

Wisconsin TDDL Takes Big Step Forward

By Bob Erdahl

When you have a disease problem on your golf course, how do you go about finding a solution? Most of us rely on our experience; we know what diseases occur at certain times of the year and the weather conditions that spell trouble. We have learned to anticipate problems and do everything possible to prevent a disease from damaging both our golf course and our reputation.

Sometimes, however, we run into an unknown disease that stumps us. Then what? Well, we can call our fellow superintendents for their advice, we can blow the dust off of one of those books that have all the full color pictures of every turfgrass disease known to man, we can call in the USGA and we can pray—a lot.

Starting in 1996, the answer to many a prayer will be answered when the Turfgrass Disease Diagnostic Lab (TDDL) opens at the O.J. Noer Turfgrass Research & Education Facility. The TDDL will be a great step forward for all turfgrass managers in the state of Wisconsin. It will provide a multitude of services including: rapid, and accurate diagnosis of turfgrass diseases, research aimed at developing new technologies to identify pathogens that are difficult to detect and support for the educational programs at the O.J. Noer Turfgrass Research & Education Facility.

Like most large steps forward, the TDDL for 1996 owes its existence to a series of smaller steps that have occurred over a number of years. The origins of turfgrass disease diagnosis in Wisconsin go back to Dr. Gayle Worf at the University of Wisconsin-Madison. Dr. Worf was the pioneer UW-Extension Turfgrass Pathologist from the early 70's to the early 90's. His work focused on snowmold control, testing of new fungicides, and the identification of *Leptosphaeria korrae* as the causal agent of Necrotic Ring Spot. Dr. Worf's advice and counsel were responsible for bailing many a golf course superintendent out of hot water.

The current UW-Extension Turfgrass Pathologist, Dr. Julie Meyer, came on board in 1992. Her work consists of turfgrass disease research at the O.J. Noer Turfgrass Research & Education Facility and at sites throughout the state of Wisconsin. Dr. Meyer was on parental leave during the 1995 season and will return for the upcoming year.

The first facility in Wisconsin for the diagnosis of plant diseases was the Plant Pathogen Detection Clinic at the UW-Madison Department of Plant Pathology. Established in the mid 70's, the clinic is responsible for diagnosing disease problems on all agricultural crops, including turfgrass, in the state of Wisconsin. As the UW-Extension Turfgrass Pathologists and members of the faculty in the Department of Plant Pathology at UW-Madison, both Dr. Worf and Dr. Meyer have been responsible for overseeing the turfgrass side of the clinic.

As 1995 opened, two key factors began to drive the future of turfgrass disease diagnosis in the state of Wisconsin. First of all, Dr. Julie Meyer was going to take a parental leave for the 1995 growing season. Secondly, the turfgrass industry in Wisconsin (especially golf course superintendents) were calling for turfgrass diag-

nostic services that were more responsive to the needs of the turfgrass industry in the state of Wisconsin. To meet these challenges, the Department of Plant Pathology decided to create an independent facility for turfgrass, the Turfgrass Disease Diagnostic Lab (TDDL).

The TDDL was put under the supervision of Dr. Doug Maxwell. Dr. Maxwell was long on plant disease research and short on experience with diseases of turfgrasses. He appointed

FIGURE 1. Percent distribution of turfgrass managers that submitted samples to the University of Wisconsin, Department of Plant Pathology, Turfgrass Disease Diagnostic Lab in 1995.

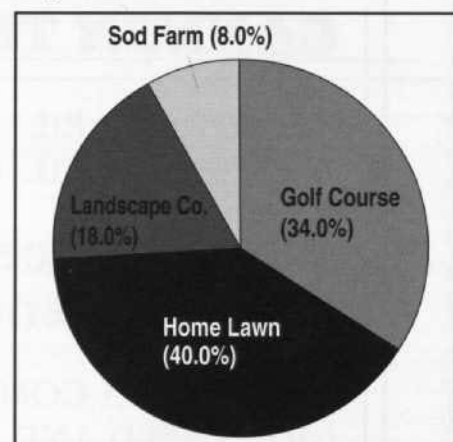
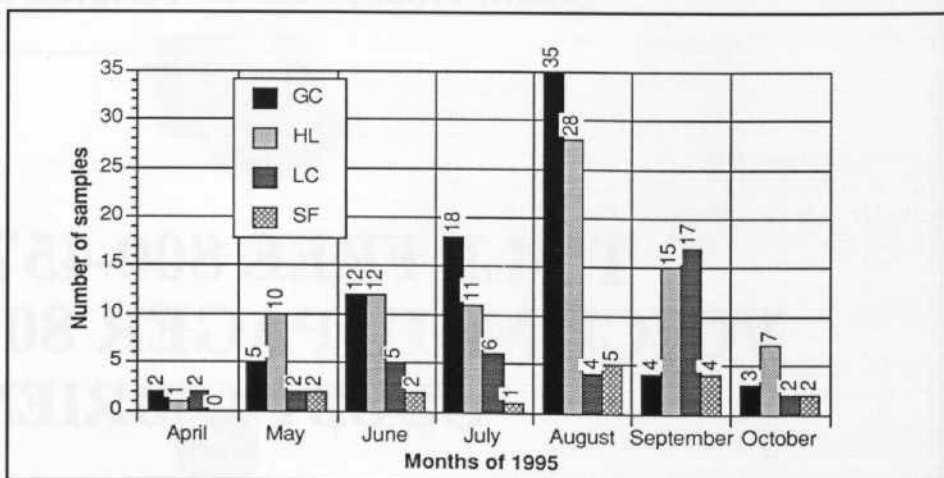


