Update – 3/24/11

Spring has Sprung

Ah!!! The smell of freshly mown grass and the sound of flinging aerification cores rings the air. The turfgrass season of 2011 has begun with the official calendar start of spring occurring last Sunday. Day length and photoperiod steadily increase as we tilt gradually more towards the sun. Bentgrass, fescue, and bluegrass are putting down roots and putting up shoots, and even the zoysia is starting to green up around the turf farm.

3/21/11 - The first (week) day of spring. Short sleeves and mid 70's.
A) First mowing of the research greens at Mizzou Turf Farm.
B) Time to start monitoring soil temperatures. This 63°F, 2” reading taken our research green was taken at 11 AM on Monday. A forecasted cool down should delay preventive applications in mid MO. Southern MO may need to target crabgrass prevention.

Get Your Weather and Soil Temperatures

The fast warm-up of early week has gotten some thinking about timing of preventive applications for pest control. If you have past history of the pest, then it is a good idea to target these spring times when either infection occurs or the pest is at an early (and vulnerable) stage of growth. This early action is actually based on the pest's biology and can save the multiple applications that are often necessary in curative situations.

Although we had soil temperatures get in the range for a few days in middle MO, it is still at least a week or so too early for many preventive disease applications. This is particularly true for preventive control of soilborne turfgrass diseases such as fairy ring or take-all patch which take consistent 55-60°F soil temperatures for 3-5 days. Alternatively, if you are planning pre-emergent crabgrass control, you should make these applications shortly... particularly if you are in south or southwest MO. What a difference a few weeks can make in MO.
We will mention soil temperatures regularly and you may want to monitor them yourself. With a standard soil thermometer (as in the figure above), take measurements at 11 am to get the closest representation of the average daily soil temperature. The standard thresholds for turfgrass pest control are based on temperatures taken at a 2-inch depth.

Two alternatives for monitoring soil temperatures are on the web:

• The agriculture weather station network monitors 2-inch bare soil temperatures at many of its stations. Although it’s in bare soil, it is a pretty close representation. [Click here to go to the Mizzou weather station website.]

• Growing degree-day tracker 4.0 is now covering a few states in the Midwest, including Michigan, Indiana, and Illinois. Instead of monitoring soil temperatures directly, the web application calculates growing degree days and interpolates soil temperature to characterize pest biology. Illinois is a nice geographical neighbor to cherry pick (I mean utilize) some of this information. You can sign up for emailed pest alerts based on your location. If you are in NW Missouri, sign up for Quincy, IL alerts (zip code 62301) and if you are in the Bootheel sign up for Carbondale, IL (zip code 62901). [Click here to go to GDD Tracker 4.0.]

Microdochium Patch

A slight outbreak of Microdochium patch was observed on our ‘A-4’ bentgrass research green this past week. On its own, it probably wouldn’t have been significant, particularly because I wrote about it in our [winter disease update]. What is interesting though, is that we only saw this disease on our ‘A-4’ green and did not observe it on ‘Penncross’ or ‘L-93’. Dan Lloyd also noted that in their newly
established greens height cultivar trial only ‘A-4’ (out of the 22 entries) was afflicted with the disease (see Figure above).

The disease is mainly just a problem on bentgrass. Since ‘A-4’ is a popularly planted cultivar for golf putting greens in MO, superintendents should be aware of this susceptibility to Microdochium patch. For the most part, Microdochium patch is easily controlled by a number of different fungicides, including thiophanate-methyl, fludioxonil, or a tank-mix of iprodione + chlorothalonil. If you see the disease, you should apply a curative fungicide to stop it. The pathogen will sporulate when consistently warmer conditions (60-75°F) and some moisture occur. These conidia can disperse in water films (see Figure) and rapidly spread infections across a turf area, sometimes yielding symptoms that can appear like Pythium.