

TABLE OF CONTENTS

THE PRESIDENT'S MESSAGE	
Let It Snow!	3
GAZING IN THE GRASS	
What's Wrong with our Schools Now? Pesticides! (?)	4
NOTES FROM THE NOER FACILITY	
Notes from the Ninety-Eight	8
THE EDITOR'S NOTEBOOK	
Heat Wave!	10
PERSONALITY PROFILE	
Golf Course Friendships Keep Him From Retiring Too Early	15
WISCONSIN SOILS REPORT	
My Putting Green Grow-In Program ..	23
FROM ACROSS THE COUNTRY	
The Science and Management of Turfgrass Winter Injury	26
GOLF IN THE FLATLANDS	
At the Crossroads	33
JOTTINGS FROM THE GOLF COURSE JOURNAL	
Seed Savers	39
THE CUTTING EDGE	
Audubon Certification	43
SOYLENT GREEN	
The UW Turf Legacy	48
THE CUTTING EDGE	
Bluebirds, University Ridge GC 1998 .	49
TDDL	
Turfgrass Disease Diagnostic Lab - Annual Report	56
MISCELLANY	
1998 Wisconsin Golf Turf Symposium - "What You Seed Is What You Get"	58
INNER CUT	
.....	60

The artwork so skillfully portrayed on our cover by Jennifer Samerdyke is from a WGCSA sport coat crest given to me by Bill Sell many years ago to preserve for posterity. I have done so faithfully.

The symbolism is clear: the crest from the past is on the cover of the first issue of THE GRASS ROOTS with its updated format. Change most often is a good thing, and that is how we feel about the changes to this journal. They were designed to give it a more contemporary look without being trendy.

Emphasis is now placed on article titles rather than on icons. And the icons are new. So is the masthead. The copy should be more readable with a new font; each issue will be more formally organized and offer an improved professional appearance.

The constants will be the superb writing by our excellent volunteer staff. Cover artwork like you never see anywhere else in golf, humor, and news about those who are the WGCSA are all still here.

Responsibility for the new design fell to Ms.

THE GRASS ROOTS

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Samerdyke and, like always, she came through like a champion. We both hope you like the results.

*Shut in from all the world without,
We sat the clean-winged hearth about,
Content to let the north-wind roar
In baffled rage at pane and door;
While the red logs before us beat
The frost-line back with tropic heat;...
Snow-Bound
by John Greenleaf Whittier*



LET IT SNOW!!

By Scott Schaller

As I put together this President's message together, I am looking outside my office, with the window open and I see many golfers playing and enjoying our golf course. Today is the last day of November and the weather is in the high 50s. Unbelievable for this time of year. We have experienced great weather this fall, if not for the entire growing season of 1998. But it has to end sometime and that is why I say, "Let It Snow, Let It Snow!!" I don't think you could find a golfer in the state of Wisconsin that had been cheated of an opportunity to play golf this year due to weather. The 1998 golf season will be a tough one to beat.

The 1998 Symposium Committee should be commended again for their recent efforts in putting together an outstanding educational presentation on

putting Green Establishment, "What You Seed Is What You Get." Also a special **thanks** goes out to Milorganite and Alan Nees, Larry Lennert and their staffs for again putting together one of the finest turf-grass conferences offered in the country.

The winter season is relatively a quiet time on a golf course in Wisconsin, but there is plenty for golf course superintendents to do. This is the time to stay current with our profession and industry through educational offerings. I look forward to seeing you at the WTA's EXPO '99 in Madison on January 12th and 13th, also at the GCSAA Conference and Show in Orlando in early February and lastly the WGCSA Spring Business and Educational Meeting held in Fond du Lac, March 1st. 🌱

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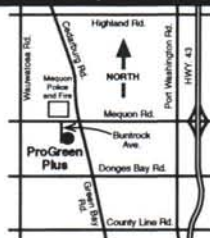
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What's Wrong with our Schools Now? Pesticides!(?)

