

Uncle! A 2012 TDL Year in Review

By Dr. Paul Koch, Turfgrass Diagnostic Lab Manager, O.J. Noer Turfgrass Research and Education Facility

Well that was unpleasant. They say that time heals all wounds, and as we sit comfortably in our office chairs this winter some may look back at last summer and say, "You know what, that wasn't so bad." Those people are weird. 2012 was a record-setter on many levels, mostly in a bad way. 2012 was the warmest year on record for Milwaukee and amongst the warmest for most of the state. Milwaukee also broke its record for most consecutive days without measurable snowfall, and snowfall across most of the state was a rarity. In addition, most of the state, especially the southern half, saw the worst drought in decades. Add in the stretched-to-the limit budgets, and it's a wonder we didn't collectively throw down our hoses on July 1st and apply to business school. Let's take a look back at the year that was, from the often distorted view of the Turfgrass Diagnostic Lab.

If the past few summers could be described as 'St Louis summers', then certainly the winter of 2011-2012 could be described as a 'St Louis winter'...or maybe even an 'Atlanta winter.' The winter that wasn't was initially greeted with open arms as many courses across the region opened for play for several weeks in January, bringing in some cash flow during a normally dead period. But record warm temperatures in January and February turned to ridiculous record warm temperatures in March, with highs topping 80°F for a several day stretch and feeling more like June or July. While many courses achieved their earliest opening ever, this early warm-up led to some isolated cases of intense disease activity that would have likely been much more severe and widespread if not for the main story from 2012.

The drought of 2012 will go down as one of the most severe on record, rivaling the legendary droughts of 1995 and 1988. Nearly two dozen counties in Wisconsin were designated federal disaster areas. For most in southern Wisconsin, it stopped raining in mid to late May and didn't start up again until late July. Moisture is the driving environmental factor for most plant diseases, and the dry conditions limited the development of many turfgrass diseases such as brown patch and Pythium blight in 2012. But areas of poor irrigation coverage and high-stress areas on the collars and clean-up passes suffered badly in the prolonged drought. As a result, diagnoses of abiotic turf damage and stress-related anthracnose (Figure 1) jumped sharply in 2012 (Table 1).



Above: Figure 1. Anthracnose, both basal rot and foliar, was widespread amongst golf course turfgrass throughout Wisconsin and the Midwest in 2012.



Right: Figure 2. Along with anthracnose, summer patch was the premier disease of annual bluegrass in 2012.

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The only disease aside from anthracnose that was diagnosed more frequently in 2012 was summer patch (Figure 2). Record springtime warmth jumpstarted the growth of the summer patch fungus earlier than normal, allowing for prolonged periods of infection and widespread incidence of the disease on annual bluegrass putting greens throughout the region. Disease severity would likely have been much worse if not for dry conditions.

One of the ongoing debates in turfgrass pathology in recent years has been the influence of bacterial infections on turf health, and numerous submissions to the TDL had notes attached that said 'suspected bacterial wilt.' Of all the suspected or potential bacterial wilt/decline submissions, bacterial streaming was not observed on a single one, including those with clear etiolation. This is not meant to say that I think bacterial decline is not a true turfgrass disease. In fact, research out of Michigan State and North Carolina State has shown that bacteria can cause decline of creeping bentgrass turf. With that said, I'm not sure how extensive the bacterial wilt phenomenon is, since we were not able to observe any bacterial streaming in any of the sample submitted to the TDL last year.

This is something we will continue to monitor in the years ahead, but AT THIS POINT I do not believe bacterial decline to be a serious issue on turfgrass in Wisconsin or even throughout much of the Midwest. The fall conditions were relatively tame with seasonal temperatures, though still quite dry for long periods. No major disease outbreaks occurred and the fall allowed many superintendents to take a deep breath and undertake any renovations delayed by the intense summer stress. Overall, the Turfgrass Diagnostic Lab continued to expand its reach across the region and country.

The 130 professional samples were amongst the largest professional samples in a given year since the diagnostic lab opened in the mid-90's. Of those submissions, over 1/3 were from outside the state of Wisconsin. Samples were submitted from such Midwest states as Minnesota, Illinois, and Ohio but also from courses in Colorado, California, Oregon, Washington, and Oregon.



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Increased interest from other areas of the country, especially the west, has led to requests for articles describing the TDL's services in regional turfgrass trade magazines. While the TDL remains first and foremost committed to the turfgrass managers of Wisconsin, its increasing importance to turfgrass managers across the region and country cannot be denied. With the continued extraordinary support the TDL receives from the state's turfgrass industry, I have no doubt the lab will continue to thrive for both the stakeholders within the state and those outside the state looking to us for leadership.

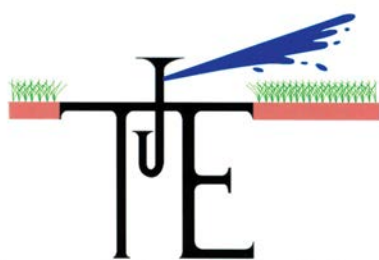
Thanks to our 2012 contract members

As always, I would like to offer sincere thanks to our 2012 contract members (Table 2). Quite simply, the lab would not exist without their generous support. I am well aware that more is asked of you every year, both at your own facility and in support of the associations that work on your behalf. In addition, we at UW and the TDL in particular rely on you to make our programs viable and successful. We do this knowing that every dollar in your budget, both personal and professional, is stretched to the limit and we work hard to make sure every dollar you send our way is managed in the most efficient way possible and that in the end it will make some aspect of your job easier in the future.

UW's turfgrass program is currently in unsettled waters. The departures of Dr. Stier and Dr. Kerns means the program faces an uncertain future, but there are numerous people (both inside and outside the turfgrass industry) working tirelessly to make sure the program's future remains bright. I hope that no matter what the future holds, you will continue to support the UW and the TDL to the same degree you have in the past. If you aren't a contract member with the TDL, I urge you to join 70 of your industry colleagues and help to make the TDL the foremost center for turfgrass diagnostics in the Midwest and one of the premier turfgrass centers in the country. We can't do it without your support. For more information, please visit the TDL's website at www.tdl.wisc.edu.

2012 TDL Diagnoses

<u>Diagnosis</u>	<u>Professional</u>	<u>Homeowner</u>
Take All Patch	10 (6)	0 (0)
Abiotic	53 (42)	21 (25)
Microdochium Patch	1 (2)	0 (0)
Leaf Spots	3 (3)	2 (10)
Insects	0 (0)	0 (2)
Anthrachnose (foliar & basal rot)	17 (13)	0 (0)
Fair Rings	8 (3)	0 (1)
Necrotic Ring Spot	1 (1)	9 (8)
Summer Patch	15 (6)	16 (28)
Brown Patch	1 (3)	0 (0)
Brown Ring Patch	2 (3)	0 (0)
Etiolated Tiller Syndrome/ Bacterial Wilt	1 (NA)	0 (NA)
Typhula Blight	1 (1)	1 (6)
Weed ID	4 (2)	20 (15)
Dollar Spot	2 (2)	0 (0)
Pythium Foliar Blight or root rot	7 (4)	0 (1)
Other	5 (7)	1 (3)
TOTAL	131 (91)	70 (106)



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Thank you to the 2012 TDL contract members!!!

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