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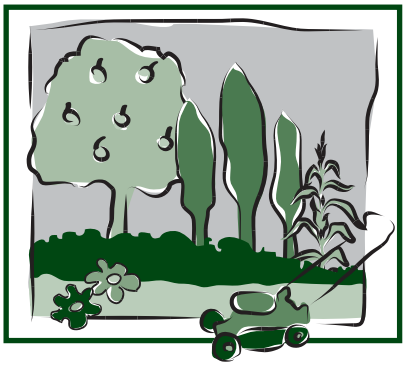

Ascochyta Leaf Blight of Turf

Fact Sheet No. **2.901** Gardening Series | **Diseases**

by N. Tisserat*

Ascochyta leaf blight results in the rapid development of large irregularly shaped, straw-colored patches on Kentucky bluegrass, and occasionally tall rescue and perennial ryegrass during the summer. Because the *Ascochyta* fungus is primarily a foliar pathogen, diseased turfgrass usually recovers relatively quickly. Environmental conditions that trigger *Ascochyta* leaf blight are poorly understood.

Symptoms and Signs

Ascochyta leaf spot symptoms may develop throughout the growing season but are more common during hot, droughty periods that were preceded by cool, rainy conditions. Large irregular patches of turf rapidly turn a straw-color and appear dead. The overall appearance of the disease may resemble drought stress, except that the symptoms of Ascochyta blight appear quickly (i.e. sometimes overnight). Although the blighting within an area appears complete from a distance, healthy leaves are interspersed within the patch. Blighting is usually restricted to the leaves; bluegrass crowns and roots typically are not killed.

Leaves infected with the Ascochyta fungus often exhibit a bleached tip dieback that extends approximately a third to halfway down the leaf blade. The margin between healthy and diseased tissue is abrupt and slightly pinched, but doesn't have the dark brown to purple banding that is characteristic of another disease called dollar spot. In other cases leaves may exhibit white banding or entirely collapse and shrivel. These leaf symptoms resemble heat or drought stress.

Ascochyta produces minute yellow to dark brown, flask-shaped fungal fruiting bodies called pycnidia in diseased leaf tissue. These fruiting bodies, which are easier to view with the aid of a handlens, are peppered throughout the dead leaves and can be very useful as a diagnostic feature.

Conditions

Ascochyta species can be found on senescing or dead leaves of several turfgrass species, however the disease appears to be most serious on Kentucky bluegrass.

Ascochyta survives as spores in pycnidia on dead leaves or clippings remaining in the thatch. These pycnidia are highly resistant to drought and extreme temperatures. Thousands of spores may ooze from a single pycnidium during wet weather and be dispersed by splashing rain, irrigation, mowing or other management activities.

Conditions that favor *Ascochyta* blight are poorly understood. The disease may occur in late spring or summer on drought-stressed turf caused by watering restrictions and poor irrigation system coverage. However, the disease also develops during periods of hot weather preceded by unusually wet soil conditions caused by excessive rain or over-irrigation. Frequent mowing and dull mower blades may contribute to disease severity by creating more infection sites (wounds).

Figure 1: *Ascochyta* leaf blight on Kentucky bluegrass

Quick Facts

- *Ascochyta* leaf blight has become a common problem on Kentucky bluegrass lawns in Colorado.
- Large uniform areas of affected turf will turn straw-colored.
- Leaves usually start dying back from the tips.
- *Ascochyta* can occur throughout the growing season, but is more prevalent in the spring when there are extended wet periods.
- The first line of defense against *Ascochyta* leaf blight is to manage the turf properly.

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Figure 2: *Ascochyta* leaf blight. Note that not all of the leaves within a diseased area are blighted.

Figure 3: Bleached leaf tips and banding are characteristic of *Ascochyta* leaf blight.

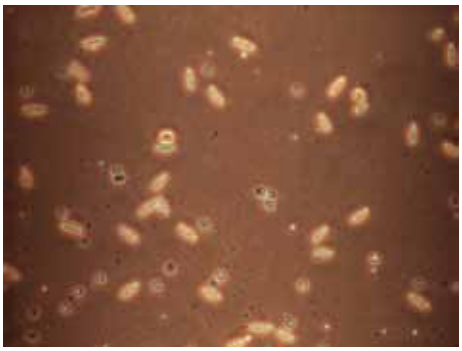

Figure 4: Conidia of *Ascochyta* produced from pycnidia.

Management

Ascochyta leaf blight can be managed by following good cultural practices that minimize stress in the lawn.

- Reduce thatch and promote water penetration through the soil by yearly aerification. Maintain grass height between 2 ½ and 3 inches. Minimize wounding of the leaf blades by maintaining sharp mower blades. Avoid mowing during wet weather, especially when Ascochyta blight is active. Reduce mowing frequency and increase mowing height during *Ascochyta* outbreaks. The fungus can be spread from one location to another on grass clippings although this is unlikely to contribute significantly to disease development. Similarly collecting clippings while mowing to reduce the amount of fungus is unlikely to reduce disease severity. Disease development is more dependent on environmental conditions and not the initial amount of fungus present in the lawn.
- Maintain a balanced fertilization program. Avoid excessive applications of nitrogen fertilizer, especially in spring. This promotes rapid, succulent leaf growth that requires more frequent mowing and wounding of the turfgrass.
- Try to maintain uniform soil moisture. Check the irrigation system to make sure all irrigation heads are working properly and that water is being distributed uniformly to avoid drought stress. On the other hand excessive irrigation and poorly drained soils may also promote disease development.
- *Ascochyta* blight is primarily a leaf and not a root or crown disease so it rarely causes plant mortality. Turfgrass usually recovers completely after a couple of weeks. Although several fungicides will inhibit *Ascochyta* growth, they can be expensive and difficult to apply. Furthermore *Ascochyta* leaf blight development is sporadic and rapid, making timing of preventive and curative fungicide applications difficult.

Remember that *Ascochyta* blight is primarily a foliage and not a root or crown disease. Therefore individual bluegrass plants are usually not killed. Given enough time, usually several weeks to a month depending on weather, new leaves will emerge from the surviving shoots. Be patient following a disease outbreak and maintain normal management practices.