

Turf M.D.

■ THE DOCTOR IS IN THE HOUSE

"Change is often rejuvenating, invigorating, fun ... and necessary."

— Lynn Povich, *journalist*

Spring is an annual ritual for cool-season turf rejuvenation. Maximum root elongation and production occurs in the early spring with the foliar growth following shortly behind. Middle to late spring should be the time creeping bentgrass and/or *Poa annua* greens are on full "go" reflected in the ubiquitous green color of the season. In the last 15 years "go" has been replaced with a "caution or stop," characteristic of the yellowish-orange symptoms of anthracnose.

Anthracnose, caused by the pathogen *Colletotrichum cereale* (formerly *Colletotrichum graminicola*) was associated with summertime stress on *Poa annua* greens and fairways 30 years ago. Signs of the disease were foliar in nature — primarily the presence of the fungi-fruited structure known as acervuli with setae (spines) in the leaf lesion. Often referred now as the foliar anthracnose, the pathogen primarily attacked *Poa annua* fairways.

On greens, anthracnose did not become a widespread problem until 15 to 20 years ago. A serious problem on *Poa annua*, it also became a disease of creeping bentgrass greens primarily in the mid-Atlantic and southeastern United States. Basal rot anthracnose attacks greens from early spring through the entire growing season. As the name implies, the pathogen attacks the lower sheaths of the turf plant, including the crown. The pathogen produces small black bumps, which are the acervuli. It was thought years ago that basal rot anthracnose did not produce setae, but this is not the case. Setae are often present in the later stages of anthracnose development.

Describing conditions favorable for basal rot development are frustrating. We are often comfortable in describing a disease through specific environmental conditions like ideal temperatures and humidity or leaf wetness. Unfortunately, basal rot anthracnose is not so easy. Given that basal rot anthracnose can occur from March through September (although now it seems to

Basal Anthracnose: Springtime Ritual

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occur year round), an additional component, stress, is needed to produce favorable conditions.

Stress that occurs because of management practices is extremely frustrating to golf course superintendents because it's hard to isolate one or more of the contributing factors. Basically, management practices implemented to increase green speed (frustrating?) enhance the potential for basal rot anthracnose. For example, a low height of cut is often targeted as the major culprit causing anthracnose. Although low mowing heights are a significant factor, anthracnose can occur at varying cutting heights. Factors associated directly with the mowing process — grooved versus solid rollers or the type of mower head (fixed, flex, or floating) — can influence anthracnose severity. Add a few additional factors to increase green speed like lower fertility levels, maintaining a moisture stress condition, untimely topdressing and verticutting practices, and anthracnose becomes a severe and chronic problem. How do you know when your management practices are too extreme? Not an easy question, but simply stated: It's when your fungicide program for managing basal rot anthracnose no longer works.

But basal rot anthracnose has resulted in some positive changes or rejuvenation in putting green management. Given its strong association with plant stress, providing a healthy environment around putting greens is a necessity. For example, some of the earliest aggressive tree-removal programs were instituted around *Poa annua* putting greens that had chronic basal rot anthracnose. These greens are healthier now growing under higher light and air-movement conditions.

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