

The Grass Roots

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May/June 1995

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About the Cover:

"I had a dream..." that O.J. NOER stopped at his namesake for a tour of the building and research plots before teeing it up at his alma mater's golf course, University Ridge. He was granted special permission to use his own West Point golf cart!

Cover design and artwork by designer and marketing specialist Jennifer Eberhardt.

"Everybody needs beauty as well as bread; places to play and places to pray in, where nature may heal and cheer, and give strength to body and soul alike."

— John Muir, from
*Montello, Wisconsin
and the University of
Wisconsin-Madison*

Table of Contents

President's Message	3
The Editor's Notebook	5
Gazing In The Grass	10
Personality Profile	13
The Cutting Edge	17
Jottings From The Golf Course Journal	20
"Hiring & Firing" At Spring Business Meeting	23
Editorial: Communicating With Your Members	24
Tales From The Back Nine	27
GCSAA Conference Tops Expectations!	32
From Across The Country	38
The Superintendent's Library	41
The Cutting Edge	42
Wisconsin Soils Report	44
Notes From The Noer Facility	47
THE GRASS ROOTS Article Index	49
Golf In The Flatlands	54
Editorial: Setting A Tone For The Next Generation Of Professionals.....	57
Wisconsin Pathology Report	58
Editorial: Conference Comments And Questions	60
Caring For And Observing Our Wildlife	62
Editorial: He Did It With Style	63
The Surrounds	64



Front row (Left to Right): Mark Kienert, Mike Semler, Scott Schaller, Mike Handrich. Back row (Left to Right): Kris Pinkerton, Dave Smith, Joe Kuta, Dave Brandenburg, Bruce Worzella.

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OPENING DAY

By Michael Semler



By the time most of you read this, you will likely have experienced the opening day at your golf courses. Since the golf course I manage is scheduled for opening on June 1 of this year, we still have a few weeks to go.

I think that for all superintendents, opening day is traditionally the biggest event in the golf season. It may not be the most enjoyable event because the pressures to get the course open can be quite substantial; nevertheless, it is still a lot of fun.

This year will be an one of the most enjoyable opening day events for myself. The reason is that, for the past two years, construction and preparations have been under way for this opening. In looking back on the past two years there were times I felt that the project would never be completed. At times, the amount of earthwork that took place appeared astronomical. The meticulous staking and grading, and then regrading, have

moved that mountain of soil into shapes and forms that now make golf holes. The seed bed preparation seemed to go on forever. Rains, which in years past would bring a smile to any golf course superintendent, only brought a string of curses. Finally, when the last of the seed was sown and the sod was laid, a large party was held by the golf course staff in celebration of the completion.

Now that the construction phase is complete, I wonder where the past two years have gone? I know my wife and son feel the same way, only for different reasons. I can now look back and feel a sense of deep relief. I feel relief because the slopes have been stabilized with a cover of turf. I can finally experience a day without 8 irrigation cycles and the added problems that go with it. Because the 1 million or more rivulets caused by the rains have been repaired. (or at least 900,000 of them). And finally, I feel relief because we can show off what

the last two years of difficult work has accomplished.

No one can come close to describing what constructing a new golf course involves; you have to experience it. The trials and tribulations seem to take a heavy toll on the spirit of the workers. Yet they continue making slow and steady progress, until finally, by some miraculous happening, the golf course is finished and ready to play.

I really do believe that this will be one of the more enjoyable opening days I will experience. Although I must admit, that one of the true pleasures of the past two years has been the absence of golfers, and the ability to enjoy all 230 acres for myself. Now that is an experience we should all get to have!

However, like every opening day on every golf course, a whole new set of challenges await me and the staff, and it is time to begin preparing for them. 🌱