FIGURE 2. Number of samples submitted monthly to the TDDL by grower in 1995. GC=Golf Course, HL=Home Lawn, LC=Landscape Company and SF=Sod Farm.



his graduate student, Steve Millet, to head up the TDDL and the rest as they say, is history. What Maxwell and Millet have accomplished in only one year is impressive. They did their homework, came up with the right answers when they were needed and helped many golf course superintendents through the horrendous summer of 1995.

In addition to the routine work at the TDDL in 1995, Maxwell and Millet began work on a research project to develop a rapid diagnostic procedure for an unknown "Patch" pathogen. The work is funded by the Wisconsin Turfgrass Association and involves comparing the DNA of known pathogens with the DNA of the unknown pathogen. If the work is successful, it could lead to the development of rapid, DNA based diagnosis for other turfgrass diseases.

To summarize his year of work with the TDDL, Steve Millet compiled a booklet titled "Turfgrass Disease Management 1995". The booklet has two parts: The first part is a listing of all the turfgrass pathogens that were identified at the TDDL in 1995. For each disease there is a detailed discussion of symptoms, cultural management and chemical management. The second part is an analysis of the types of samples that were submitted to the TDDL throughout 1995. Figures 1 and 2 are taken from the booklet and show which segments of the turfgrass industry utilized the TDDL and at what time of year. Table 1 (also taken from the booklet) gives the frequency of turfgrass diseases diagnosed by the TDDL in 1995. The booklet is very informative and can be obtained by sending \$15.00 (make your check payable to UW Badger Turf and Grounds Club) to:

Turfgrass Disease Diagnostic Lab
3101 Highway M
Verona, WI 53593

Now back to the TDDL in 1996. With a successful first year under his belt, Dr. Maxwell approached the Wisconsin Turfgrass Association in the fall of 1995 with a proposal for the continuation of the TDDL. He wanted to expand the services of the TDDL and relocate it to the O.J. Noer Turfgrass Research & Education Facility. The problem—money of course! With the continuing budget cuts at UW-Madison and UW-

Extension, public funds would not cover the entire cost of expansion and relocation of the TDDL. His solution; a partnership between the Wisconsin Turfgrass Association and UW-Madison/UW-Extension.

The Board of Directors of the Wisconsin Turfgrass Association agreed that the TDDL was an important asset to the turfgrass industry of Wisconsin and worthy of its financial support. The details of an agreement worked out at the November, 1995 Wisconsin Turfgrass Association Board Meeting are as follows:

- The TDDL will relocate to the O.J. Noer Turfgrass Research & Education Facility.
- The TDDL will be supervised by Dr. Doug Maxwell.
- The TDDL will be staffed by Steve Millet, Catherine Smejkal and Gary Gaard.

- The three person staff will be responsible for the diagnosis of turfgrass diseases (full-time from May to October), provide expanded educational and outreach programs, and conduct research related to turfgrass diseases.

- 1996 funding for the staff of the TDDL and the equipment and supplies necessary to run the lab will come from these sources:

Wisconsin Turfgrass Association	\$23,000.00
UW-Madison/ UW-Extension	19,000.00
TDDL Revenue	3,500.00
TOTAL	\$45,500.00

With the agreement in place, it was now up to the Wisconsin Turfgrass Association to come up with its share of \$23,000.00. Time was short
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Table 1. Frequency of turf problems diagnosed by the TDDL in 1995.

