My Summer Vacation - A 2008 TDL Year in Review

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As the gloomy economic numbers are being analyzed from the 2008 golfing season, one item in the budget that nearly every superintendent spent significantly less on this year was fungicides. Mild temperatures and low humidity for much of the summer kept most diseases in check. In fact, at the O.J. Noer Turfgrass Center we had a difficult time getting dollar spot to even appear, which was evident to any attendee at the WTA Summer Field Day who watched Dr. Kerns and myself talk about this wonderful new biocontrol product for dollar spot called "Untreated Control." However, despite the title of this article, grass did still die and we still found ourselves with plenty to do. The breakdown of sample submissions to the TDL in 2008 can be seen in Table 1, as well as the comparison to 2007.

With over 100 inches of snow across much of the area, the winter of 2007-2008 was one for the record books. Much of the talk as we headed towards spring was how bad the snow mold would be, and once the snow finally did melt, the answer was in most cases, "well that's not so bad." Snow mold was most severe on unsprayed areas of the golf course and areas that were nitrogen-heavy going into the winter. If you think back all the way to the fall of 2007, there were several dollar spot outbreaks in October and even November. Some superintendents attempted to fertilize to recover from the dollar spot before dormancy hit, but with the winter's early and permanent arrival, the stage was set for some severe snow mold breakthrough. Breakthrough was even observed at some courses that used three-way mixtures that had held up well under heavy disease pressure in our northern snow mold trials, which should remind everyone just how important a role late-season fertility plays in snow mold.

Later in the spring brought the usual disease suspects; leaf spots, red thread, and Micodochoum patch, albeit in lower numbers than we had observed in previous years. The big stories of the spring were the cold temperatures and the heavy rainfall. Any place that had experienced damage from ice cover or snow mold seemed to take until July to recover, and the only thing more frustrating than winter damage is having to wait weeks and months for it to fully recover. Maybe the biggest newsmaker of the summer in southern Wisconsin was the heavy rains that inundated the state and caused record flooding. This not only wiped out revenue from potential golfers, but also diverted funds away from other areas of course maintenance towards flood cleanup.

Following the floods, conditions dried out and humidity stayed low for most of the year. While this was not conducive for diseases such as dollar spot, brown patch, or Pythium blight it did seem to cause a problem with rooting depth of annual bluegrass. I also observed this abnormally shallow rooting of annual bluegrass in August of 2006, when southern Wisconsin was hit by 12 inches of rain over a couple day period, and rooting depth seemed to decrease significantly on many courses.

2008 TDL Diagnoses

Diagnosis	Professional*		Homeowner*	
Take-All Patch	7	(8)	0	(0)
Abiotic	29	(22)	30	(29)
Microdochium Patch	1	(0)	0	(0)
Leaf Spots	9	(10)	2	(5)
Insects	1	(2)	1	(2)
Anthracnose (Foliar and Basal Rot)	2	(6)	0	(0)
Fairy Rings	2	(1)	1	(1)
Necrotic Ring Spot	3	(2)	20	(11)
Summer Patch	3	(5)	1	(5)
Rhizoctonia Brown Patch	1	(6)	2	(3)
Brown Ring Patch	3	(0)	0	(0)
Rough Bluegrass (*Poa trivialis*)	0	(1)	8	(8)
Typhula Blight	2	(2)	5	(0)
Weed ID	5	(1)	10	(12)
Dollar Spot	0	(4)	0	(0)
Pythium foliar blight or root rot	5	(2)	1	(3)
Fungicide Resistance Assays	0	(6)	0	(0)
Other	3	(2)	4	(6)
TOTAL	**76**	(80)	**85**	(85)

Table 1. *Numbers in parentheses are diagnoses in 2007

While there is other possible causes for the decrease in rooting depth, what is clear is that a higher number of samples were diagnosed as "abiotic" than in past years and many of those were related to annual bluegrass.

One disease that actually saw an increase in diagnoses across the state and the region in 2008 was brown ring patch (*Waitea circinata* var *circinata*). As Dr. Kerns talked about in a previous Grass Roots article (Kerns 2008), brown ring patch has never been officially reported in Wisconsin but has been reported as close as Chicago. Much of the work on this pathogen to date has been done by Dr. Frank Wong at the University of California - Riverside, and though we are in the initial stages of researching this disease expect much more information as research from our lab and others becomes available. Dr. Kerns and I are currently testing the isolates we have in the lab to get a definitive diagnosis of the pathogen.

Another disease that seemed to be more severe than normal in 2008 was fairy ring. Possibly a result of the wet spring and dry summer, fairy ring seemed to be very severe in places it had never been observed before while at the same time never showing up in places where it had been a problem in the past. In a particularly extreme case of Type I fairy ring, Dennis Robinson of Horst Distributing brought in a sample that came from a perfectly round circle of dead grass (Figure 1). While it looked like fairy ring, the sample was incubated in a moist chamber for 3 days and the amount of hyphae produced was incredible, nearly enveloping the entire sample (Figure 2). To have such prolific fungal development is thought to be rare with fairy ring, but little is known about the multiple species of fungi that cause the disease. Lee Miller from North Carolina State University is working to gain more insight into this frustrating disease, and we submitted fairy ring samples from around the state to aid in his research.

Figure 1: This type I fairy ring appeared in early September, and apparently did not previously have the darker green ring that most fairy rings have in their initial development. This picture was provided by Dennis Robinson of Horst Distributing.

