Like a Dog Off a Leash

Weather

June started slow, but temperatures ascended quickly to summer-like over the past few days with most eclipsing the 90-degree mark yesterday. The high temperature trend looks to continue with both the 6-10 day and 8-14 day temperature outlooks showing a higher likelihood for above normal temperatures for most of Missouri (http://www.cpc.ncep.noaa.gov). The blunt edge of the sword is warm season turgrasses will hopefully perk up and begin growing out of the doldrums of a cool, wet spring. In May, Missouri had fairly close to normal temperatures, but the cloudy skies and cool rains were the kicker. Out of 121 years worth of data, May 2015 ranked as the 13th wettest in Missouri and was the wettest month on record for the contiguous US (CO, OK and TX all set records – click here for more info). Soils were frequently saturated, (particularly out west), and a wet soil is buffered to temperature shifts. Two-inch soil temperatures in Columbia only briefly surpassed 70F on a few occasions in May, only to dip back quickly into the lower 60s or even high 50s.

The sharp edge of the high temperature sword concerns cool-season turfgrasses. For the most part, top growth on tall fescue and other cool-season grasses has come at a blistering pace this spring. Did this come at a price, however? If the spigot does get shut off under summer heat conditions, the roots, which have had their growth compromised by waterlogged soils, may not be able to support the transpiration needs of the robust leaf canopy. For species with adaptive drought characteristics like tall fescue, this may not be much of a concern, but some cultivars of Kentucky bluegrass, fine fescue, perennial ryegrass and creeping bentgrass could come under considerable strain in the summer months.
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On the upside, the region does have a cooler than normal summer forecasted. On the downside, above normal chances for a continued wet pattern are forecasted over the next 6-14 days. The environment is wet, humid and sticky now, and may remain so in the short-term... so cool-season turfgrass pathogens should bolt like a dog let off its leash...

Quick Hits:

Brown Patch on Tall Fescue & Creeping Bentgrass
A. Brown patch lesions and some patches now appearing on tall fescue.
B. Brown patch also apparent on our ‘Penn A4’ research green at the research farm.

- **Brown patch** lesions were found 10 days ago, and now the patches have begun. Over the past week, brown patch has been observed in shaded tall fescue and on our bentgrass putting greens. Both diseases are caused by *Rhizoctonia solani* and are spurred by long durations of leaf wetness (check), daytime temperatures in the mid 80’s and nighttime temperatures in the mid to upper 60s (check), high humidity (check), and frequent rainfall (check). As noted last week, nitrogen fertility at this point with spur on this disease. Many fungicides are labeled for control of the disease on creeping bentgrass, but be wary of DMIs (except for Briskway) as we get into hotter weather. If a significant outbreak is occurring now on a tall fescue stand, a QoI (strobilurin) or QoI/DMI fungicide combination is suggested to halt disease progression.
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- **Large patch** is still chugging along this year, with new patches forming daily in untreated zoysia grass areas. This year has been impressive, as areas that are normally drier at the farm are experiencing considerable damage this year. Warmer weather will hopefully allow zoysia to start recuperating from this damage. As opposed to tall fescue, now is an opportune time to start kicking the zoysia in gear with some N. I will be discussing management techniques for both brown patch and large patch at this year’s field day.

- **Red leaf spot** was observed on creeping bentgrass this past week in our untreated plots. Disease symptoms may appear similar to dollar spot (although not as bleached in color), early brown patch (no smoke ring) or copper spot (not quite as big). Symptoms closely resemble someone flicking hydraulic fluid around randomly on the green. Appearance of these
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symptoms should also raise the alarms for managers of young Kentucky bluegrass stands, as a related species (*Drechslera poae*) can cause considerable spotting and melting out. Symptoms can be especially severe on Kentucky bluegrass that is low mown for fairways or sports fields. Most preventive programs on putting greens control this disease, with the Qols (Heritage, Insignia, etc) and dicarboximides (Chipco 26GT) providing good control.

Pythium like Phelps in the Pool

Pythium root rot was observed in another creeping bentgrass sample from Kansas City this past week. Kansas City, St. Joseph, and northeastern KS have experienced 5-8” + above normal precipitation in the last 30 days, and as stated before, all Pythium really needs is a pool to swim in. May is normally the wettest month, and most of the state experienced at least 1” above normal or 6” + during the period. Our brethren farmers of the monocot (corn) are experiencing considerable issues with Pythium root rot as well. Pythium is tricky as it normally doesn’t fall neatly into a fungicide program and tends to fall through the cracks. This is due in part to the fact that *Pythium* spp. are not fungi. *Pythium* differs considerably from fungi (i.e. cellulose instead of chitin in cell walls, oospores, motile swimming zoospores) and is in a completely different kingdom more akin to diatoms and algae. For this reason, most extremely effective Pythium fungicides do not provide control of many other diseases since they target the biology of this very specific and unique pathogen.

Due to the erratic nature of its development, not many fungicide evaluation studies
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for Pythium root rot exist. For preventive control, watered-in applications of Segway, Subdue, Banol, or Stellar are recommended. After an outbreak is confirmed, a watered-in application of ethazole (Koban or Terrazole) followed 3 days later with one of the aforementioned fungicides is suggested. This strategy is taken from the recommendation of Dr. Lane Tredway, who borrowed it from Dr. Bruce Martin. Two additional thoughts (1) Fungicides should be watered-in with 1/8 – 1/4” of irrigation immediately after application. This is especially true with ethazole which can has injury potential in higher temperatures. (2) If you are seeing decline in putting greens now and don’t know why, send in a sample. Several labs throughout the country can aid in targeting the correct pathogen with the precise control method.


Mark your calendars for the 2015 Mizzou Turfgrass and Ornamental Field Day to be held at the MU Turfgrass Research Farm in Columbia, MO. We expect to have a morning packed of education on topics ranging from turfgrass pest control to NTEP cultivar trials to ornamental flower selection to soil testing analysis. In the afternoon, we will be having our first annual Lobenstein Scholarship Tournament. This 9-hole event will be held at Columbia Country Club and all proceeds will benefit the Lobenstein Fund. The fund awards two $1,000 scholarships annually to deserving MU undergraduate students in Landscape Design, Horticulture, or Turfgrass Science, and is the legacy of Dr. Bill Lobenstein, who founded the MU turfgrass program and was instrumental in its development. The forecast for the day is certain to be cool, so plan on a day full of education and camaraderie on July 21. Registration and other details can be found at www.motec.org.