IPM-1292

Home Lawns: Disease Control

Disease Control Recommendations for 2020

Disease control is an important part of home lawn care. Diseases, insects, and weeds are all pests of home lawns. Chemical controls are available but may not be necessary. If you follow proper management recommendations, you will have a healthy, vigorous turfgrass capable of withstanding most pest problems.

High nitrogen and/or low potassium levels, high pH in warm-season grasses, poor drainage, and wet conditions contribute to disease. However, there are always exceptions. For help identifying and controlling specific disease issues, contact your county Extension office.

Key Diseases

Algae and Moss. Algae and moss are small, green filamentous plants that form a green scum over a moist soil surface. The green scum produced by algae forms a tough, black crust when dry. Unlike moss, algae prefer areas with a wet soil surface in full sunlight. Other factors that contribute to algal growth are compacted soils, high fertility, and open, thin turf. Control of moss and algae does not involve the use of herbicides. Contact fungicides will, at best, control only moss and algae temporarily. The only permanent control of these pests is to correct the conditions that prevent or restrict turfgrass growth.

Large Patch. Large patch is the most damaging diseases of warm-season turfgrasses in Alabama. It first appears in lawns as small, circular, brown areas several inches in diameter. These spots quickly increase in size, forming irregular patches of brown, blighted turf up to 20 feet in diameter. Most of the damage occurs when temperatures cool in the fall, but symptoms appear following greenup in the spring. Turf often recovers from damage during the height of the growing season, only to decline again the next fall. The most effective time to apply fungicides for large patch is in the early fall before dormancy. A similar disease called brown patch occurs on cool-season turfgrasses and is a problem throughout the growing season.

Dollar Spot. Dollar spot can be found any time during the growing season but is most commonly seen in late summer and early fall. On coarser lawn grasses like centipedegrass, spots are less distinct and somewhat larger than on fine-leafed turfgrasses. On closely mowed bermudagrass, zoysiagrass, or bentgrass, dollar spot will appear as small, circular, tan-colored spots 1 to 2 inches in diameter. If left unchecked, these spots will grow together forming large areas of blighted turf.

Gray Leaf Spot. Gray leaf spot occurs primarily on St. Augustinegrass. Frequent showers, high temperatures, and excessive nitrogen fertilization are favorable for disease development. Gray leaf spot is most prevalent from June to August. Small, round, gray-brown spots appear on the leaves and leaf sheaths. As spots enlarge, their centers become light brown to gray, and the margins turn purplish brown.

Nostoc. Nostoc is a dark blue-green, jellylike organism found in perpetually wet home lawns. While homeowners may find its presence alarming, it does not cause harm to plants or animals. However, large populations of nostoc will shade out low-cut turf as do other weeds. Nostoc is not an algae, bacteria, or fungus. It is a cyanobacterium. Nostoc fills in space where grass will not grow because of soil compaction, high phosphorus levels, or excessive moisture. Recommended control measures include aeration, drainage improvement, and the addition of organic matter.

Rust. Rusts occur on all commonly grown warm- and cool-season grasses. Zoysiagrass is the most susceptible warm-season species, while perennial ryegrass is the most susceptible cool-season species. Mild, humid weather conditions coupled with poor soil fertility, drought stress, poor air circulation, and heavy shade increase the likelihood of rust development. Rust usually peaks on zoysiagrass in May and again in July. Rust epidemics on perennial ryegrass usually occur in the spring and fall. Small yellow flecks on the leaves and possibly on the leaf sheaths are the first signs of rust. Within several days, yellow to orange, raised spots appear in place of the yellow flecks.

Slime Mold. Slime molds are unusual organisms that rarely damage a lawn. However, the sudden appearance of the crusty gray to black fruiting bodies of slime mold on a manicured lawn often causes concern to homeowners. Alabama's humid, warm climate is conducive to slime mold activity, particularly during extended periods of rain in late spring and early summer. Mowing or light raking are effective means of destroying the crusty fruiting bodies of slime mold. Washing affected areas with a hard stream of water can also break up the slime mold.

Spring Dead Spot (SDS). Spring dead spot is most common in the northern half of Alabama. However, damage can be seen statewide after an unusually cold, harsh winter. Damage will appear as circular patches of bleached, dead turf. Affected areas range from a few inches to several feet in diameter. Symptoms typically appear during spring greenup in bermudagrass.

As bermudagrass reestablishes, a ring or frog-eyed pattern may be observed. Patches of diseased turf often appear in the same areas year after year.

Take-All Root Rot. Take-all is a disease of the roots and stolons of most warm-season grasses but can be most severe on St. Augustinegrass. Symptoms usually become apparent in early spring and summer, suggesting infection may occur during the previous fall. Initially, the affected turf becomes wilted and yellow. Roots and stolons are darkened and rotted and easily pull from the soil. Thin, bare areas will appear as turf dies. These declining areas are typically irregular in shape and vary in size from 1 foot to more than 20 feet in diameter. A high pH (6.5 or higher) is associated with outbreaks of take-all disease.

