



Pest e-alerts



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What are those Spots on my Bermudagrass?

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As I stepped out the door for my run this morning, I realized that my bermudagrass lawn was covered in heavy dew. With wet sneakers, I also noted the humid conditions and milder morning temperatures. I can just hear the dollar spot mycelium growing! Sure enough, when I walked into the office this morning we had two separate reports of dollar spot epidemics on bermudagrass in home lawns. With the milder evening temperatures, the frequent rain events, and excessive dew formation due to high nighttime relative humidity, dollar spot will be on the prowl in bermudagrass lawns and recreation areas.

Symptoms of dollar spot vary with turfgrass species, mowing height, and other management practices. On residential lawns and taller turfgrasses, symptoms appear in irregularly shaped, bleached patches ranging from four to six inches or more in diameter (Fig 1).



Fig. 1. Symptoms of dollar spot on a residential lawn planted with bermudagrass.

Patches may coalesce to cover large areas. Individual infected leaves exhibit lesions (spots) that are first chlorotic (pale green or yellow), then water soaked, and finally a bleached straw color (Fig 2). Dollar spot lesions are characteristically bounded by a tan to reddish-brown margin (Fig 3). In the early morning when dew is present on grass blades and the pathogen is active, a white, cottony, growth (mycelium) may be seen in the affected patches.



Fig. 2. Leaf spot symptoms bleached leaves characteristic of dollar spot on bermudagrass.



Fig. 3. Leaf spot symptoms with tan to reddish-brown margins.

In Oklahoma, the disease can be active from spring (April) through late fall (November). Favorable environmental conditions include humid weather with warm days and cool nights that result in heavy dews. A temperature range of 50°F to nearly 90°F can encourage growth of the fungus, with greatest activity for infection occurring between 60°F and 70°F. The disease can remain active even at high temperatures but will typically slow or cease when daytime highs exceed 90°F. Turfgrass grown under low nitrogen fertility is more prone to dollar spot development. Turfgrass that is drought-stressed, excessively irrigated, has low air movement above the canopy, subjected to low mowing heights, and/or has excessive thatch buildup will be more prone to dollar spot. Extended periods of wet, overcast weather can lead to severe epidemics of dollar spot on grasses susceptible to the disease. Epidemics under these conditions are even more severe when soils are dry.

Activities which minimize the duration of leaf wetness can greatly reduce infection by the fungus. Practices such as early morning irrigation, removing dew, and increasing air flow across the turf will help suppress the disease. When water is required, apply a sufficient amount to wet the soil and then water as infrequently as possible without causing moisture stress between watering

(Consult <http://sip.mesonet.org/> for proper irrigation recommendations for your specific situation). Avoid frequent applications of small amounts of water, unless the water is used briefly to remove morning dew. Do not water in the late afternoon or evening.

Maintain a moderate to high nitrogen fertility program appropriate to the turfgrass species, during periods favorable for dollar spot development. For bermudagrass, a total of five pounds actual nitrogen (N) per 1,000 square feet per year should be applied as five one pound N per 1,000 square feet split applications in May, June, July, August, and September. Do not apply nitrogen after September 15, as this may increase bermudagrass susceptibility to winter injury and spring dead spot disease development. An additional one to three pounds N per 1,000 square feet per year may be needed on high maintenance areas. For more information about warm and cool-season turfgrass fertilization programs in Oklahoma, consult the Oklahoma Cooperative Extension Service fact sheet HLA-6420, "Lawn Management in Oklahoma" (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2299/HLA-6420web.pdf>).

Few effective fungicides are now available over the counter for the homeowner which can be used for dollar spot management. However, many effective fungicides are available to the professional turfgrass management community for dollar spot control. Fungicide resistance has been a chronic problem for this pathogen. For chemical control to be effective, different fungicide chemistries should be alternated and applied in the early spring and fall before disease development or when the disease is first evident. Fungicides should not be the only management tool. An integrated pest management (IPM) program combining cultural and chemical management, and considering other potential pests, should be used to manage dollar spot effectively without encouraging other turfgrass pest problems.

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