By Dr. John C. Stier, Department of Horticulture, University of Wisconsin-Madison

Section I

"Pesticide-use ban advocated for kids' spots", read the headline in the Wisconsin State Journal last October 23. Environmental groups in Wisconsin want pesticide use banned, beginning in and around schools. Other groups have similar goals, including the State Medical Society of Wisconsin and the Wisconsin Parent Teacher Association (PTA). The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) began responding to these concerns in 1997 by obtaining a grant from the federal EPA to fund a survey to assess the extent of pesticide use in Wisconsin schools.

Surveys were mailed to the approximately 3,000 primary and secondary schools in Wisconsin during April 1998. Approximately 30% of the schools and/or districts, both public and private, returned survey results. The findings? 90% of the responding public schools reported using pesticides indoors. Seventy-one percent of the public school respondents used pesticides outdoors, primarily for weed control. Percentages of private schools reporting pesticide use were somewhat lower than public schools. The survey contained other vital information: identification of pesticide applicators (over half the applications were made by professional pest control operators, or PCOs), types of pesticides used (insecticides indoors included ant traps; outdoors the pesticides were mostly herbicides—glyphosate, 2,4-D, dicamba, MCPP, and prometon), notification practices for school staff and the public, and which schools had a pesticide use policy. Most of the schools did not have a pesticide use policy (85%) although over 50% did have a person responsible for deciding pest

control measures.

If you read many newspapers during the summer you're aware the survey results were supposed to be kept confidential, according to the agreement between DATCP and the schools. The confidentiality agreement unraveled when the Environmental Decade group sued DATCP for release of the information to the general public and the rest, as they say, "is history".

Good intentions on both sides of the issue, perhaps, but where does it go from here? During the summer, DATCP organized a committee composed of school officials and staff, a PTA representative, a toxicologist, an oncologist, parents, green industry professionals and PCOs, DATCP personnel, and UW-extension employees. A large committee, but one that so far has worked fairly well towards a common goal: developing and implementing assistance for schools to develop pesticide use policies to help ensure the safety of school children and environmental protection. The grand plan now is for a project to proceed in three phases: 1) Development and distribution of a school IPM manual, 2) Initiation of a pilot program to institute pesticide use policies in several selected schools, and 3) Broadening the program to include a multitude of schools/school districts throughout the state. The project will cost approximately \$80,000. DATCP has agreed to fund phases 1 and 2 and to at least partially fund phase 3. The three of us from UW-extension currently serving on the committee (Karen Delahaut (IPM), Phil Pelletteri (Entomology), and myself (Horticulture)) will be largely responsible for completing the three phases, DATCP having successfully completed the survey portion of the project.

During November 1998 we drafted the integrated pest

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management manual. The manual will be revised following review from the committee members. Publication and distribution is expected this spring. From spring through fall of 1999, the three of us from UW, with assistance from DATCP, will be providing education and training assistance to five schools in Wisconsin as we conduct the pilot program phase of the project. Schools will be selected which represent upper and lower income schools, public and private, in both rural and urban areas: likely sites will be Eau Claire, Madison, Stevens Point, the Fox River Valley, and the Milwaukee area. Only schools which use pesticides will be targeted. During autumn 1999 we will evaluate our pilot program and adjust our approach accordingly. Beginning winter/spring of 2000 we will provide outreach assistance to at least 25 schools and/or school districts. Each school will receive at least three visits, each visit lasting a minimum of eight hours. The manual will be available to all schools, regardless of whether they participated in the survey and/or training. Please let me know if you have a particular school or district which you would like to see on the list and I will submit it for consideration.

Section II

The national PTA supports integrated pest manage-

ment (IPM) strategies for schools for two primary reasons: 1) Elimination of health risks from potential pesticide exposure and 2) Cost-savings due to reduced pesticide usage. Good goals, but it's often difficult for persons inexperienced in pest management to appreciate the requirements of a practical IPM program. In my mind, a cooperative effort among a good toxicologist, several medical experts (oncologist, endocrinologist, etc.), a child behavior expert, and a pesticide use specialist would be required to fully determine the potential health risks of pesticide use in and around schools. As far as cost-savings are concerned, I think many outside advocates of IPM don't fully understand the components of an IPM program.

