The Hunt for a Wet October

Lobenstein Scholarship Tournament – This Friday!

The Lobenstein Scholarship Tournament is scheduled for this Friday, October 2\textsuperscript{nd}, 8 am at Columbia Country Club. This is the day before the SEC Opener for the Mizzou Tigers vs. the South Carolina Gamecocks, so come on out and make a full weekend out of it.

The tournament will benefit the Lobenstein Fund, which has the sole purpose of annually awarding two deserving MU undergraduates (one in Turfgrass Science and one in Horticulture Science & Design) $1000 scholarships. The event will be a 4-man scramble, and the field is limited to 72 players. Hole, prize and beverage sponsorships are also available.

More information is provided on the flyer below. To register, go to http://motoc.org/golf/. Hope to see you there!
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Weather

September continued to be warm and very dry, in sharp contrast to our previous spring pattern. Most areas of the state are averaging 4 – 6 degrees above normal for the month, with consistent high temperatures in the mid 80s. In Columbia, we are eagerly waiting for a 5-day average 2” soil temperature of 65°F to initiate fall fungicide and fertilizer treatments in a large, large patch management study (current = 70°F). A cold front passage and jet stream dip has cooled current temperatures, and forecasts indicate the cool-down to at least normal fall temperatures should last through the early portions of October.

The bigger story is the drought situation (see below) gripping much of the central portion of the state. No rain (or perhaps a trace) has fallen in Columbia since Sept. 11, leaving the region 2.5 to nearly 3.5” below normal for the month. We have slipped onto the radar of the U.S. drought monitor (click here to see it) for the first time this year, but hopefully October will help us out. Let’s not lose too much perspective, as our drought status in the Midwest with only ~ 560k people affected, is miniscule compared to that out West with over 58 million. Forecasted rainfall for early October is thankfully optimistic, meaning if you held out on reseeding or overseeding cool season turfgrasses, the time is now or never.
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Quick Hits:

- Continuing the above theme, drought conditions have had a considerable impact on non-irrigated cool season turfgrasses in much of Missouri. Although actual evapotranspiration estimates are low due to cooler temperatures, dry air and consistent winds have not helped keep moisture around, particularly on bare ground. Overseeding or renovation efforts (such as in my own lawn) have been considerably hampered by the lack of moisture. Seeding or growing turfgrass around tree roots has been especially problematic, as the deeper robust root systems outcompete shallow turfgrass roots for moisture. Even these trees may be impacted, however, as fall colors may be muted or leaf drop quicker due to the lack of moisture. Additionally, earlier heavy spring and early summer rainfall events compromised plant root systems by replacing air in saturated soil profiles with...
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water. This resulting short root system (which was also predisposed to soilborne disease) set up for more severe drought symptoms.

If turfgrass seed is down, frequent irrigation (and annoying hose pulling) will need to continue at least a bit longer. Remember to try and keep soils frequently dark and moist during germination instead of shiny and oversaturated. Also, for a complete renovation straw or covering with a light application of mulch can help retain moisture considerably when nature turns the spigot off. Here’s to rooting for the NOAA forecast!

• **Fall Applications for Soilborne Pythium Disease?** I’ve been recently asked to suggest a treatment for fall prevention of Pythium root diseases on golf putting greens. The request was predicated on a recommendation for prevention of Pythium root dysfunction with applications timed to the fall pathogen infection range of 50 – 75°F soil temperatures. To date, **we have not had a single confirmed case of Pythium root dysfunction** from Missouri or the surrounding region submitted to our diagnostic lab. This, of course, doesn’t mean it doesn’t exist here, but in contrast > 35 samples of Pythium root rot, a completely different disease, were diagnosed on putting greens this season. No research is available indicating fall preventive fungicide applications will aid in control of Pythium root rot.

Pythium root dysfunction, as caused by *Pythium volutum*, occurs most severely on greens that were constructed in the last 10 years, and, contrary to Pythium root rot, on drier areas such as slopes and ridges. The disease was most likely misidentified in the Southeast as take-all patch due to the similarity in symptoms and infection period, until Dr. Jim Kerns from North Carolina State University identified the pathogen and characterized the disease. After a confirmed diagnosis of Pythium root dysfunction, fall as well as spring applications during the infection period will aid in disease prevention.

A rotation of fungicides is necessary for Pythium root dysfunction which includes (1) a QoI fungicide (i.e. Insignia) at the high label rate, (2) Segway at the high label rate, and (3) Signature + Banol (4 + 2 oz/1000 ft²) or + Subdue Maxx (1 oz/1000 ft²) applied every 21 – 28 days in the infection period. Applications 1 and 2 or watered in with 1/8” of post application irrigation, whereas application 3 is not. This is a very expensive application strategy, and without a positive diagnosis of Pythium root dysfunction may be wasteful. Without this confirmation, perhaps the only watered-in application on putting greens that is suggested would be #1: QoI fungicide since it would impact the incidence of patch diseases such as take-all patch and summer patch.
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• Although mentioned earlier, dollar spot is currently raging on creeping bentgrass putting greens. These outbreaks are consistent with our seasonal pattern of severe pressure in spring and fall, with a lull during the heat of summer. Dollar spot, like anthracnose, is a low nitrogen disease and may indicate the greens are hungry for some nitrogen fertilizer. Fall is the time for strong dollar spot fungicides (21 – 28 d residual control), and with low stress periods all DMIs may be utilized without potential for phytotoxicity. Do not let dollar spot infection centers occur late in the fall season as recovery will be slowed, and the disease will recur the following spring. Keep them clean.
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Conditions are favorable for large patch infection as indicated by several reports, along with considerable outbreaks in our irrigated, and previously untreated areas at the MU turfgrass farm. The time is definitely here or is drawing nigh to make a fall application if making 2 or 3 applications per year targeting large patch control. See the previous update for more information.

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