



Leaf Spot and Melting Out

O & T Guide TD-9

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Hosts: Leaf spot and melting-out diseases, caused by several different species in the genera, *Bipolaris*, *Curvularia*, *Drechslera*, and *Exserohilum*, are among the most common turf diseases in New Mexico. These fungi used to be in the genus *Helminthosporium*. All turfgrass species are susceptible to one or more of these pathogens. Cool-season grasses are generally most susceptible however bermudagrass and St. Augustine are also commonly infected in the Southwest.

Symptoms: Leaf spot first appears as small, dark purple or black spots on the leaf blade. These spots develop into oval lesions with buff-colored centers, surrounded by a dark brown to dark purple margin. The lesions may enlarge to cross the width of the leaf blade. When this occurs, leaf blades are girdled, wither and die. Symptoms of melting-out are similar at first, with small, dark purple to black spots on infected leaves. However in the case of melting-out, the disease progresses down the leaves eventually reaching and attacking the crown and roots. Tissue around the base of infected plants becomes dark brown and rots. Affected grass areas are shabby looking, yellowed and gradually thinned from the loss of individual plants. These areas appear as irregular patches ranging in size from 2

inches to 3 1/5 feet in diameter. Individual turf plants are hard to find in infected areas and it appears as if the turf has "melted" away. When individual plants are found, the leaves may have brownish-green to black lesions, be dappled with yellow and green patterns, or have elongated water-soaked lesions with a yellow halo.



Melting-out. Photo: N. P. Goldberg, New Mexico State University.



Melting-out. Photo: N. P. Goldberg, New Mexico State University



Leaf spot caused by *Drechslera*. Photo: R. W. Smiley, Oregon State University.



Individual plant affected by melting-out caused by *Drechslera*. Photo: R. W. Smiley, Oregon State University.



Leaf spots caused by *Bipolaris*. Photo: R. W. Smiley, Oregon State University.

Conditions for Disease: The fungi survive in infected plants or plant debris and are spread by the movement of spores and infected plant material by equipment, people, animals, water, and wind.

These diseases occur from spring through fall and are favored by dry periods alternating with cloudy, wet weather. Disease caused by *Bipolaris* and *Exserohilum* are favored by cool to warm (68-86°F) temperatures. *Curvularia* is favored by high temperatures (above 86°F) and *Drechslera* is favored by cool temperatures (55-65°F). Other factors which contribute to disease development include excess nitrogen fertilizer, excess water, thick thatch, and short mowing height.

Management: Cultural practices which help to reduce the occurrence and severity of the disease include:

- Maintain appropriate fertility levels.
- Avoid heavy nitrogen applications.
- Follow proper irrigation practices.
- Avoid watering at night.
- Avoid light, frequent watering.
- Mow grass frequently to maintain turf at the tallest height recommended for the grass species.
- Avoid scalping.
- Reduce shade.
- Reduce thatch to improve aeration and water drainage.
- Use resistant cultivars and use a blend of multiple cultivars when possible.
- Fungicides can be used to help manage these diseases; however timing is critical to effective control and in many cases, the severity of the disease can be reduced with cultural practices which reduce plant stress and fungicides should not be needed.

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