A Spring Scene: Dead Spots, Red Threads, and a Cool Breeze

Weather

![Map of weather conditions with text: "Patchy Frost and Near Record Lows Possible Tuesday Morning"](A)

5/16/11 - Weather
A. Record lows and patchy frost in mid May, really?! - source: NOAA
B. Soil temperatures in Columbia and throughout the state are nearly 10 degrees below normal.

What a difference a week makes here in Missouri. Cool and wet weather have pervaded the past 7 days. Near record lows are anticipated tonight, and the NWS has issued a possibility for patchy frost in mid-MO. Luckily, middle and not southern Missouri took the brunt of the rain this past weekend, with Columbia getting just over 2 inches of precipitation over the weekend. In reality, however, all the water still runs down the Mississippi. Warm season grasses are trying to green up in mid-MO, but are really wondering what is going on. Have I mentioned yet this is a perfect large patch/spring dead spot year?

Brood 19 Cicadas

Break out your earplugs, the 13-year cicadas have begun to emerge in southern MO and will continue to do so throughout the state. According to our resident experts and from those in other areas of the country, Brood 19 will be deafening. Definitely will be an interesting accompaniment to the backyard BBQ or those knee-knocking “push” putts on the 18th green. [Click here to view the full story, written by Dr. Bruce Barrett.](#)
Spring Dead Spot

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A. Bermudagrass is greening up slowly throughout the state, and with it comes the disappointment of spring dead spot damage.
B. The SDS pathogen, *Ophiophaerella* spp., attacks the roots, rhizomes, and crowns of the plant in the fall, restricting the plant's ability to overwinter.
C. The SDS pathogen is an ETRI, or ectotrophic root infecting fungus. The pathogen also produces small black spore bearing structures called pseudothecia.

Spring dead spot (SDS) reports on bermudagrass sports fields have come in from southern and mid-Missouri. Like large patch of zoysia, this disease is the Achilles heel of bermudagrass use in the transition zone. The pathogen, an *Ophiophaerella* spp., infects bermudagrass roots, rhizomes, and stolons in the spring and fall. Because freezing temperatures are necessary preceding plant symptoms, fall is the more important of the two infection periods. Newer bermudagrass cultivars with greater cold tolerance, such as Patriot, seem to be more resistant to SDS damage.

Research from North Carolina State suggests one or two 6 oz/M application of Rubigan (fenarimol) applied in the fall is best for SDS prevention, although control is difficult and in the first year only a 60-70% symptom reduction may be realized. This may be particularly true of the SDS disease in Missouri, since the species *O. herpotricha* is the most virulent and is thought to be the predominant Midwestern species.

High soil pH, which is the norm for this region, also exacerbates SDS symptoms. Exciting research at North Carolina State showed that consistent application (4 – 1 lb N/M apps during the summer) of calcium nitrate controlled *O. korrae*, the predominant species in the Southeast, while applications of ammonium sulfate controlled our putative species *O. herpotricha*. The implication is that lowering soil pH with the ammonium sulfate applications was the mechanism for controlling SDS caused by *O. herpotricha*, but more research is necessary to reach a definitive conclusion. Along with evaluating fungicides for SDS control, research at Mizzou is underway to 1) identify the SDS pathogen in Missouri, and 2) see if this fertilizer use strategy can be implemented here for SDS control. SDS sufferers stay tuned…
Red Thread

An outbreak of red thread was noticed on Dr. Fresenburg’s perennial ryegrass NTEP trial last week. The disease is caused by *Laetisaria fuciformis*, and affects longer cut cool season turf such as perennial ryegrass, Kentucky bluegrass, and tall fescue. Oftentimes, *Limonomycyes roseipellis*, the pathogen that causes pink patch, can also be found infecting leaf tissue in conjunction with *L. fuciformis*. Circular, bleached or tan, 4-8 inch diameter patches are noticeable from a distance. The patch often contains pink fluffs of mycelium, or dark red string-like sclerotia, which erupt from infected leaf tips. These pathogens only infect leaves and do not infect roots or crowns, so turf recovery from this disease is quicker than for many other diseases.

Red thread is a low nitrogen disease, meaning occurrence is usually tied to inadequate nitrogen levels. However, at this late date it may be best to table fertilization efforts until fall, when predisposition of the turf to more destructive high nitrogen summer diseases like brown patch and Pythium is not an issue. If fertilizer is applied, apply a small amount (0.25 lb N/1000 sq ft or less), and use a slow release nitrogen source. Like many other foliar diseases, long periods of leaf wetness are crucial for development of this disease, so plan irrigation for early morning instead of at night to reduce the duration of moisture on the leaf blade. Fungicide use is usually not necessary for this disease, except in very severe cases.

**Save the Date: July 26, 2011**

Make plans to join us at the University Missouri Turf & Ornamental Research Farm on July 26th for our annual field day! We have prepared the agenda for this year’s event, and it is packed with useful information and demonstrations that can help your turf and ornamental management operation. This agenda will be posted shortly along with participant registration.
For vendors, this is the best deal in the Midwest to capture your audience and display your ‘wares. Not to mention your dollars will go towards funding the very research that makes Field Day and the Missouri Golf Industry Conference successful. It’s a true win-win!! If you are interested in having a display at the event, or being an event sponsor, vendor online registration is now open – just click here.

Looking forward to seeing you there.

Lee Miller
Extension Turfgrass Pathologist
University of Missouri