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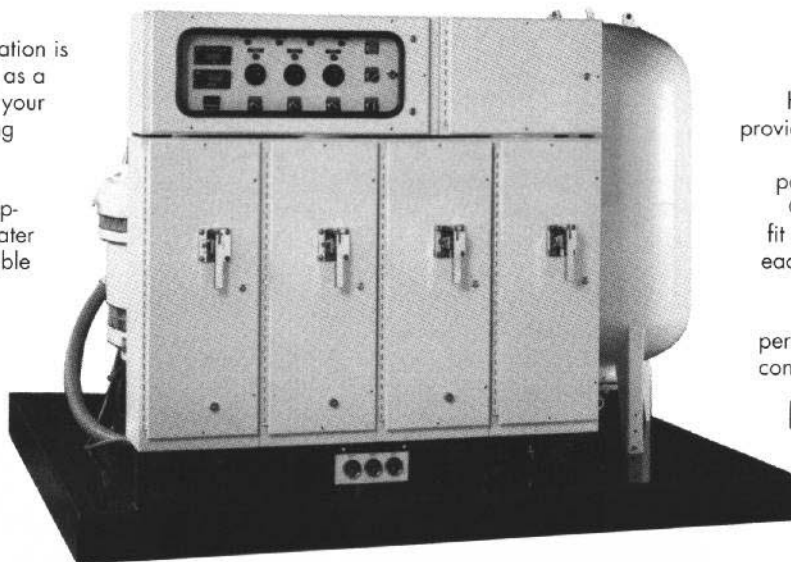
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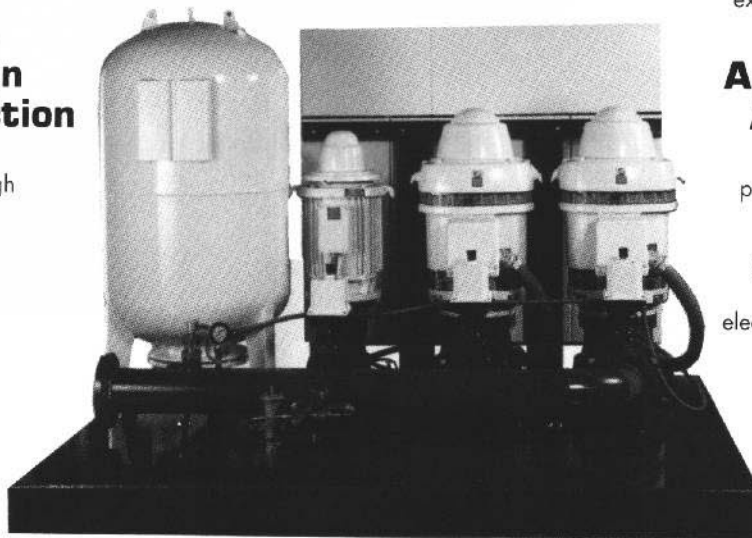
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MOSTLY, IT'S TOO GOOD TO BE TRUE

By Monroe S. Miller

What are we going to do if we do not have the weather to gripe about? The long and late autumn, the snowy, short and almost balmy winter, and the incredibly early spring couldn't have been scripted much better. Throw in the early (record setting on my golf course) opening day and the championship conditions of putting greens, and some of us are left with nothing to complain about! Add in the budget cutting events in government at all levels and you get to thinking we are on a big time roll. Happy days are here, despite that northern European tendency to feel guilt when good luck befalls us. You know, "what did I do to deserve this?" and "this cannot last, can it?"

