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Helminthosporium Turf Diseases

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What are Helminthosporium turf diseases? *Helminthosporium* diseases of turf are a group of common, cool season turfgrass diseases (including *Helminthosporium* leaf spot and melting out) that occur throughout North America. In residential settings, these diseases can severely reduce the aesthetic appeal of a lawn and can lead to expensive lawn replacements.



Helminthosporium turf diseases cause "eyespots", round to oval spots with buff-colored centers surrounded by dark brown to dark purple margins.

What do Helminthosporium turf diseases look like? Symptoms of *Helminthosporium* turf diseases vary, depending upon the specific pathogen, grass species, weather conditions, and cultural conditions involved. In general, the diseases lead to patches of thin, dead grass. On Kentucky bluegrass, and fine and tall fescues, initial symptoms are small, dark purple to black spots on the leaf blades. Older leaf spots on these hosts are often described as "eyespots" (i.e., round to oval spots with buff-colored centers surrounded by dark brown to dark purple margins). Infected bentgrasses often initially have a smoky-blue, water-soaked and matted appearance. As the disease progresses, infected leaves yellow and eventually die.

Where do Helminthosporium turf diseases come from? *Helminthosporium* turf diseases are caused by several fungi, all of which were at one time lumped within the fungal genus *Helminthosporium*. More recently, these fungi have been reclassified into the genera *Bipolaris*, *Drechslera*, and *Exserohilum*. These

fungi overwinter in infected turfgrass and turfgrass debris (e.g., thatch, grass clippings), and throughout the growing season produce spores that can readily infect leaf blades that have been wet for several hours. Disease development is favored during periods of high temperature when dry conditions alternate with prolonged stretches of cloudy, moist weather.

How do I save turf with Helminthosporium turf diseases? Fungicides containing azoxystrobin, captan, chlorothalonil, fludioxonil, fluoxastrobin, iprodione, maneb, mancozeb, myclobutanil, PCNB, polyoxin D, propiconazole, pyraclostrobin, thiophanate-methyl, trifloxystrobin, thiram and vinclozolin are labeled for control of *Helminthosporium* turf diseases. These fungicides will not cure existing infections, but if they are applied early in disease development, may help prevent substantial losses. If you decide to use fungicides for control, be sure to read and follow all label instructions of the fungicide that you select to ensure that you use the fungicide in the safest and most effective manner possible.

Helminthosporium turf diseases throughout the year												
			+	+++	+++	+++	+++	+++	+++	+++	+	
Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Likelihood of disease:				+ = possible				+++ = likely				

How do I avoid problems with *Helminthosporium* turf diseases in the future?

Water, fertilize and mow your lawn properly (see UW-Extension bulletin A3435 for details) to keep it healthy, and growing vigorously. Turf requires approximately one inch of water per week from natural rain, supplemental irrigation or a combination of both. If you must irrigate, make sure to water deeply,



***Helminthosporium* turf diseases cause dead patches on intensively managed creeping bentgrass.**

but infrequently to avoid drought. Avoid late afternoon and evening watering that can promote longer periods of moisture on leaves. **DO NOT** overfertilize. In particular, avoid heavy applications of nitrogen (especially fast-releasing forms of nitrogen such as urea), particularly during wet weather. Test leaf tissue from your turf routinely to make sure that the nitrogen to potassium ratio (N:K) is approximately 1:2, and fertilize appropriately to maintain this ratio. Keep your lawn mowed to between 2½ and 3½ inches, and never remove more than ⅓ of the existing growth when mowing. Keep the blade on your mower sharp. Ragged cuts, caused by dull mower blades, provide easier entry points for *Helminthosporium* turf disease fungi. Collect and destroy (by composting, burying or burning) lawn clippings from infected plants and try to clean any contaminated clippings from your mower. *Helminthosporium* turf disease fungi can survive and can easily be moved from place to place in grass clippings. If *Helminthosporium* turf diseases have been a problem in your lawn, consider using a blend of resistant turfgrass cultivars or a mixture of cool-season turfgrasses

when establishing a new lawn or over-seeding an existing lawn. Resistant cultivars of Kentucky bluegrass include 'Alpine', 'America', 'Boutique', 'Brilliant', 'Buckingham', 'Freedom II', 'Merion', 'Moonlight', 'Serene', and 'Unique' (see UW-Extension bulletin A3187 for details).

In summary, to avoid problems with *Helminthosporium* turf diseases:

- Reduce leaf wetness (June to Sept.)
- Avoid drought stress (July, Aug.)
- Avoid excess N (May to Aug)
- Balance fertility (N:K = 1:2) (Spring, Fall)
- Mow at 2½ to 3½ in. (May to Nov.)
- Keep mower blades sharp (May to Nov.)
- Avoid mowing wet grass (May to Nov.)
- Collect diseased clippings (Spring)
- Plant resistant turf cultivars (Fall)
- Follow fungicide label (Always)

For more information on *Helminthosporium* turf diseases: See UW-Extension Bulletin A3187 or contact your county Extension agent.

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*Completed as partial fulfillment of the requirements for the graduate course: "Plant Pathology 559: Diseases of Economic Crops."

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Thanks to Diana Alfuth, Judy Reith-Rozelle and Deb Simons for reviewing this document.

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