Anthracnose (*Colletotrichum graminicola*) in the West

Until recently, Anthracnose (*Colletotrichum graminicola*) was regarded as a relatively minor disease of *Poa annua*. Now it’s considered one of the more severe diseases on golf course greens, tees and other closely cut turf. Anthracnose is recognized as a primary pathogen of turfgrass and is most severe on plants under severe stress from compaction, other diseases, or severe weather conditions such as excessive heat or drought. The Compendium of Turfgrass Diseases states:

“The primary conditions necessary for infection are those that stress the turfgrass plant, including periods of temperature extremes and soils that are compacted or that supply inadequate amounts of phosphorus, potassium, nitrogen, or water.”

The two stages of the disease, foliar and basal rot, may act in sequence or independent from one another. The common, foliage-infecting form may cause serious injury to *Poa annua* during summer stress periods. This leaf-blighting phase also infects Kentucky bluegrass, creeping bentgrass, fine-leaf fescue, perennial ryegrass and bermudagrass. *Poa annua* is the most susceptible of all these species. The other form of anthracnose is basal rot. While bentgrass may recover from foliar anthracnose following timely application of fungicides, *Poa annua* will almost never recover once basal rot has entered the crown.

The fungus overwinters as mycelium in dead plant tissue in the thatch and on stems below the leaf sheath. Infected plants begin showing signs of infection (yellowing of leaves and stems) during warmer weather, followed by a bronze color and plant death as temperatures increase.

As the emphasis for high maintenance turfgrass increases, golf course greens must be managed correctly to avoid additional plant stresses promoting anthracnose development. Practices such as low mowing heights, intensive top dressing, and heavy traffic all contribute to anthracnose severity. Reducing these stresses can help manage this disease.

**Beneficial Cultural Practices Include:**

- Increase soil drainage
- Encourage deep rooting
- Reduce/eliminate compaction
- Reduce excessive foot or equipment traffic
- Provide balanced fertility, with adequate nitrogen
- Manage irrigation to avoid extremes in soil moisture
- Avoid aeration during periods of stress
- Increase height of cut during periods of stress
**Chemical Control**

As indicated above, once anthracnose infects the crown of *Poa annua*, the Poa will not recover. University turfgrass scientists recommend, “spraying fungicides at least 3 weeks prior to infection to be successful against anthracnose.” Attempts to control anthracnose with curative fungicide applications are generally unsuccessful. Symptoms can occur on turf in the western U.S. from June to October. Preventive fungicides include:

- Azoxytrobin (Heritage®)
- Propiconazole (Banner MAXX®)
- Chlorothalonil (Daconil Ultrex®)

**Figure 1.** Percent Anthracnose damage observed in plots, 2000, Wisconsin.

**An effective program for anthracnose control (begin treatments preventively):**

**Application 1:** Apply a systemic fungicide in fall, which can be timed with take-all patch, pink snow mold or yellow patch control applications.

- Heritage (0.4 oz/1000 ft²)
- Banner MAXX (2–4 oz/1000 ft²)

**Application 2:** Apply in spring when turf is actively growing.

- Heritage (0.4 oz/1000 ft² @ 21–28 days) OR
- Banner MAXX (1–2 oz/1000 ft² @ 14–28 days) OR
- Daconil ULTREX (3.2 oz/1000 ft² @ 7–10 days)

**Application 3:** Continue to apply fungicide applications until conditions for disease cease to exist.

- Heritage (0.4 oz/1000 ft² @ 21–28 days) OR
- Banner MAXX (1–2 oz/1000 ft² @ 14–28 days) OR
- Daconil ULTREX (3.2 oz/1000 ft² @ 7–10 days) OR
- Thiophanate-methyl (Cleary’s 3336™, see label)

Call 1-800-395-8873 to contact your local Syngenta sales representative and learn more about Banner MAXX, Daconil ULTREX, and Heritage.