DISEASE CONTROL

Table 1. Home Lawn Disease Control

Herbicide (active ingredient)	Herbicide (trade name)	Rate per 1,000 square feet	Labeled Control	Comments
HOME LAWN FUNGICIDES				
Azoxystrobin (0.31%)	Heritage G	2-4 lb.	Take-all root fot; gray leaf spot; rust; spring dead spot	Begin applications before disease development. Re-treatment interval is 14 to 28 days. Use shorter re-treatment intervals when favorable disease conditions exist. Do not apply more than 37 lb. of product per 1,000 square feet per year.
	Scott's DiseaseEx Lawn Fungicide Granules	2-4 lb.	Gray leaf spot; spring dead spot; take-all root rot	Begin applications before disease symptoms. Product may be applied at 14- to 28-day intervals. Do not apply more than 37 lb. of product per 1,000 square feet per year.
Myclobutanil (0.39%)	F-Stop Fungicide Granules	4 lb.	Large and brown patch; dollar spot; gray leaf spot; spring dead spot	Optimum control is achieved when applied as a preventative at a rate of 4 lb. per 1,000 square feet. **DO NOT** apply more than 46 lb. of product per 1,000 square feet per year.
Myclobutanil (1.0%)	F-Stop Lawn & Garden Fungicide Concentrate	21.3 fl.oz.	Large and brown patch; dollar spot; rust; spring dead spot	Dilute 5.33 fl.oz. per 1 gallon of water to treat 250 square feet. Repeat application every 2 to 4 weeks or at the first sign of new disease development.
Myclobutanil (19.7%)	Eagle 20EW	1-2.4 fl.oz.	Dollar spot; rust; spring dead spot	When disease pressure is high or used as a curative treatment, use higher rates and shorter intervals. Under light to moderate disease pressure, apply at lower rate and longer treatment interval.
Propiconizole (0.51%)	BioAdvanced Fungus Control for Lawns Granules	2 lb.	Large and brown patch; dollar spot; gray leaf spot; rust; spring dead spot; take-all root rot	As a preventive, apply at 21 to 30 day interval. As a curative, apply at 14-day intervals until control is achieved.
Propiconizole (1.45%)	Spectricide Immunox Fungus Plus Insecct Control	12.8 fl.oz.	Large and brown patch; dollar spot; gray leaf spot; spring dead spot; take-all root rot	Most effective when used as a preventive measure. Begin treatment at spring greenup or first sign of damage. For best control, treat every 2 weeks.

Table 1. Home Lawn Disease Control

Herbicide (active ingredient)	Herbicide (trade name)	Rate per 1,000 square feet	Labeled Control	Comments
HOME LAWN FUNGICIDES (cont.)				
Propiconizole (1.55%)	Ferti-Lome Liquid Systemic Fungicide II	12-20 fl.oz.	Large and brown patch; dollar spot; gray leaf spot; spring dead spot; take-all root rot	Make application after mowing. Repeat treatment every 10 to 21 days if necessary.
Propiconizole (14.3%)	Patch Pro Fungicide	0.5-4.0 fl.oz.	Large and brown patch; dollar spot; gray leaf spot; rust; spring dead spot; take-all root rot	Bermudagrass injury can result. **DO NOT** exceed 4 fl.oz. per 1,000 square feet within 30 days.
Propiconizole (2.42%)	BioAdvanced Fungus Control for Lawns	6.4 fl.oz.	Large and brown patch; dollar spot; gray leaf spot; rust; spring dead spot; take-all root rot	Most effective when used as a preventive. Begin treatment when disease conditions are favorable. Reapply at 14-30 day intervals.
Thiophanate-methyl (2.08%)	Cleary's 3336 DG	3 lb.	Large and brown patch; dollar spot; gray leaf spot	May be applied during dry or moist leaf/soil conditions. Activate with irrigation or natural rainfall within 24 hours for best results. Minimum re-treatment interval is 14 days.
Thiophanate-methyl (41.25%)	Cleary's 3336 F	2 fl.oz.	Large and brown patch; dollar spot; gray leaf spot	Retreat every 14 days as long as disease is present. **DO NOT** exceed 8 fl.oz. per year. Avoid mowing 12 hours after application. **For root pathogens**, lightly water treated area to move fungicide into the root zone. Excessive irrigation will move chemical below root zone reducing effectiveness.
Thiophanate-methyl (2.30%)	Scott's Lawn Fungus Control	2.7 lb.	Large and brown patch; dollar spot; gray leaf spot	Apply to dry or moist foliage. Repeat at 2- to 3- week intervals during periods of high day and night temperatures and humidity.

Measurement calculations: Total lawn area in square feet = length × width.

Equal measures: 1 fl.oz. = 2 Tbsp. (6 tsp.); 2 fl.oz. = 4 Tbsp.; 4 fl.oz. = ½ cup; 8 fl.oz. = 1 cup; 16 fl.oz. = 1 pt; 32 fl.oz. = 1 qt

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FOR MORE INFORMATION on pesticides, pesticide safety, or submitting samples for analysis, see the following publications in the IPM series:
IPM 1293, “Safety.” Safety contact information; worker protection standards; the safe use, handling, and storage of pesticides
IPM 1294, “Submitting Samples.” Procedures for submitting samples for diagnosis, analysis, and identification
IPM 1295, “General Pesticide Information.” Federal and state restricted use pesticide lists; pesticides and water quality
IPM 1317, “Appendix.” Pesticide guidelines for agronomic crops, including preharvest intervals; rain-free requirements; grazing restrictions; crop rotation guidelines; and the names, classifications, and toxicities of pesticides.

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For more information, contact your county Extension office. Visit www.aces.edu/directory.

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or canceled, the rate listed here is no longer recommended. Before you apply **any** pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

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