Many publications already exist on IPM for schools and other areas. The authors usually have good intentions but have seldom if ever been responsible for managing pests in actual situations. Many of the authors claim they are "environmentalists"; I would argue many of us in turf management, from golf course superintendents to landscapers, are also environmentalists—we like plants and nature and want a safe environment for our children. Most of the IPM manuals tend to emphasize "biological" controls: borax for ground ivy control, beer for slug con-



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trol in gardens, bacteria for insect and disease management, and lately corn gluten meal for control of any and all weeds. Many of these "solutions" are only partially effective at best: even when corn gluten meal levels build up sufficiently in the soil to control weeds on a pre-emergent basis, it is effective only on a limited number of weeds. With a few notable exceptions (crabgrass and dandelion), most of the weeds controlled are not even problems in managed turf in Wisconsin (bermudagrass, smartweed, pigweed, lambsquarter, etc.). Other suggestions I have heard are "Why not just pull the weeds by hand?", "Use weed whackers", and, for weeds in parking lots, "Just repave the parking lots regularly" (but what is the environmental cost, especially in terms of clean water and air, for production and use of the asphalt?). My question – Why don't turf managers write the IPM manuals?

The content of the manual we have written for the school IPM project is approximately 60% devoted to turf management, 10% for ornamentals, 10% for "varmints", 15% for indoor insect pests, and 5% for "other" areas (weed control in parking lots, natural "prairie" areas, etc.). It is different than most IPM manuals I have seen because it emphasizes basic plant care over chemical or biological pest control measures. Most of us know that if we maintain a dense turf with a good root system then weed, insect and disease problems will be negligible on lawns and athletic fields. Yet one of the greatest problems

I have sensed in the committee is the unwillingness and the lack of school funding to provide the three primary cultural practices for turf: regular mowing, fertilizing, and irrigation. For many situations, aerification is needed to manage thatch and alleviate compaction which otherwise would increase weed and insect problems. Topdressing is needed on athletic fields to maintain the crown and surface uniformity. Yet even after discussing turf management in the committee, there is reluctance and a general acknowledgement that schools will not regularly mow, fertilize and irrigate the turf. If these things are not done, no amount of scouting, monitoring, corn gluten meal or Bt are going to save the turf. Proper cultural practices are the core of IPM programs, yet the decision-makers are not prepared to spend the money on the front end: instead, money is spent for chemicals or biological controls and back-end negotiations with parents and environmental organizations. I doubt an IPM approach will offer substantial financial savings: mowing, fertilizing, scouting, monitoring, and the hiring of an educated turf manager all cost money, yet these are the items that will really allow us to reduce conventional pesticide usage, not reliance on foo-foo dust and snake oils. The real savings truly may come in decreased reliance on pesticides if proper cultural practices are funded.

We are still fighting ignorance on the part of the public responsible for controlling many of the management deci-

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sions. I have a letter on my desk from the parks director of Menasha asking for my response to a document an alderman received from the Lake Michigan group of the League of Women Voters. The document discusses ways to eliminate pesticide use in turf areas. One of the statements professes the importance of thatch to provide healthy turf and the detrimental effects thatch management practices have on the overall health of the turf! According to the document, mechanical aerification should be avoided because it "unnecessarily destroys grass plants and roots" and "reaches only the upper few inches of soil". True, grass plants and roots may be cut by aerification tines, but most gardeners and houseplant enthusiasts know the benefits of cutting roots of pot-bound plants will improve root and foliage. True, aerification only reaches the upper few inches of soil, but compaction and turf root growth are generally limited to the upper few inches of soil. Empirical evidence and research have shown for years that aerification improves turf quality by providing increased water infiltration and improved turfgrass root growth, improving turf health, which allows the turf to outcompete weeds such as knotweed and diminishes the effect of insect and disease events. Who's writing this stuff? No one claimed authorship of the four page document which was fraught with misconceptions and half-truths. It did boast some drawings of forest and