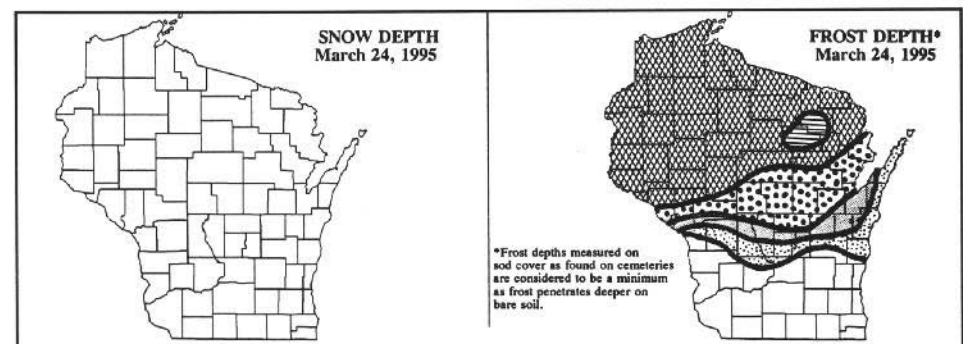
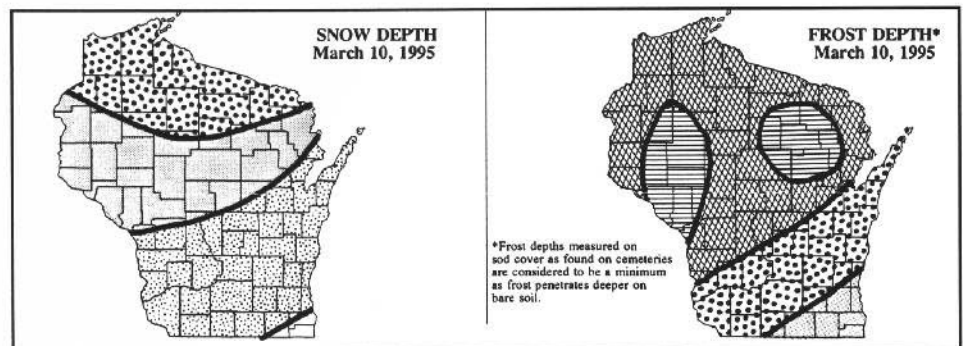
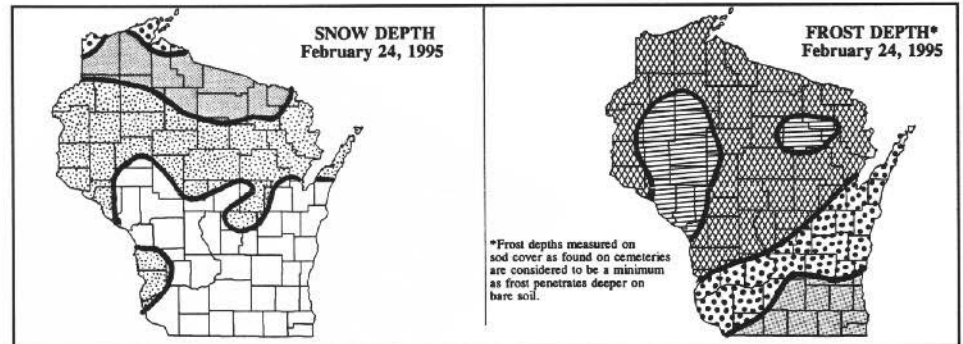
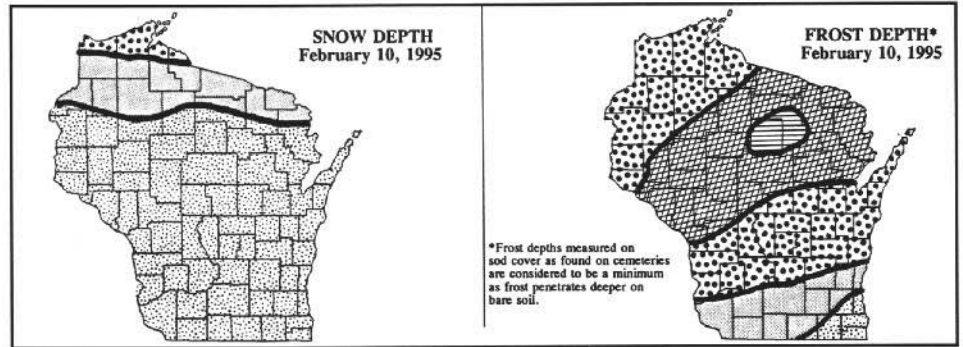
The only downside of a mild winter and early spring, in my view, will be the renewed hand wringing about global warming. I am not convinced that it is a problem.

Studies of some standing show natural weather cycles occurring about every 18 years, and it sure seems to be difficult to separate out man made efforts — like global warming — from that natural cycle. The greatest increases in temperatures in this century happened between 1920 and 1940; I wonder if back then the seasons like we have had of late were considered harbingers of pending disaster?

Those details are beyond me and for now do not matter. I am too busy enjoying the good weather.

If part of our job with THE GRASS ROOTS is keeping track of significant events and features of each golf year, then data from the Wisconsin Agricultural Statistics Service is an important part of that job. The dated maps below follow the weather of winter's end and spring's early and wonderful beginning.

(Continued on page 7)