DIAGNOSIS	SAMPLES	% OF SAMPLES	GROWER TYPE			
			GC	HL	LC	SF
Env./Phys.	40	18.5	8	22	6	4
Necrotic Ring Spot	31	14	2	21	8	0
Leaf spot/Melting out	18	8	1	10	7	3
Rhizoc. blight	15	7	10	2	1	2
Cult./Nutr.	13	6	5	5	2	1
Summer Patch	11	5	8	0	3	0
Insff. sample	10	4.5	0	4	5	1
Pythium	9	7	1	0	1	
Unidentified	9	9	5	2	2	0
Poa decline	8	3.5	8	0	0	0
Anthraxnose	7	3	4	1	6	0
Thatch	7	3	1	4	2	0
Rust	5	2	0	4	1	0
Take-all	4	1.5	4	0	0	0
Typhula blight	4	1.5	1	2	1	0
Spring Fusarium	3	1	3	0	0	0
Dollar Spot	3	1	3	0	0	0
P-tox	3	1	3	0	0	0
Fairy ring	3	1	2	1	0	0
Anthraxnose basal rot	3	1	3	0	0	0
KYB billbug	3	1	0	3	0	0
Weed id	3	1	0	2	0	1
Saprophytes	2	<1	2	0	0	0
Herbicide damage	1	<1	1	0	0	0
Ring/Stunt nemas	1	<1	1	0	0	0
Rhizome rot	2	<1	1	1	0	0
R. zeae blight	2	<1	2	0	0	0
Sod webworms	2	<1	0	2	0	0
Red thread	1	<1	0	1	0	0
Slime mold	1	<1	0	1	0	0
Ascochyta/anthracnose	1	<1	0	1	0	0
Dog urine	1	<1	0	1	0	0
Black cutworm	1	<1	0	1	0	0
Pink snow mold	1	<1	0	0	1	0
Localized dry spot	1	<1	0	0	1	0
Yellow ring	1	<1	0	0	0	1
Bacterial wilt	1	<1	0	0	0	1
Damping-off	1	<1	0	0	0	1

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because decisions could not be made about the future of the TDDL without the money in hand by February 1, 1996. The quick way to solve the problem would have been to use Wisconsin Turfgrass Association funds. That large of an outlay, however, would have restricted the ability of the Wisconsin Turfgrass Association to support research, so the Board of Directors dismissed that idea and turned to an idea that was successful in the past—fund raising.

It had been several years since the successful completion of the fund raising drive for the O.J. Noer Turfgrass Research & Education Facility and the Wisconsin Turfgrass Association no longer had any full scale fund raising campaign in place. The TDDL was the perfect project to get the fund raising ball rolling again.

Time was still the problem, there just wasn't enough to permit a well organized, state-wide fund raising campaign. The solution—divide the fund raising campaign for the TDDL into two parts; short term for 1996 and long term for 1997 and beyond.

For the short term goal of \$23,000.00, the Board of Directors targeted selected members of the Wisconsin turfgrass industry that had actively supported the programs of the Wisconsin Turfgrass Association in the past. The plan was to ask for a pledge of \$1,000.00 from each donor so that the fund raising campaign could be kept small and finish by the deadline of February 1, 1996. The plan worked.

Twenty three, generous donors pledged \$1,000.00 each to secure the short term financial needs of the TDDL.

The 23 donors are made up of 18 golf courses and 5 businesses.

Among the golf course donors, there were many superintendents that used "Creative Financing" to make their donation possible so the names of the participating golf courses will not be made public at this time. When the timing is right, the names of the 18 golf courses will be released so that the entire Wisconsin turfgrass industry can recognize these forward thinking superintendents for their contributions to the TDDL. In regard to the 5 business donors, there names are as follows:

The Bruce Company
Lawn Care of Wisconsin, Inc.
Reinders Brothers, Inc.
Spring Valley Turf Products
Terra International

These businesses are to be commended for their generous support of the TDDL and the Wisconsin Turfgrass Association.

What about 1997 and beyond? Will the \$19,000.00 of public funds be available to continue the partnership between the Wisconsin Turfgrass Association and the UW-Madison/UW-Extension? No one knows for sure. If not, the Wisconsin Turfgrass Association will have to raise a total of \$42,000.00 per year in donations to

fund the continuation of the TDDL.

In order to be prepared for the future financial needs of the TDDL, the Wisconsin Turfgrass Association is in the process of developing a long range fund raising campaign. Details of the campaign will be released in the Spring of 1996; look for them in the next issue of THE GRASS ROOTS. Some features of the campaign will include donation programs to match the financial resources of all members of the Wisconsin turfgrass industry along with the request for a multi-year commitment of support.

Given the rapid and positive response to the short term need for \$23,000.00 in 1996, the Wisconsin Turfgrass Association feels confident that the turfgrass industry of Wisconsin will rise to support the future of the TDDL. In fact, the fund raising campaign for the TDDL may be just what is needed to draw attention to both the current and future financial needs of the Wisconsin Turfgrass Association and the O.J. Noer Turfgrass Research & Education Facility.

Remember, the TDDL is funded only through the end of 1996. We need your help for the years to come. Start making plans now to include a contribution to the Wisconsin Turfgrass Association in your future budget requests. The bottom line is simple—if we don't do it ourselves, it won't get done. ♣

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