garden flowers (wild petunias, blue iris) and a large-print sidebar of a quote from Aldo Leopold I am still trying to figure out how these relate to sound turf management practices. Some municipalities in Wisconsin have banned the use of chemical fertilizers for use on turf because it ostensibly results in significant environmental problems as the nitrates and phosphates leach and run-off into water supplies. Anyone who is familiar with Dr. Kussow's research on nutrient fate and runoff from turf knows that proper fertilization actually increases turf density and decreases nutrient run-off problems. Other researchers in the U.S. have obtained similar results.

One of the ways all of us can make a difference is to be heard. Submit letters to the editor of your local newspaper. Be prepared to discuss pesticide and fertilizer use on turf when a news crew shows up at your golf course because its being targeted as a "polluter". Attend town and city meetings regarding pesticide and fertilizer use for turf. Too often we lose out on legislation, like the recent failure to substantially change posting requirements in the Ag 29 fiasco because we were too busy being "professional". Be heard! The world is run by those who SHOW UP! ♣

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Notes from Ninety-Eight

By Tom Schwab, Superintendent, O.J. Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

I'm going to use this forum to document some improvements and accomplishments of a productive year at the Noer Facility. Everyone on the UW-Madison Turf Team contributed to the improvements. Our annual Research Report, which you'll be receiving at the Turf EXPO on January 12th and 13th, will further summarize the extensive work.

The attached map names most of the studies being conducted at the Noer Facility. It shows 92 irrigated plots with 43 active projects. Twenty-three new studies were initiated in 1998. Eighteen involved major renovation of the land (shaded ones on the map). Five others were installed onto existing turf. The remaining studies on the map are either ongoing long-term stud-

ies or are proposed ones for the future. Next year will likely be another big construction year, as you'll see from the number of plots designated as future.

The map shows only four plots that are not currently used or claimed for future studies. I'm sure they will soon be claimed by the new urban entomologist, Chris Williamson, or by the new turfgrass pathologist when that position gets filled. The current turf team may quickly claim those remaining plots also. That is the reason we are trying to increase the size of the facility. We are running out of land to conduct the amount of turf research that needs to be done at the UW-Madison. Enlarging the facility will be one of the big achievements that we hope to

report on next year.

We hope to add approximately 10 acres to the 13 acres we currently own. Our discussions about this are getting pretty serious too. The last discussion had some pretty big players in attendance including UW-Madison representatives Al Fish from the Athletic Department, Dale Schlough from Agricultural Research Stations, Doug Maxwell from the College of Agricultural and Life Sciences Dean's Office, and Fred Winding from the Foundation, among others. There were also representatives from the Madison City Planning Office and Metro Sewerage District. The land near the Noer Facility is becoming urbanized. That fact combined with the need to establish a facility that will serve the needs for turf



research well into the future makes this acquisition urgent.

Getting back to the current accomplishments, one of the biggest achievements or events for the Noer Facility had to be the Summer Field Day back in August. The responses from the attendee's conference questionnaires and personal comments were that it was the most informative and organized field day ever. Professor Stier coordinated the day's events as conference chairman and Audra Anderson, WTA/Noer Facility secretary, continued to organize all the behind-the-scenes details. The rest of the Turf Team really put their hearts into it also and will use that field day as a model to continue the progress.

Other accomplishments this year were the addition of irrigation to 13 new plots that are the ones numbered C-27 through A-31 on

the bottom of the map. Also the old irrigation lines were looped to improve pressure to some of the remote plots this past year. Additionally the Noer Facility building received some improvements. Two new windows were added that made a big difference. One converted a Turf Disease Diagnostic Lab storage closet into a nice office area and the other gave Audra a professional office/reception area. Previously she conducted all of her Wisconsin Turfgrass Association and Noer Facility business from a desk in the hallway. She is also now conducting this business with a new computer that Dan Williams and Riverview Country Club just donated to the OJ Noer Facility. We're so thankful for their generosity.