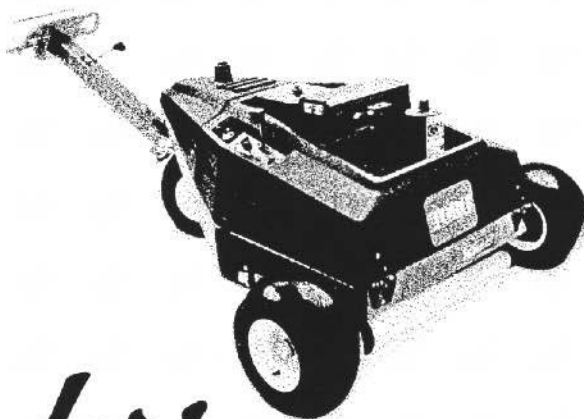
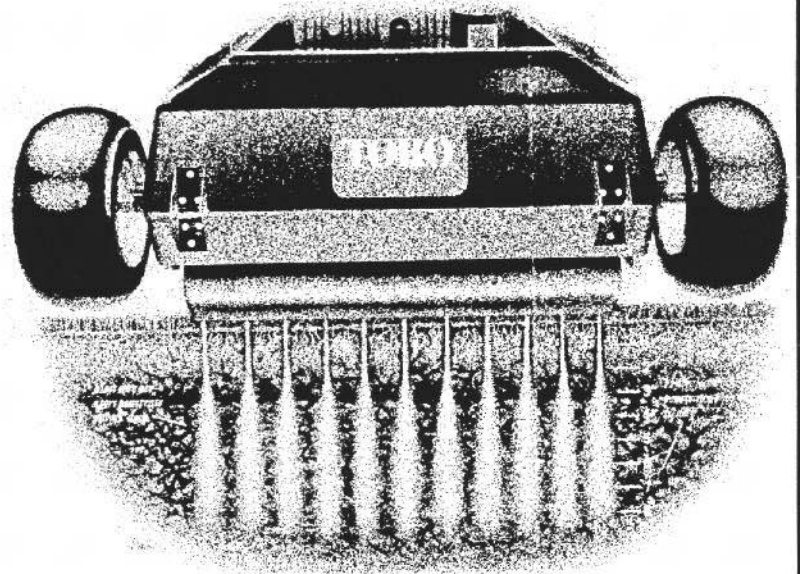
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(Continued from page 5)

The Wisconsin Agricultural Statistics Service offers up an excellent review of the 1994-1995 winter each year. Their own records coupled with information from State Climatologist Pamela S. Knox give a good retrospective of that season that was so kind to us this year.

As in the 1993-1994 season, the past winter began late. Besides one snowstorm in the middle of December, little snow was seen in December or January. The snow in December quickly melted from the unusually mild temperatures. Both the snow and frost depths were significantly behind normals until mid-January. The only exception to that was the snowstorm in mid-December. That storm dropped snow so that the total snowdepth for the state was 4.2 inches, only 0.1 inches below normal.

Cold temperatures then set in and the frost level increased to near normal depth but the snow cover was about 1/3 of normal. Throughout the remainder of January and into February, cold temperatures continued to send frost deeper into the ground. By late February, the frost depth was ahead of the normal. While snow levels were still well below normal, a warm week in late March melt-

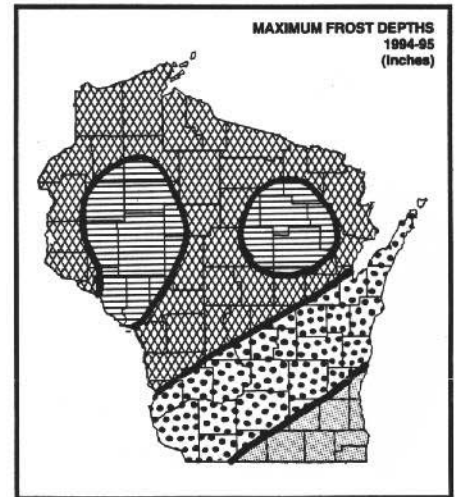
ed all the snow and brought frost levels below normal.

Snow Depths

One big snowstorm in mid-December had the snow cover on a normal pace, but warm temperatures melted the snow quickly. By late-December the snow depth was only 0.8 inches as compared to a normal of 6.0 inches. The snow depth continued to be significantly below normal until mid-March. Snow showers in mid-March brought snow depths to 7.6 inches, 0.4 inches above the 33-year normal average. Temperatures in the 70s the next week melted all the snow across the state and brought snow depths down to zero.

Frost Depths

Warm temperatures in December kept frost depths well below normal. In late December the frost depth was at 2.1 inches, 5.4 inches below the normal. Frost levels increased significantly from late December to mid-January. Frost levels increased slightly each week until mid-March when it reached a level of 22.2 inches, 6.2 inches above normal. Warm temperatures dropped the frost level 13.7 inches over the next two-week period to 8.5 inches.



