Clemson Cooperative Extension
Home & Garden Information Center

Leaf Diseases of Lawns

Factsheet | HGIC 2152 | **Updated:** August 01, 2022

Several fungal leaf diseases may commonly occur in South Carolina home lawns, including dollar spot, rust, gray leaf spot, powdery mildew, anthracnose, and Helminthosporium leaf spot. Most of the time, these problems go unnoticed by the homeowner and do not cause significant damage to the lawn. However, when conditions are favorable for disease development, serious damage can occur. Effective control programs for most diseases must include proper cultural care of the lawn and a basic understanding of the factors affecting disease development. For information on brown patch or large patch, see HGIC 2150, *Brown Patch & Large Patch Diseases of Lawns*.

Dollar Spot

The fungus, *Claireedia homoeocarpa*, is the cause of dollar spot in lawns. It causes straw-colored spots about the size of a silver dollar (2 to 6 inches in diameter) to appear on closely mowed turf. Grass in affected areas may die, and the spots may merge to form larger irregular patches. In coarse-textured turfgrasses that are cut high, the dead spots are larger and more diffuse. Leaf blades have light tan spots with reddish-brown margins that develop across the leaves. Early in the morning, you may be able to see a cobweb-like growth of the fungus over the infected area.

Dollar spot most commonly occurs on bermudagrass, zoysiagrass, creeping bentgrass, turfgrass tall fescue, and ryegrass. Dollar spot is most active from late spring through fall. The fungus develops during humid weather when daytime temperatures are warm (59 to 86 °F) and nights are fairly cool. These conditions result in heavy dew formation on the lawn.

Prevention & Treatment: Adequate fertilization will help the lawn overcome this disease. Prevent thatch buildup and remove excess thatch. Please see HGIC 2360, *Controlling Thatch in Lawns,* for more information. Avoid drought stress by watering the lawn deeply and thoroughly when needed, timing irrigation for early morning. For more information on lawn irrigation, see HGIC 1207, *Watering Lawns*. Remove morning dew if possible by mowing or irrigating the lawn. Fungicide applications may be needed during moist weather during the spring and fall when day temperatures are between 70 to 80 °F. For home lawn application, fungicides that give good control of dollar spot should contain propiconazole, azoxystrobin with propiconazole, or triadimefon. Always apply all chemicals according to directions on the product label.

Rust

Rust fungi (*Puccinia* and *Uromyces* species) can infect most types of grasses but occur most commonly on bluegrass, turfgrass tall fescue, ryegrass, and zoysiagrass in South Carolina. Rust

diseases are favored by warm, humid conditions and frequently develop on lawns stressed by drought, low nitrogen, and shade. The disease first appears on leaves as tiny orange to reddish-brown flecks that enlarge to form raised pustules. Lawns that are heavily infected become thin and weak with an orange or reddish color.

Prevention & Treatment: Rust is most often a problem on lawns with too much shade. Limb up nearby trees and prune back shrubs close to the lawn. Avoid stresses induced by herbicides, drought, or compacted soil. Maintain adequate nitrogen levels and irrigate during drought conditions. Mow the grass regularly, and remove the clippings, being sure not to cut the lawn too low. Do not overwater. Fungicides are usually not necessary in actively growing lawns. If necessary, home lawn fungicides that give good control of rust should contain propiconazole, triadimefon, azoxystrobin, pyraclostrobin with triticonazole, or myclobutanil.

Gray Leaf Spot

Gray leaf spot is caused by the fungus, *Pyricularia grisea,* and causes severe damage primarily on St. Augustinegrass (a. k. a. "Charlestongrass") and ryegrass. Turfgrass tall fescue may also be damaged by gray leaf spot. Leaf spots on grass blades are tan to gray with purple to brown margins. When the disease is severe, the entire planting may appear brownish or scorched, similar to damage caused by drought. This disease most commonly occurs during warm, rainy periods in the summer.

Prevention & Treatment: Plant resistant cultivars. Avoid excessive applications of nitrogen, especially during warm, humid weather. Deeply irrigate early in the morning when needed. Avoid stresses induced by herbicides, drought, or compacted soil. Improve air movement and light intensity by pruning back shrubs and limbing up nearby trees. If chemical control is necessary, the most effective fungicides contain azoxystrobin, azoxystrobin with propiconazole, or thiophanate-methyl and are available for use in the home lawn. Always apply all chemicals according to directions on the product label. For more information, see HGIC 2151, *Gray Leaf Spot on St. Augustinegrass*.

Powdery Mildew

This disease is caused by the fungus, *Blumeria graminis*, and appears as a grayish-white powdery growth on the surfaces of the grass blades. Leaves may turn yellow and gradually die. It is an important disease on bluegrass, turfgrass tall fescue, and bermudagrass, especially in areas of shade or little air movement.

Prevention & Treatment: Increase sunlight penetration to densely shaded areas, or select a more shade tolerant cultivar. A balanced fertilization program is important for the lawn. Mow the lawn often and at the recommended height. Increasing air circulation will also help to control powdery mildew. Fungicides containing myclobutanil, propiconazole, or triadimefon are effective on the home lawn in areas where environmental conditions cannot be modified. Always apply all chemicals according to directions on the product label.

Anthracnose

This leaf disease causes the most severe damage on creeping bentgrass and annual bluegrass and is caused by the fungus *Colletotrichum cereale*. It occurs during the peak of hot weather when cool-season grasses are barely growing. It also infects centipedegrass during very

rainy periods in the spring and summertime. In creeping bentgrass, anthracnose causes a stem rot at the base of the plant, which can cause the lawn to turn yellow and die.

