

LOUISIANA PLANT PATHOLOGY

DISEASE IDENTIFICATION AND MANAGEMENT SERIES

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Gray Leaf Spot of Turfgrasses

Pyricularia oryzae Cavara

Gray leaf spot, caused by the fungus *Pyricularia oryzae* (or *Magnaporthe oryzae*), occurs on a wide range of turfgrasses throughout the United States. In Louisiana, it is most commonly seen on St. Augustine grass but occasionally can be a problem for Bermuda grass or centipede grass as well.

Gray leaf spot generally is associated with drought stress, soil compaction and high nitrogen fertility and typically occurs from mid-summer to early fall. Disease development is favored by periods of warm (82-90 F), humid weather with sufficient leaf wetness (nine hours) for infection to occur. The disease develops particularly well when the turf is subjected to prolonged periods of alternating wetting and drying.

The primary symptoms of gray leaf spot on St. Augustine grass are the presence of round to oblong spots on the leaf blades that first appear as small, brownish lesions that expand rapidly and result in lesions with a purplish or brown margin and a light tan to gray center (Figure 1). During periods of warm, humid weather when the fungus is actively sporulating, the lesions may be covered with gray masses of conidia. These conidia are then dispersed by wind, splashing water and various types of lawn equipment. As the disease progresses and becomes more severe, areas of affected turf appear dry and the leaf blades often shrivel and die (Figure 2).

Because the disease is most severe on rapidly growing turf that is subjected to stress, practices that reduce these stresses are important in its management. Avoid over-fertilization with nitrogen, especially quick-release formulations, during the summer. Irrigate on a regular basis, as needed, to promote a deep root system, which will help the turf get through periods of drought. In some cases, it may be necessary to aerate the lawn to reduce soil compaction.

Fungicides can be effective in the control of gray leaf spot, but over-reliance on strobilurin (i.e., azoxystrobin, pyraclostrobin or trifloxystrobin) or



Figure 1. Typical gray leaf spot lesions on St. Augustine grass.



Figure 2. Scorched appearance of St. Augustine grass due to gray leaf spot.

benzimidazole (i.e., thiophanate-methyl) fungicides can lead to the development of fungicide resistance in the pathogen. These groups of fungicides should be alternated or tank-mixed with a protectant fungicide with a different mode of action, such as chlorothalonil mancozeb. Good control also can be obtained when these

protectant fungicides are combined with another fungicide, such as propiconazole or triadimefon. Remember, although chlorothalonil may be used on golf courses and commercial turf, it is no longer labeled for use on residential lawns!

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