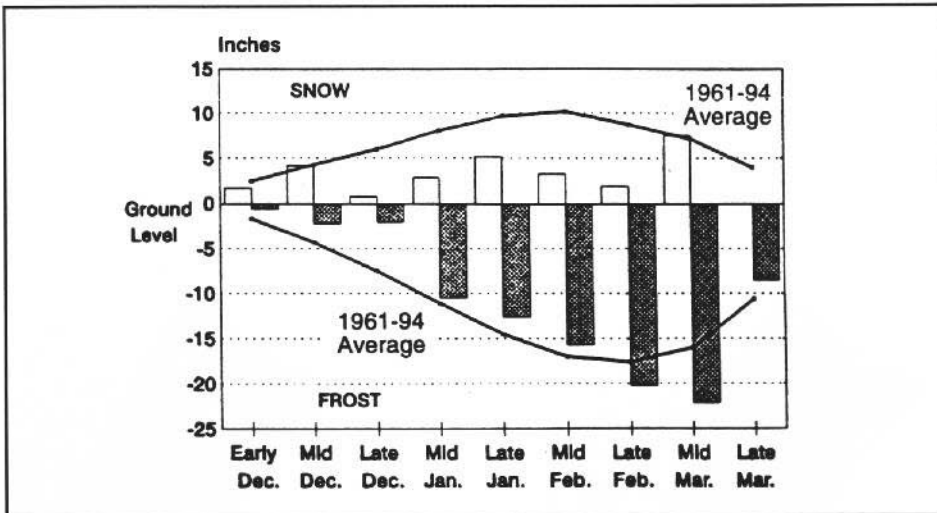
Frost depths measured on sod cover as found on cemeteries are considered to be a minimum as frost penetrates deeper on bare soil.

Temperature and Precipitation

The October – March average temperatures were above average as reported by the five major reporting stations in Wisconsin (Madison, Milwaukee, Green Bay, LaCrosse and Duluth). Temperatures were well above normal for each month and in each reporting station. The only time the temperature was below normal was in February at the Duluth, Minnesota station.

Total precipitation for the five major reporting stations was below normal for the months of October – March except for Duluth. This station was above normal in precipitation by 0.06 inches, mainly due to the 3.4 inches of above normal snowfall. The Madison station was 11.8 inches above normal in snowfall, but 1.57 inches below normal for precipitation. This is a result of the more precipitation being in the form of snow instead of rain. The snow received had a low moisture content.

1994-95 Snow & Frost Depths Compared to Average & Previous Historical Records



Total Precipitation and Departure from Normal, Water Equipment Inches, Winter 1994-95

Location	October		November		December		January		February		March		Six months	
	Total	Dep.	Total	Dep.	Total	Dep.	Total	Dep.	Total	Dep.	Total	Dep.	Total	Dep.
Madison	0.65	-1.52	2.77	0.68	1.08	-0.76	2.12	1.05	0.06	-1.02	2.17	0.00	8.85	-1.57
Milwaukee	0.78	-1.63	3.31	0.80	1.14	-1.19	2.14	0.54	0.25	-1.20	1.76	-0.91	9.38	-3.59
Green Bay	0.98	-1.25	1.43	-0.73	0.34	-1.19	0.65	-0.50	0.39	-0.64	1.92	-0.13	5.71	-4.44
La Crosse	1.99	-0.21	2.05	0.32	0.71	-0.56	0.73	-0.20	0.38	-0.52	2.78	0.80	8.64	-0.37
Duluth	2.27	-0.22	2.53	0.73	0.33	-0.91	1.38	0.16	1.04	0.24	1.97	0.06	9.52	0.06

Source: Pamela S. Knox, State Climatologist.

Wisconsin Average Precipitation October 1, 1994 - March 31, 1995 1/			
District	Total	Departure from normal	Percent of normal
Northwest	7.06	-2.19	76
North Central	6.92	-3.00	70
Northeast	7.24	-3.22	69
West Central	7.57	-1.65	82
Central	7.14	-3.01	70
East Central	7.65	-3.25	70
Southwest	7.56	-2.34	76
South Central	7.86	-2.89	73
Southeast	9.27	-2.22	81
State	7.41	-2.62	74

1/Preliminary. Source: Pamela S. Knox, State Climatologist.

The weeks of March 6 and March 13 were tremendous for turfgrass education in Wisconsin.

It started out with the WGCSA spring business meeting. I echo Rod Johnson's compliment to the officers and directors on a job well done. The only disappointment was the modest turnout.

I think I know why more didn't attend — lawyers were the featured speakers. You know full well if a program features three attorneys, the subject is not going to be putting green management or sand bunker reconstruction. More than likely the discussion will be about a topic considerably less interesting, at least to golf course superintendents.

But not less important. Personnel policies, especially hiring and firing procedures, are touchy issues these days. The speakers did a superb job of updating and informing those smart enough to attend.

Despite being very sick, Frank Rossi drove to Fond du Lac to report progress on the WGCSA-sponsored research of putting green management underway at the Noer Research Facility. Frank was probably told two times by every person at the meeting how happy we are that he is staying in Wisconsin.

