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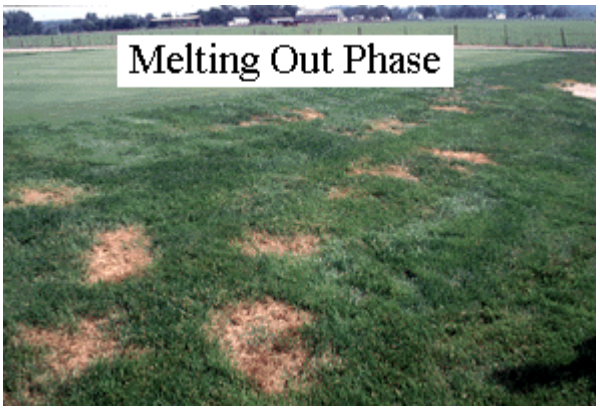
Problem: Leaf Spot and Melting-out of Cool-Season Grasses - *Drechslera poae* and *Bipolaria sorokiniana*



Hosts: Primarily Kentucky bluegrass and tall fescue

Description: One of the most troublesome diseases on Kentucky bluegrass and tall fescue is *Drechslera* (*Helminthosporium*) leaf spot and *Bipolaris* melting-out. Some leaf spot can be found on most home lawns in the spring, but it normally does not cause significant damage to the turf. However, newly seeded lawns and certain cultivars of Kentucky bluegrass are particularly susceptible, and a disease outbreak can result in serious injury to the turf.

Leaf spot is caused by a fungus called *Drechslera poae*. The fungus overwinters in the thatch layer or in small lesions on leaf blades. It requires extended dew periods, warm evenings and either rain or irrigation that increases hours of leaf wetness. The fungus infects young, succulent leaf tissue and causes the development of small elliptical purple spots. The spots eventually turn light gray or tan but remain bordered by a dark brown to purple margin. The leaf spot phase of the disease usually does not damage the plant significantly.

Melting-out is caused by *Bipolaris sorokiniana* and is active during continuous cool, wet conditions. The fungus invades the leaf sheath and crown. Coalescing purple lesions girdle the sheath. The fungus also may invade the crown, rhizomes, and roots. As daytime temperatures increase, leaves on crown- infected plants begin to turn light green or yellow, similar to nitrogen deficient turf. Eventually these plants die and turn brown or straw colored. Severe melting-out can result in irregular patches of dead turf. Damaged lawns often appear "thin" or uneven and tend to have weed problems.

Recommendations: Several cultural practices will reduce the severity of leaf-spot and melting-out. Avoid excessive nitrogen fertilization in spring which favors lush growth, but do not "starve" the lawn of nitrogen during the spring. A well-balanced fertilization program will reduce the severity of the disease (see KSU Horticultural Fact sheets on cool-season turfgrass fertilization). There is some evidence that frequent watering to keep the thatch moist will help reduce sporulation by the fungus. Nevertheless, do not apply irrigation in late afternoon or night because this will keep leaves wet for long periods and will favor infection. If frequent watering is attempted, it should be done at mid-day. Use higher mowing heights (> 2 to 2½ inches) in late spring or during dry weather. Thatch reduction will also help reduce disease severity.

The most effective means of controlling leaf spot and melting out is to plant resistant cultivars. It is recommended that varieties with proven resistance be used. The National Turfgrass Evaluation Program (NTEP) lists resistant ratings for Kentucky bluegrass varieties annually at www.ntep.org.

Several fungicides are available for the control of leaf spot and melting out. Application of fungicides depends somewhat on disease severity and the susceptibility of the turfgrass cultivar. If leaf spot has occurred in previous years but has not caused significant injury, then fungicides may not be needed. Nevertheless, chemical protection may be required on susceptible cultivars.

Fungicides are protective in nature and should be applied as soon as symptoms are observed. For specific recommendations for commercial applicators, see the reference listed below. The disease is very difficult to control once the crown rot or melting- out phase has begun.

References:

1. Leaf Spot/Melting Out, Purdue University, Turfgrass Disease Profiles, BP-103-W

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