale yellow spots. By mid-July, the yellow spots expand and a thick, raised, black stromata start to form within the spot. Then, by late summer, the affected leaves develop the characteristic tar spot symptoms. When severe, the disease may cause some premature defoliation. Fortunately, injury from tar spot infections is primarily aesthetic and rarely affects the host tree's overall health.



Tar spot on Silver Maple, Travis Cleveland, University of Illinois

Trees that are damaged on an annual basis tend to be located in moist, sheltered sites that provide an ideal environment for the pathogen. Tar spot fungi overwinter on infected leaf debris. In the spring, overwintering fungal fruiting bodies ripen and eject spores. Wind then carries the spores to nearby developing leaves of susceptible hosts where the infection occurs.

Disease management practices are rarely warranted. When necessary, the first step is to rake and destroy leaf debris in the fall or early spring. This practice will help reduce spores capable of causing new infections. Fungicides containing the active ingredient Mancozeb (Fore 80 WP or Protect DF) or Copper Hydroxide (CuPro 500) can be used to protect newly developing leaves from infection. Begin sprays when the leaf buds are opening and re-apply twice more at 10-day intervals. Results from tar spot research on Norway maples in Canada suggested that one fungicide application, just before full leaf expansion, may provide sufficient control for this disease on Norway maples.

Travis Cleveland

Cercospora Leaf Spot of Hydrangea

Cercospora leaf spot of hydrangea is a fungal disease that affects bigleaf hydrangea, *Hydrangea macrophylla*; smooth hydrangea, *H. arborescens*; and oakleaf hydrangea, *H. quercifolia*. This disease does not kill the hydrangeas, but the spots can cause unsightly foliage. Severely infected plants may defoliate and often have reduced plant vigor and fewer flowers.



Cercospora leaf spot on bigleaf hydrangea, Travis Cleveland, University of Illinois

The *Cercospora* leaf spot pathogen overwinters on leaf debris. The pathogen's spores are disseminated to foliage via splashing rain or overhead irrigation. The first leafspots appear on older leaves near the plant's base, then progressively spread upward through the plant. Initial spots are purple and small with a circular shape. As spots enlarge, they often become irregular or angular in shape and develop a tan or gray center surrounded by a purple or brown border. Leaves that are severely spotted often become a yellow-green color.

Sanitation is an essential tool in disease management. Remove and destroy fallen leaf debris to help reduce overwintering spores and future infections. Avoid overhead irrigation that wets the foliage. When possible, use drip irrigation or soaker hoses. Adequately space plants to allow air movement and quick drying of the foliage.

Chemical control options are available for severely affected plants. Products containing chlorothalonil, myclobutanil, or thiophanate-methyl are highly effective if applied at the onset of the disease. Homeowners have access to products containing chlorothalonil (Bonide Fung-onil, Ortho MAX Disease Garden Control or Daconil), or myclobutanil (Spectracide Immunox Multi-Purpose Fungicide)

Travis Cleveland



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