A good business meeting is a short business meeting, and President Semler kept this one organized, on track and on time. There was no rea-

son anyone should have been late for supper!

The USGA held a regional meeting at Maple Bluff CC on Thursday, March 9th. Jim Sweeney put the program together with golf course superintendents, clubhouse managers, golf pros and club officials in mind. Strong emphasis was put on the environmental issues and environmental research the USGA is sponsoring. Green Section staff on the program included Jim Snow, Bob Vavrek and Bob Brame. Heidi Olson, USGA Women's Regional Affairs manager for the norther region, spoke about the ways and importance of making women feel welcome on our golf courses.

Jim Sweeney talked about the regulatory role of the USGA, critical to golf's integrity. And Dr. Frank Rossi wrapped up the day with a lecture on grass selection. Gene Haas and I had the easiest jobs — moderating the two excellent sessions. If attendance is an indicator, Jim selected some great topics of discussion. About 100 were at Maple Bluff for the day.

All reports that came back to me were highly favorable. Thanks to all the USGA people for a job well done.

The next week, on March 15th and March 16th, Reinders hosted their 12th Turf and Irrigation Conference and Equipment Show. One had to wonder which was the toughest for Ed Devinger to handle — the lousy winter weather

which makes travel nearly impossible, like two years ago, or the gorgeous days like this year when the temptation for WGCSA members was to stay home and get ready to open. Ed said 'give me the good weather every time!'

Fact is we were having days with high temperatures 30 degrees above the normal. It was so warm that on the 14th Mike Handrich opened Racine CC for walkers! That's early!

The Reinders show was great. Dr. Joe Vargas has been on every program — 12 in all over the past 24 years. I was glad for the chance to visit with him, ask my list of specific questions (rates, timing, materials, etc) and listen to him and Wayne Otto chew on matters around the midwest. He autographed the books of his I have and gave two really good lectures.

Bill Ratajczyk presented a good refresher and update on aquatic weed control. Phil Pellitteri's lectures are a "can't miss" prospect and Wayne Kussow's ever-growing expertise on USGA spec greens was offered and useful. From 9:15 a.m. until 3:30 p.m. in three different rooms, there was more to learn than one person had time for. The new information given by Joe Becker (D & B Sales, a GRASS ROOTS advertiser) was worth the price of admission.

All in all, the 1995 Reinders Conference was a winner for the Wisconsin golf turf industry.



One of the most popular UW-Madison staff members — Phil Pellitteri.



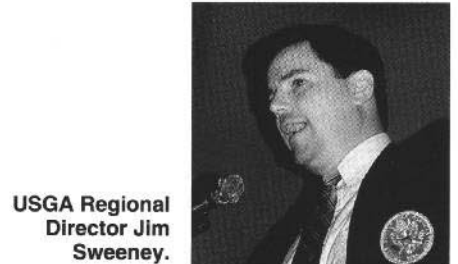
Professor Joe Vargas, in Milwaukee from MSU for every one of the 12 Reinders conferences.



The boss himself — Ed Devinger.



On the day of the USGA Regional meeting, Gene Haas wore a blue jacket in lieu of the red coat we are used to seeing.



USGA Regional Director Jim Sweeney.



Showtime!

The USGA meeting at Maple Bluff CC was the second of 17 similar meetings Jim Snow will present. Who better to discuss environmental matters than the Green Section's director?



The true Extension Scientist — Dr. Frank Rossi in front of an audience talking about turfgrass issues.

I'm not certain if this is a confession or a clarification. Either way, here it goes.

Stories you read in *Tales From The Back Nine* are just that — stories. For years I have wondered why all golf fiction is about the game when there is so much happening on a golf course and in the golf course shop. Our places of work reflect life itself — I wish John Steinbeck had grown up around a golf course and worked on a course staff somewhere rather than the farm fields of the Salinas Valley in California. There might have been books about us instead of the farm workers he knew and remembered.

I have seen only a few really good pieces of golf course fiction in our popular literature. Twenty or so years ago there was a great story in THE NEW YORKER. Of course, the author had worked on a golf course and knew of what he was writing. Maybe that, in fact, is the reason for the dearth of that kind of writing — golf course summer employees go on to become golf course superintendents, lawyers, architects, doctors and engineers. Very, very few become writers.