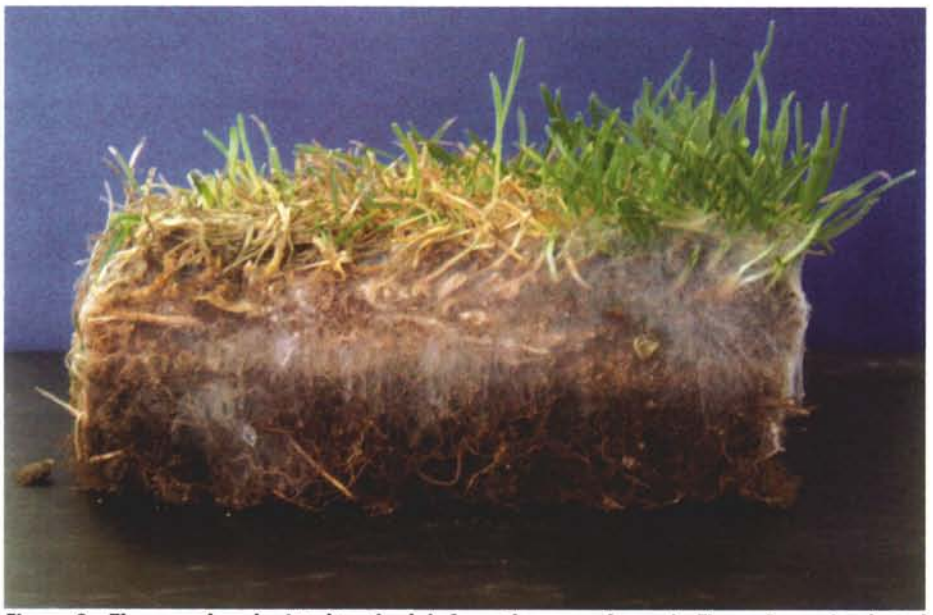

Figure 2: The sample submitted to the lab from the area shown in Figure 1 was incubated for 3 days in a moist chamber and produced a tremendous amount of fungal mycelium.

Looking at the table of samples submitted to the TDL shows it matches up pretty well with 2007. The number of samples submitted was close to the same, the breakdown between homeowner and professional was similar, and aside from the numbers of abiotic samples, the breakdown within diagnoses was also similar. It just goes to show you, no matter the weather the grass will still find some way to die.

TDL Contract Memberships

Speaking of turf death, if your course has had turf decline for unknown reasons in the past, or

you need verification of a problem to prove to the board a certain action needs to be taken, or you just feel like supporting your local turf resources; then it may be time to consider becoming a contract member with the Turfgrass Diagnostic Lab.

The Turfgrass Diagnostic Lab does not receive any state or university funding, so the money brought in from contract members forms the foundation of the lab. While all samples submitted to the lab, from contract members and non-contract members alike, get our complete attention; there are some special benefits to becoming a TDL contract member.

Contract members that submit samples to the lab get a complimentary written report, which is an additional $50 for non-members. The report includes color pictures and recommendations for controlling the pest that can be useful in explaining the situation to your staff or the clubhouse. Contract members also get biweekly email updates throughout the growing season with explanations of the most common problems being brought into the lab at that time, and what to watch for at your course over the next two weeks. This is in addition to the disease alert emails sent out to contract members, which warns them if weather conditions will be conducive for a damaging outbreak of disease such as *Pythium* blight. Complimentary "University of Wisconsin Turfgrass Research Reports" are mailed to those contract members who request it, keeping you up to date on the latest and greatest ways of managing your turf.

The fee system is also set up to allow for flexibility in membership depending on the financial capacities of your facility. For each $100 in membership you sign up for, you get one sample diagnosis with complimentary report. For example, a $500 membership entitles you to up to five sample submissions with report throughout the growing season. For those who become $1,000 contract members unlimited samples may be submitted, which is perfect for municipalities or ownership groups that operate several golf courses.

If you are interested, please fill out and return with a check the

contract membership order form, provided on the following page. For any further questions, please do not hesitate to call me at (608) 845-2535 or email at plk@plantpath.wisc.edu. In addition, a heartfelt thank you to the 2008 TDL contract members for all of your tremendous support, $1,000 members are noted in bold text.

References

Kerns, J. P. 2008. What The Heck is Brown Ring Patch? *The Grass Roots.* 37(5) p 46-47.

Thank you to the 2008 TDL contract members!

Abbey Springs CC
Antigo Bass Lake
Big Foot CC
Blackhawk CC
Blue Mounds CC
Bristlecone Pines GC
Blackwolf Run
Brown County GC
Brynwood CC
Bulls Eye CC
Chenequa CC
Debuck's Sod Farm
Eagle River GC
Eau Claire CC
Edgewood GC
Fox Valley GC
Frontier FS Coop
Grand View GC
Green Bay CC
Green Bay Packers
Greenwood Hills CC
Hawks Landing GC
Hayward Golf & Tennis
Horst Distributing
House on the Rock Resort
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La Crosse CC
Lake Arrowhead GC
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Lieds Nursery
Long Sod Farms
Lurvey Farms
Maple Bluff CC
Mascoutin GC
Meadowbrook CC
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Milwaukee CC
Minocqua CC
Nakoma CC
New Berlin Hills
New Richmond GC
North Hills CC
North Shore CC
North Shore GC
Oconomowoc CC
Old Hickory GC
Olds Seed Solutions
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Twin River Turf
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West Bend CC
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