

Turfgrass Disease Profiles



Leaf Spot / Melting Out

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Until recently, leaf spot and melting out were classified as a single disease and referred to as *Helminthosporium* leaf spot. They actually are different diseases with similar symptoms and pathogen characteristics. They both attack Kentucky bluegrass, perennial ryegrass, and tall fescue, and appear to cause the most damage to golf course roughs, sports turf, and residential lawns. All parts of the plant (leaves, shoots, and roots) are affected by both leaf spot and melting out pathogens. The major apparent difference between the two is that the melting out pathogen is active during the cool wet weather, while the leaf spot pathogen infects during the heat of the summer.

Symptoms and Disease Characteristics

From a distance, symptoms resemble a diffuse pattern of off-color turf (Fig. 1). Close inspection of leaves of affected plants reveals decaying leaf blades with purple/brown lesions (Fig. 2). Large areas of turf can be damaged if favorable conditions persist (Fig. 3). Symptoms of leaf spot closely resemble those of the gray leaf spot disease that occurs on perennial ryegrass (see BP-107-W).

Melting out (caused by *Bipolaris sorokiniana*) is a disease of April and May during periods of cold rainy weather. Melting out also is favored by high nitrogen fertilization during the middle weeks of spring. Leaf spot (caused by *Drechslera poae*) is a disease of summer, requiring long dew periods, warm evening temperatures, and ample precipitation for establishment and spread. Close mowing can aggravate disease outbreaks by increasing stress on plants and allowing spores greater access to crowns and roots.



Figure 1

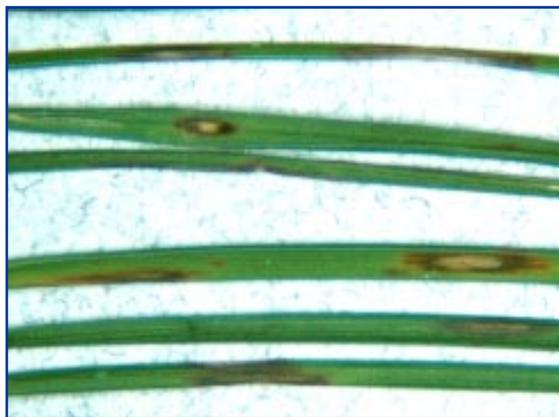


Figure 2



Figure 3

Gray Snow Mold

Pink Snow Mold

Leaf Spot/Melting Out

Red Thread

Dollar Spot

Brown Patch

Gray Leaf Spot

Anthracnose

Pythium Blight

Leaf Rust

Powdery Mildew

Slime Mold

Fairy Ring

Take All Patch

Summer Patch

Necrotic Ring Spot

Neither pathogen results in gray or white mycelium growing on leaf surfaces. Instead, the disease is spread by wind-blown and rain-splashed spores. Both pathogens survive among infested debris in thatch and the turf canopy.

Cultural Control Options

There appears to be good reliable genetic resistance to leaf spot and melting out infection in Kentucky bluegrass varieties. Over-seeding damaged areas with resistant varieties (for Kentucky bluegrass stands) offers the least expensive option for long-term disease control. Varieties are listed with resistance ratings by the National Turfgrass Evaluation Program (NTEP). The annual evaluations may be accessed at the NTEP website < www.ntep.org >.

Avoiding excess nitrogen fertility in early spring and mid summer will limit the severity of disease outbreaks. Raising the mowing height and relieving other stresses (redirect traffic away from affected turf) also will reduce disease severity and help hasten turf recovery. Also, avoiding irrigation during late afternoon and early evening hours during the heat of the summer will help restrict the development and spread of leaf spot.

Fungicides for Disease Control

In situations where rather severe outbreaks of either of these diseases occur in the same location in successive years, fungicide application may be necessary to suppress disease development to tolerable levels. Strobilurin products such as Heritage[®] and Compass[®] are extremely effective against these diseases. Iprodione (Chipco[®] 26 GT) and chlorothalonil (Daconil[®]) also will help suppress disease development. DMI fungicides such as Banner Maxx[®], Bayleton[®], and Eagle[®], have not performed consistently in recent trials.

Timing of application is critical for satisfactory performance of fungicides. Sprays should be applied at the first sign of the leaf spot stage of the diseases, or preventatively with the arrival of disease-favorable weather. Once large areas become blighted to the point of crown infection and plant death, disease pressure will be too great to be confident of adequate control with a single application. Even repeated fungicide applications may be only marginally effective.

Before selecting a fungicide, double check that your diagnosis is accurate. Leaf spot resembles the gray leaf spot disease of perennial ryegrass, which is caused by an unrelated pathogen. Fungicides that are highly effective against leaf spot may have little or no effect on gray leaf spot. Also, an application for melting out control in April will have no effect on leaf spot development in July and August.

Home Lawn Help

Leaf spot and melting out can cause serious problems on residential lawns. Mowing at a height less than 2 inches and applying the bulk of nitrogen fertilizer in spring will increase the vulnerability to disease outbreaks. Therefore, raising the mowing height and applying most of the nitrogen fertilizer in the fall will contribute to a healthier lawn that is less prone to these two diseases. Avoiding early evening irrigation during July and August also will reduce the chance for leaf spot establishment and spread. If a problem persists, the best approach is to over-seed with resistant varieties. Fungicides are expensive and results can be especially variable on lawns if not applied at the most appropriate times. A professional lawn care contractor should be consulted regarding fungicide application for leaf spot and melting out control.