So I decided a couple of years ago to try myself to write some golf course fiction stories. And all I do with my pencil is try. I have no — none, zero, zip — training, only the interest to make an attempt. Most attempts are amateur and pretty feeble. That's why I was so surprised and pleased that lots of people thought I actually had made the trip to Scotland as a result of reading the ANCESTORS story in the March/April 1995 *Tales From The Back Nine*. Especially gratifying was a note from Geoffrey Cornish, a phone call from Stan Zontek and a scolding from Len Sosnowski, my boss for six years ("why didn't you tell me you were going to Scotland?").

The fact is I have never been to Scotland. The story I wrote was fiction.

You could call it historical fiction, I guess. I read extensively for two months about Scotland, everything from Tulloch's book *Old Tom Morris and Darwin's Golf Courses Of The British Isles* to John Kenneth Galbraith's *The Scotch* and Michelin's *Guide To Scotland*. In between were a couple dozen others. I think I visited every Madison bookstore and looked at the photos in every coffee table book in this town about Scotland so I had a visual image before I started to write my story.

The parts about my ancient relatives are all true and I simply wove them into this travel story.

Two other things were extremely helpful. Gavin Inglis, the bar manager at Blackhawk, is Scottish, born and raised in Glasgow and educated (B.A. and M.A.) at the University of Edinburgh. I spent time — hours, actually — asking him questions, getting help with dialect, and soaking up the essence of his wonderful, witty and bright Scottish personality. He also proofread the copy for me. He is a great guy who was a big help in making my story more authentic and credible.

The other helpful item was a huge topography map of Scotland I had at hand when reading. Really, I feel as though I have been to that country. Roads, mountains, lakes, villages, shorelines and golf courses took on a reality when I read a paragraph and then looked at this huge map.

And let's give credit to Jen Eberhardt; her splendid and realistic cover added to the sense of reality.

It was fun to do, although it took a lot of time.

So I beg of you this: remember "tales" equals fiction. Any resemblance between characters I write about and people you know is purely coincidental. The places around Wisconsin may be real but the golf courses are from my mind and are not intended to represent a real course. If one does, it is unintended and accidental. I am not smart enough to figure all that out and keep it straight.

I do, however, have a master list of recurring characters, their courses and towns, family details, and the like. This record-keeping is for consistency sake from issue to issue, but that is as deep as it goes.

Summer is almost here, and the hot weather is not only sometimes hazardous to the health of grasses but to us and our staff as well. That is particularly true on those hot AND humid Wisconsin summer days.

When the humidity is high we don't cool off as quickly as we would at a lower humidity. Sweat doesn't evaporate so your heart beats faster in an attempt to increase circulation and get more blood to the skin surface. Oftentimes people faint because the body is saying to you, essentially, "I want you horizontal so it will be easier to pump blood than it is while you are standing and vertical." Down you go.

In anticipation of those inevitable hot and humid days, below is the Heat Stress Index chart from the National Weather Service. You might want to keep it handy as a reminder not to send a crew out to shovel sand when the temperature is nearing 90 degrees and the humidity is moving over 80%. It could be disastrous.

		Actual temperature										
		70	75	80	85	90	95	100	105	110	115	120
Relative humidity	0%	64	69	73	75	83	87	91	95	99	103	107
	10%	65	70	75	80	85	90	95	100	105	111	116
	20%	68	72	77	82	87	93	99	105	112	120	130
	30%	67	73	78	84	90	96	104	113	123	135	148
	40%	68	74	79	86	93	101	110	123	137	151	
	50%	69	75	81	88	96	107	120	135	150		
	60%	70	76	82	90	100	114	132	149			
	70%	70	77	85	93	106	124	144				
	80%	71	78	86	97	113	136					
	90%	71	79	88	102	122						
	100%	72	80	91	108							

* All temperatures in degrees Fahrenheit

Danger zone: highlight area between 90-130 degrees apparent temperature. Sunstroke, heat cramps and heat exhaustion may occur with prolonged exposure and physical activity.

If you haven't gotten your new directory yet, here is Jim and Lois Latham's new address:

Jim & Lois Latham
P.O. Box 587
Whitney, TX 76692

There was a nice article about Jim in the March/April 1995 issue of GOLF JOURNAL. Look it up.

The news about Bill Sell's massive heart attack on March 2 travelled around Wisconsin very quickly. He was in the hospital for 15 days, ten of them in intensive care. He called me on March 20 from home and didn't sound like the guy we know. His voice was weak and he said he was only able to walk a short distance down the hallway.

But I told Bill that if anyone could make the most of a tough situation, he was the one. Let's help him out — drop him a line with some news and a word or two of encouragement. He will appreciate it.