Prevention & Treatment: Maintain the lawn in as healthy a condition as possible with a balanced fertilization program. Reduce thatch and soil compaction. Chemical control is generally not needed on centipedegrass because of its quick recuperative potential. Fungicides containing propiconazole or azoxystrobin with propiconazole are available for good control when other measures fail. Always apply all chemicals according to product label directions.

Helminthosporium Diseases

The diseases in this group are commonly referred to as melting out, leaf spot, net-blotch, and crown and root rot. These diseases are caused by the fungi *Bipolaris* and *Drechslera* species but were previously classified as *Helminthosporium* species.

Bipolaris and *Drechslera* species cause leaf spotting and melting out disease primarily on bluegrass and bermudagrass, but turfgrass tall fescue, creeping bentgrass, ryegrass, and zoysiagrass are also affected by this complex of diseases. In turfgrass tall fescue, bermudagrass, and ryegrass, the disease is most active during cool, wet weather in the spring and fall. However, in bluegrass and creeping bentgrass, the disease is most active during warm, wet weather in late spring, summer, and early fall. The diseases generally start as leaf spots and may progress to sheath and crown rots. Leaves have circular to elongate, purple or brown spots with straw-colored centers. When disease lesions become extensive, turfgrass leaves turn reddish-brown, then yellow, and die. Melting out may follow and appears as a reddish-brown rotting of the leaf sheaths, crowns, rhizomes, and stolons. These fungi rarely affect centipedegrass adversely.

Prevention & Treatment: Avoid high nitrogen fertilization and watering practices that provide long periods of wet or humid conditions. Frequent mowing at proper heights will provide better drying conditions in the turf and help to reduce the leaf spot phases of these diseases. Provide adequate water with infrequent but deep irrigation to help avoid crown and root rot phases. Reduce excessive thatch during May for warm-season turfgrasses.

Submit a soil sample to test for soil nutrients, and maintain a sufficient soil potassium level.

Fungicides for good control of Helminthosporium diseases include azoxystrobin, azoxystrobin with propiconazole, pyraclostrobin with triticonazole, and thiophanate methyl. Apply all chemicals according to directions on the product label.

Excerpted from *Diseases of Turfgrasses in the Southeast*, Martin, B., EB 146, 1994.

Table 1. Fungicides for Control of Turfgrass Leaf Diseases on Home Lawns.

Fungicides	Examples of Brands	Form of Product Available
Azoxystrobin[1]	Heritage G	Granules; 0.31%
	Scotts Disease EX	Granules; 0.31%
	Headway G	Granules; 0.31% (with 0.75% propiconazole)
	Quali-Pro Strobe Pro G	Granules; 0.31% (with 0.75% propiconazole)
Pyraclostrobin	Pillar G Intrinsic Fungicide	Granules; 0.38% (with 0.43% triticonazole)
Myclobutanil	Ferti-lome F-Stop Lawn Fungicide	Granules; 0.39%
	Lebanon Eagle 0.62G Specialty Fungicide	Granules; 0.62%
	Lesco Eagle 0.39% Granular Turf Fungicide	Granules; 0.39%
	Ferti-lome F-Stop Lawn & Garden Fungicide RTS[2]	Ready to Spray; 1.00%
	Monterey Fungi-Max Multi-purpose Fungicide Concentrate (apply with hose-end sprayer)	Concentrate; 2.00%
	Spectracide Immunox Multi-Purpose Fungicide Spray Concentrate (Apply with hose-end sprayer)	Concentrate; 1.55%
Propiconazole	Bayer Bio Advanced Fungus Control for Lawns Ready to Spread	Granules; 0.51%
	Bayer Bio Advanced Fungus Control for Lawns RTS[2]	Ready to Spray; 2.42%
	Bonide Infuse Systemic Disease Control Lawn & Landscape RTS[2]	Ready to Spray; 1.55%
	Ferti-lome Liquid Systemic Fungicide II RTS[2]	Ready to Spray; 1.55%
	Anderson's Turf Products Prophesy 0.72G Fungicide	Granules; 0.72%
	Ferti-lome Liquid Systemic Fungicide II	Concentrate (1.55%)
	Spectracide Immunox Fungus Plus Insect Control for Lawns RTS	Ready to Spray, 1.45%
Thiophanate methyl[1]	Bonide Infuse Systemic Disease Control Lawn & Landscape (NOT the same active ingredient as in Bonide Infuse RTS[2])	Granules; 2.08%

[1] Resistance to the fungicide by the brown and large patch fungi, as well as by other fungi, will develop from continued exclusive use of either azoxystrobin (alone) or thiophanate methyl (alone). Always alternate either of these fungicides with one of the others. Alternatively, choose a recommended product, such as Headway G, Strobe G, or Pillar G, which contain 2 active ingredients. These can be used in repeated applications against brown or large patch or leaf diseases of lawns with a reduced risk of resistance. Follow directions on the product label for use. In general, azoxystrobin or pyraclostrobin will control diseases of lawns for 28 days. The other four fungicides will control the diseases for 14 days. Irrigate according to label directions after application of granular products.

[2] RTS = Ready to Spray (a hose-end sprayer)

Landscape professionals should consult the 2022 Pest Control Guidelines for Professional Turfgrass Managers for recommendations.

Pesticides are updated annually. Last updates were done on 9/22 by Adam Gore.

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