Gary Gaard continues to make environmental enhancements at the Noer Facility. He achieved

Audubon Cooperative Sanctuary certification for the facility. This past year he added another prairie section to the Wisconsin Ice Age Trail that is adjacent to the facility and also added a wildlife garden, wildflower sod garden, and numerous bird feeding stations. These additions are not directly related to turfgrass but they improve our public relations and aesthetics of the facility.

Nineteen hundred and ninety-eight was very productive for the Turf Team making improvements at the Noer Facility. Next year will be another very productive year. Many turf researchers from around the country visit our facility every year telling us ours is one of the best. We're going to stay that way by continuing to make big improvements and accomplishments every year. ♣

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Heat Wave!

By Monroe S. Miller

There are some, me among them, who say Wisconsin has five seasons - spring, summer, fall, winter and Christmas. I hope your Christmas season was as joyous as ours was. My only regret is that the Christmas season, the real Christmas season, is so short.

In fact, it took until Christmas for any semblance of the winter season to arrive, making for the longest autumn for golf and golf course work in my career. It was awesome if you had any construction projects on your menu.

It would be nice to take credit for project productivity, but, alas, it was a matter of the luck that comes with good weather. In our case, we started a job on our fifth hole on the Monday before Thanksgiving, paved on December 3rd, and finished sod work on December 4th. And it nearly reached 70 degrees F on Sunday the 6th. In Madison, Wisconsin!

Over a ten day period in late November and early December, seven high temperature records were set. And the golfers played on in what was the longest season in memory. Remember, after all, it began for many of us in March. We were one to two weeks early for a start and it extended at least that many days longer than normal.

If our sense is that it was a warmer than normal year, the weather statistics confirm it. For the 35 weeks from early April through late November, Wisconsin was above normal 25 times, near normal four times and below normal six times. Spring was consistently two to nine degrees above normal, and summer temps were at

or above normal except for early June and early August/ Autumn followed the trend.

In terms of precipitation, the story was one of surplus in central and southern Wisconsin and shortages up north. Our town, at year's end, was about nine inches above the norm. The odd thing is, for the growing season, the state wide

MONTHLY RAINFALL: 1998 GROWING SEASON AND NORMAL

District	April 1/		May 1/		June 1/		July 1/		August 1/		September 1/	
	1998	Normal	1998	Normal	1998	Normal	1998	Normal	1998	Normal	1998	Normal
	Inches											
NW	1.60	2.43	3.38	3.43	4.83	4.06	1.85	3.92	3.69	4.32	2.37	4.01
NC	1.41	2.40	3.11	3.41	5.36	3.92	1.25	3.76	2.71	4.32	2.44	4.17
NE	1.87	2.59	2.43	3.41	4.96	3.72	1.10	3.38	2.88	3.74	2.86	3.95
WC	2.09	2.89	4.34	3.69	7.86	4.10	2.06	4.15	5.87	4.18	1.33	4.07
C	2.18	2.78	3.31	3.59	7.91	3.70	1.26	3.73	4.35	3.90	2.30	4.11
EC	2.74	2.71	2.30	3.02	5.25	3.39	1.31	3.14	4.47	3.64	3.12	3.75
SW	3.67	3.09	4.22	3.41	8.84	3.84	2.84	3.85	5.87	4.08	2.49	3.93
SC	4.69	3.07	4.70	3.16	6.68	3.77	2.31	3.73	4.69	3.90	2.42	3.92
SE	4.16	3.22	3.54	2.94	4.36	3.49	2.29	3.72	4.95	3.80	2.00	3.77
STATE	2.40	2.71	3.46	3.38	6.19	3.82	1.74	3.74	4.19	4.04	2.36	4.00

1/Preliminary estimates, 1998. Source: State Climatologist.