Raise your glass in a toast to the good winter and spring season and lower your head in a moment of prayer for a good summer season. Best of luck to everybody. 🍷



The Science of Golf: What a Superintendent Needs to Know

By Dr. Frank S. Rossi
Department of Horticulture
University of Wisconsin-Madison

Perspective

As I recall my first appearance in the Grass Roots, I remember commenting that one either enters the golf course management profession through the maintenance shop or the pro shop: love for the land or love for the game. In my case it was clearly love for the land, yet I remain fascinated with a game for which people develop such passion. I am pleased to write that I have found some answers—the science of golf.

Science by definition is “a systematic accumulation of knowledge through study or practice”. My personal definition adds “thinking about the complexities and subtleties of a vocation”. Therefore, I am captivated when I encounter information that systematically probes the various aspects of my profession. Recently, I have been reading the *Proceedings of the World Scientific Congress of Golf* held last summer in St. Andrews, Scotland. It contains 92 different papers and over 600 pages covering the world of golf including the golfer, the equipment, the golf course and finally the game.

The essence of the *Proceedings* is wonderfully outlined by Mr. Frank Thomas, the technical director of the United States Golf Association (USGA). Mr. Thomas writes, “golf is one of the few activities which allows us to satisfy a subconscious urge to evaluate ourselves.” He continues to suggest that golf allows us to “periodically take stock of ourselves through feelings of humility.” Still, one “derives an inner warmth from achieving their goals” which lies at the core of the passion. Without knowing it, Mr. Thomas describes for us who enter through the maintenance shop, the feelings that settle inside us when our course is prepared to our satisfaction for all to enjoy.

The Golfer

As I read through the *Proceedings*, I kept asking the question, “how does this relate to the golf course superin-

tendent?” Would the respiratory pattern during the golf swing or the analysis of Tom Watson’s play at the U.S. Open over the last 13 years impact course maintenance? (by the way, Watson’s lack of competitiveness at major tournaments has long been thought to be a result of poor putting. Yet, statistically analyzing his 3719 shots during the Open we find it is a decline in his tee to green play). However, articles on the psychological aspects of a golfer’s performance does provide some useful insight.

Psychology and Maintenance. If a typical round of golf is played in 4 hours with 90 shots and 20 seconds for each shot, then golf is only “played” for about 30 minutes. The remaining 3.5 hours is spent thinking about performance, but more likely it is spent enjoying the beautiful surroundings that are under our care. The article continues to present in-depth discussion relating optimum performance to the golfer’s ability to focus on the internal environment (goals, practice, preparation and analysis) and avoid expending energy on the uncontrollable external environment (weather, course conditions, opponents). In other words, the golfers most critical of course conditions could be considered engaged in a violent struggle to mentally master the game.

The best players direct attention to internal concerns that determine performance. These ideas provide support for superintendents to focus course maintenance on consistency, maximizing the challenge of each hole and maintaining a visually appealing landscape. This information also suggests that there is a strong correlation between how much someone complains and how well they are playing—no surprise here.

A study was conducted to evaluate the golfer’s ability to read greens. The conclusion was that poor putting performance was a result of an inability to determine the break in a green. Data

was collected after the golfers under study attempted the same putt 6 times. The question in my mind remains, “how do most golfers determine putting green quality?” Criticism of functional performance such as speed, grain and resiliency must be related to more theoretical psychology than reality.

The Golf Course

With an appreciation for what goes on inside a golfer’s head and how it might explain some issues of golfer expectations, I was interested in the section that discussed the science of the course. Of the 20 articles in this section 50% were from the United States (US), with the next most (30%) from the United Kingdom (UK).

Ball Roll and Ball Impact. Stephen Baker of the Sports Turf Research Institute in the UK presented an article that relates directly to the WGCSA/WTA sponsored “Putting Green Management Systems” research. Dr. Baker discusses the influence of management factors on the playing (functional) quality of putting greens. Estimates for professional players indicate that 66% of all golf shots involve an interaction between the ball and the golf green, either as an approach shot or a putt. It is no surprise then that when the greens are in rough shape, the golfer’s perception of the course can be negative.

The interaction of the ball and the surface can be subdivided into ball roll (green speed) or ball impact on the green. There is considerably more information on the influence of management on ball roll than on ball impact. However, large gaps in the effects of wear, thatch and verticutting on ball roll still exist with only a few studies to support management decisions. Ball roll is less influenced by rootzone materials, except in wet conditions, than is ball impact, which is strongly influenced by rootzone materials. The processes of ball impact are more complex and relate to resiliency characteristics, surface