Spring Dead Spot

Overview

Spring dead spot (SDS) can be a devastating root disease of bermudagrass and most damaging in areas with winter dormancy and freezing injury. SDS is caused by three closely related ectotrophic root infecting fungi: *Ophiosphorella herpotricha*, *O. korrae*, and *O. narmari*. The species causing SDS may vary by region, but all infect bermudagrass roots starting in late summer through early fall and damage roots, stolons, and crowns. Turf injury is exacerbated by cold temperature injury with affected areas not emerging from dormancy or exhibiting slow growth in the spring.

Symptoms

- Signs of spring dead spot infection initially appears as small brown flecks on roots, stolons, and rhizomes.
- As bermudagrass breaks dormancy in the spring, symptoms appear as circular patches of straw-colored leaves (Figure 1).
- SDS is a perennial disease that if left unchecked, will reoccur in the same location with the patch radius increasing in size each year. Over time, patches will coalesce resulting in large areas of dead turf.

Figure 1. Spring dead spot symptoms on bermudagrass green in early spring.
Photo credit: Rob Golembiewski, Atticus

Cultural Management Strategies

- Select bermudagrass cultivars with good cold tolerance.
- A strong cultural management program, including reducing thatch buildup and relieving soil compaction through vertical mowing and aerification, will help mitigate SDS.
- Recent research at N.C. State University has shown differential pathogen responses to nitrogen sources.
    - *O. korrae*, most common in the eastern U.S., was effectively controlled by calcium nitrate.
    - *O. herpotricha,* most common in Midwestern states, was suppressed by ammonium sulfate.

Fungicide Solutions

- Atticus offers two effective fungicide solutions for spring dead spot include Artavia™ Xcel (azoxystrobin + propiconazole) and Gunner™ 14.3 MEC Fungicide (propiconazole).
- Timing for SDS prevention is based on university research and begins in fall when average soil temperature at a 2-inch depth taken at 10 am is 72°F for five consecutive days.
    - 1st application (Fall) <72°F soil temperature
    - 2nd application (Fall) 28 days later