MONTHLY TEMPERATURES: 1998 GROWING SEASON AND NORMAL

District	April 1/		May 1/		June 1/		July 1/		August 1/		September 1/	
	1998	Normal	1998	Normal	1998	Normal	1998	Normal	1998	Normal	1998	Normal
	Degrees Fahrenheit											
NW	46.3	41.8	59.9	53.7	61.5	62.8	68.5	68.5	68.4	65.7	61.5	56.4
NC	45.1	40.7	58.4	53.0	60.8	61.7	66.6	66.9	66.5	64.1	59.7	55.3
NE	45.6	41.4	58.8	53.4	61.7	62.3	67.1	67.5	67.3	64.7	61.0	56.0
WC	49.8	45.3	63.2	57.2	64.4	66.4	71.4	71.2	69.9	68.3	65.1	59.2
C	48.1	44.5	62.2	56.2	64.6	65.4	70.5	70.2	69.4	67.3	63.7	58.7
EC	45.8	42.9	59.9	54.3	64.7	63.9	70.4	69.7	69.9	67.7	64.1	59.7
SW	48.4	46.4	62.4	58.0	65.5	67.2	70.9	71.8	70.2	69.1	65.0	60.6
SC	47.9	46.2	62.6	57.7	66.5	67.1	71.6	71.5	71.1	68.8	65.3	60.7
SE	46.8	45.1	60.9	56.1	65.9	65.9	71.2	71.2	71.5	69.3	66.1	61.5
STATE	47.0	43.4	60.7	55.2	63.4	64.3	69.4	69.4	68.9	65.8	62.9	58.1

1/Preliminary estimates, 1997. * Normal is defined as the 30-year average for the years 1961-90. Source: State Climatologist.

COMPARATIVE TEMPERATURE AND PRECIPITATION DATA

District	Average Temperature						Total Precipitation					
	June - September						April - September					
	Normal	1994	1995	1996	1997	1998 1/	Normal	1994	1995	1996	1997	1998 1/
	Degrees Fahrenheit						Inches					
NW	63.9	64.1	65.2	63.2	63.2	65.0	22.2	23.1	23.4	22.6	21.9	17.7
NC	62.6	62.6	64.4	61.8	61.9	63.5	22.0	22.9	22.3	21.1	23.1	16.3
NE	63.7	63.4	65.2	62.5	62.5	64.3	20.8	22.5	20.0	21.9	20.9	16.1
WC	66.9	66.4	69.1	66.2	67.1	67.7	23.1	27.4	22.1	17.6	24.0	23.6
C	65.7	66.6	68.6	65.7	65.7	67.1	21.8	25.5	21.7	19.1	21.2	21.3
EC	65.7	65.8	68.6	65.3	65.1	67.3	19.7	19.5	16.7	18.2	20.8	19.2
SW	67.8	66.9	69.5	66.4	66.7	67.9	22.2	24.8	21.7	19.5	23.3	27.9
SC	67.9	67.4	69.7	66.5	66.5	68.7	21.6	23.0	22.4	21.6	20.4	25.5
SE	67.6	67.5	70.1	66.8	66.5	68.7	20.9	17.8	21.0	21.5	20.6	21.3
STATE	65.3	65.2	66.8	64.4	64.6	66.2	21.7	23.4	21.6	20.5	22.1	20.3

1/Preliminary estimates, 1998. Source: State Climatologist

Wisconsin Weather						
Week ending 1/	Temperature 2/			Precipitation 3/		
	High	Low	Avg.	For the week	Since Nov. 30	
	Degrees F			Inches		
Dec. 13	52	14	32	0.1		0.4
Dec. 20	50	9	29	0.1		0.5

1/As of 7:00 a.m. 2/Temperatures represent the state average high, low, and average for the week. 3/Liquid equivalent. T=trace.