



The Turfgrass Disease Diagnostic Lab: Report for 1999, a Record Year

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Mission statement: The Turfgrass Disease Diagnostic Lab (TDDL) at UW-Madison was organized in the spring of 1995 as a separate part of the Plant Pathogen Detection Clinic in the Department of Plant Pathology. The TDDL was created to provide more extensive turfgrass disease diagnosis to the commercial turf industry of the State, to provide an evaluation of management strategies for turfgrass diseases, and to initiate a research program on turfgrass disease diagnosis. Some immediate goals were to provide a rapid turn-around-time, voice contact with professional turfgrass managers, information on the diagnosis procedures, and recommendations for disease management.

Activities for the TDDL for 1999:

Samples processed: From January 1 to November 30, 1999, 247 (new record) turf samples were processed.

Commercial turfgrass samples (paid) = 31

Commercial turfgrass samples (contracts) = 80

Subtotals of commercial samples

Golf Course samples = 90

Sod grower samples = 6

Lawn care samples = 16

Athletic field samples = 0

Homeowner samples = 135

Fund drive: This past year was once again a record year for fund raising. The TDDL has increased its contract base to 87 partici-

pants. The resulting contribution was \$26,000 which, helps support the activities of the lab and a majority of Jeff Gregos' salary. In order for the lab to maintain its current presence in the turf industry, this upward climb must continue into the next century. This next year the lab hopes to increase the participation to over 100 contracts and an annual contribution of \$30,000. This will ensure that the lab will be here to serve the industry for many years into the future.

Snow mold trials: The snow mold fungicide trials were established at two golf courses (Sentryworld and Gateway Golf Club) and the O. J. Noer Facility. At each site there were four studies, totaling 12 for all sites. These

Table 1. Breakdown of Samples by Problem

Problem	Homeowner	Golf Course	Sod Grower	Lawn Care	Total
Cultural	22	17	2	3	44
Leaf Spot	21	10	1	3	35
Necrotic Ring Spot	28	2	0	3	33
Summer Patch	23	6	0	1	30
Brown Patch	3	12	2	1	18
Dollar Spot	10	5	0	1	16
Weeds	15	0	0	1	16
Anthraxnose	0	15	0	0	15
Pythium	0	8	0	0	8
Insect	7	0	0	1	8
Take-all Patch	0	7	0	0	7
Fairy Ring	2	3	0	0	5
Snow Mold	1	2	0	0	3
Rust	1	0	1	1	3
Red Thread	1	0	0	1	2
Bacterial Wilt	0	2	0	0	2
Chemical	1	1	0	0	2
Total	135	90	6	16	247

included: Fungicide evaluation for snow mold control, the effect of carrier volume on chemical controls, the sensitivity of snow molds to various chemicals, and the tolerance of creeping bentgrass, colonial bentgrass, and fine fescue cultivars to snow molds. This past season an additional 5 studies were established at these sites, which include the expansion of the tolerance of creeping bentgrass, colonial bentgrass, and fine fescue cultivars to snow molds and a study which investigates the persistence of snow mold chemicals under winter conditions.

Basal rot anthracnose trial: Thirty-six chemicals were evaluated to determine their effectiveness of control. Results from this study can be found in the Wisconsin Turfgrass Research Reports (WTRR) or several publications handled through the TDDL.

Dollar spot fungicide evaluation trial: Two studies were established at the O. J. Noer Facility to both investigate the control and the effect of carrier volume on control under a golf green management regime. Results are available for both studies in the WTRR.

Take all patch trials: Two studies were conducted this past year to look at both spring and fall fungicide application timings. Results are available in the WTRR.

Brown patch: A 20 treatment trial was conducted this past season to investigate if there were any differences in controlling *Rhizoctonia solani* or *R. zeae*. Results are available in the WTRR.

Sod plots: Thirteen sod growers from across the State have participated in this trial. This long-term evaluation was established this spring and will continue for 4 - 6 years. This year resulted in the first signs of patch diseases. Also, more valuable data has been obtained on the benefits of proper establishment and annual aerification. These results can be found in

the WTRR.

Pythium blight: The second year of this study has proven to be a hit with many chemical companies, and several of them were turned away because of limited space. The UW is one of two facilities in the United States that can provide

such results in pythium blight research. The results may be found in the WTRR, or the Summer Field Day Book.

Summer stress of annual bluegrass: Once again the value of having a bentgrass/annual bluegrass green has been instrumental in

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providing excellent data on this phenomena. The current trend in green management has led to some conditions that managers in the past did not have to contend with. But, some combinations of chemicals are proving to be very beneficial to the health of annual bluegrass maintained under 0.125 inch. The information on this study may be found in the WTRR.

Grass Roots Articles: In total the members of the Turfgrass Pathology Team have written over 12 articles for the Grass Roots this past year. Major authors included Gregos, Millett and Gaard.

WTA Newsletter reports: Several articles were written for the WTA newsletter this year by Gregos and Gaard.

Future Plans:

Starting in February, Dr. Geunhwa Jung will fill the long vacant position of turfgrass pathologist. He is committed to the continued activities of the Turfgrass Disease Diagnostic Lab and its current staffing. This will be vital to ensure the success of Dr. Jung as he has a 60%/40%-research/extension appointment. Geunhwa is already active, even before his start date. He has attended several meetings, been on a research trip to establish snow mold plots, and is actively working with members of the turfgrass team to develop future research programs. With such a heavy research appointment (60%), Geunhwa will be directing much of his attention towards basic research to support

his tenure document, and is currently interested in projects in molecular-assisted breeding and investigating variability of pathogens within a species, e.g., speckled snow mold fungus. The addition of Geunhwa to the Turfgrass Team will prove to vital in the next century as more emphasis is placed on understanding plant genomics - development of disease resistant cultivars.

The lab intends to continue on the same path that has been established over the past 5 years. The applied research program will increase in turfgrass pathology. We hope to become more of a presence in the turf industry now that we are fully staffed in turfgrass pathology. ♣

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