Gray Leaf Spot

Overview

Gray leaf spot (GLS), caused by *Pyricularia grisea*, is a devastating turf disease that affects ryegrasses, tall fescue, St. Augustinegrass, and kikuyugrass. On golf courses, symptoms usually first appear in higher cut turf and can be spread by mowing, traffic, and/or irrigation/rainfall. Typically, the pathogen does not overwinter in the northern U.S. but is carried by weather fronts from the south. Infection can occur at temperatures as low as 68°F but is favored by temperatures ranging from 82-90°F. Leaf wetness is a critical factor with only 9 hours of continued leaf moisture needed for infection at 82-90°F.

Gray leaf spot symptoms on perennial ryegrass (Figure 1) and St. Augustinegrass (Figure 2). On golf courses, damage typically starts in higher cut turf like roughs (Figure 3). Photos credit: Rob Golembiewski, Atticus.

Symptoms

- Gray leaf spot appears as small black to brown, water-soaked lesions on leaf blades that develop into elliptical shapes that are often gray with purple to dark brown borders.
- Spots coalesce on leaves and partial to complete blighting occurs.
- Blighted leaves have a twisted appearance or bend back to exhibit a fishhook shape.
- Initial damage to turf looks similar in size to dollar spot with small reddish to tan circular patches. When conditions remain conducive, patches become larger and irregular in shape, similar to brown patch.
- Under favorable conditions, entire areas can become blighted in just a few days.

Cultural Management Strategies

- Use newer turf varieties that have increased gray leaf spot resistance.
- Reduce compaction with regular aerification, apply slow release nitrogen sources, and irrigate in early morning to minimize length of continuous leaf wetness.
- Mitigate turf stress caused by heat, drought and herbicide and plant growth regulator use.

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Fungicide Solutions

- In areas where gray leaf spot activity is common, start a preventive fungicide program in late July with additional applications every 14-21 days to maximize control.
- On golf courses where infections typically begin in roughs, make an additional sprayer pass or two in the roughs when treating fairways.
- If infection is active and there is visible damage, curative control can be difficult.
- In areas where GLS is common, some strains have shown resistance to the strobilurin (QoI) class of chemistry.
- Fungicide programs should include a rotation of DMIs, QoIs, chlorothalonil, and thiophanate-methyl to limit damage and limit the chance of resistance development.
- Atticus offers six effective fungicide solutions including Gunner™ 14.3 MEC (propiconazole), Artavia™ 2 SC (azoxystrobin), Artavia™ Xcel (propiconazole + azoxystrobin), Protégé™ (difenconazole + azoxystrobin), Dornic™ 720 F (chlorothalonil), and Talaris™ 4.5 F (thiophanate-methyl).
- For more information or assistance with developing an effective fungicide program for your facility, please contact your Atticus representative.

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