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ABOUT THE COVER

Our cover artist Beverly Bergemann sketched this cover featuring the 16th hole at Eau Claire Golf and Country Club, host of the 2008 Wisconsin State Open and the 7th hole at Old Hickory Golf Club host of the 2008 Wisconsin State Amateur.

"If you are patient in one moment of anger, you will escape a hundred days of sorrow."

Chinese Proverb - As we enter the challenging part of our season it is important we treat others and ourselves with respect by keeping this simple proverb in mind.

THE GRASS ROOTS

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A Defining Moment

By **Dustin Riley**, Golf Course Superintendent, Oconomowoc Golf Club



The By-Laws of the WGCSA state: "The purposes of this Association are: to promote research and the interchange of scientific and practical knowledge relating to the care of golf courses and turfgrass operations thus bringing about increased prestige for this association and its members, as well as for the occupation of golf course supervision in general, including the production, maintenance and improve-

ment of turfgrass; to encourage cooperation with other associations and organizations whose interest parallel or compliment those of this association; and to promote justice, benevolence, and education to and for its members." The WGCSA Creed reads: "We the members of the Wisconsin Golf Course Superintendents Association depend upon the unity, as well as the professionalism of our membership, to cultivate and maintain superior golf turf as well as golf atmosphere."

Both of these statements have provided great guidance of this Association since its inception. Over the 78 years of existence, the members of this Association have evolved and adapted to the changes in our industry. Golfer expectations, technological advances, environmental sensitivities and straining economy are several of the influences which have changed our roles as golf course superintendents. These influences have required a re-defining of our job descriptions and our importance to the success of the game of golf. In a GCSAA survey, it has been discovered that 87 percent of those surveyed would play and return to a golf course that was in good condition rather a course that was more difficult but not in as good of condition. In essence better conditions are more important than difficulty or even status of the course, hence our importance.

As the Board of Directors investigates the potential benefits of hiring a Chapter Executive Director, we are accepting that our Industry will continually change and evolve. Therefore, in order to adapt to those changes, we must evaluate how well the current Association's activities reflect the concerns and needs

of the membership. As we continued through this Chapter Executive Director process we learned that the Association was lacking a defined direction to serve these concerns. After several lengthy gatherings, the Board of Directors has developed a Mission and a Vision statement that will provide guidance to develop goals that will better serve the membership. The Board is proud to present:

Mission Statement: The Wisconsin Golf Course Superintendents Association is committed to serve each member by promoting the profession and enhancing the growth of the game of golf through education, communication and research.

Vision Statement: The Wisconsin Golf Course Superintendent Association is dedicated to increase the value provided to its members and to the profession by:

- Enhancing the professionalism of its members by strengthening our role as a leading golf organization in the state.
- Growing and recognizing the benefits of a diverse membership throughout Wisconsin.
- Educating and promoting our members as leaders in environmental stewardship.
- Offering affordable, high value educational programs at the forefront of technology and service.
- Being key to enjoyment and the economic success of the game of golf.

The Mission and Vision statements will allow future Board of Directors the opportunity to review and alter as necessary to reflect the latest changes to our industry.

In addition, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis was performed to identify the WGCSA strengths, weaknesses, opportunities and threats. Goals can now be developed to reflect those concerns identified in the SWOT analysis. This process was very eye opening and accomplishing these steps is very rewarding. However, utilizing these results will help the WGCSA to better serve the membership, which is our mission. 🌱

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Restoring Greens After Winterkill: There's Always Hope!



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

The winter of 2007-08 was not nearly as hard on putting greens as the winter of 2004-05, but many courses still suffered significant damage. In some cases the damage was confined to specific biotypes of *Poa annua*: one plant, or patch, would die while another right next to it survived fine. In both winters fairly similar situations occurred but minor differences resulted in much less kill this year than in 2004-05. In 2005, a January thaw was accompanied by one and one-half days of rain over frozen ground which immediately turned to ice that stayed until mid-March. In 2008, the January thaw occurred, but the ground had usually never frozen and there was less rain, so ice sheeting was much less than in 2005. Consequently only the weakest biotypes of *P. annua* died. Additionally, many courses may have had less *P. annua* in 2008 than in 2005 because the 2005 winterkill removed so much *P. annua*.

In any case damage was still sometimes sufficiently severe that putting greens coming into the playing season this past month had unacceptable quality. Superintendents had several options: 1) do nothing, and hope that bentgrass would spread into the killed patches or that *P. annua* would quickly germinate and fill in, 2) Verticut or aerate with the intention of cutting bentgrass plants and stimulate stolon development, 3) hand-seed killed areas, 4) slit-seed affected areas on greens, or 5) place living bentgrass plugs cut from a nursery into the worst patches. No single option was best for all situations; instead, the best course of action often depended on the severity of the problems and the resources at hand (primarily labor and equipment).

Some of our politicians might have chosen hope over other options. Many superintendents, however, felt compelled to do something to improve the situation (I'm sure hope was still in their minds as well). As I was looking at a course and discussing the situation with the superintendent this spring, it occurred to me that we don't really know how well verticutting truly stimulates bentgrass spread on putting greens. The hypothesis is that severing stolons from the mother plant encourages them to develop new plants. Stolons that remain attached to the mother plant can still develop new plants but perhaps not at the same rate as unattached stolons. In Kentucky bluegrass, suppression of bud development appears to be controlled by hormones within the tiller (Nyahoza, 1974) and perhaps by the mother plant. The suppression of stolon development by mother plants would likely be

a survival mechanism: suppression of buds closest to the mother plant decreases competition between mother and daughter plants while buds appearing further away from the mother plant on the same stolon would be less likely to compete for space and resources and consequently not be suppressed by the mother plant.

We do know tremendous variation exists in stolon development, both number and length, depending on the variety of creeping bentgrass (Kik et al., 1990; Cattani, 1999). Dr. McCarty's group in South Carolina has shown that verticutting and aeration reduce organic matter development in bentgrass putting greens compared to topdressing without cultivation (McCarty et al., 2005; McCarty et al., 2007), but stolon development *per se* was not measured. We also neglected to measure stolon development *per se* during our investigation into thatch and organic

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matter development of the A and G series bentgrasses (Stier and Hollman, 2003). I have seen tremendous stolon growth of bentgrasses, sometimes approaching 12 inches growth per year, but this has been in tall cut turf or in open areas at fairway and greens height. I rarely have seen much in the way of stolons in dense putting green turf. I suspect competition between plants inhibits stolon development. Clearly one of us professors needs to look into verticutting and stolon development on greens.

Seeding is a time-honored way to increase turf density. While introducing seed into dense turf rarely allows the introduced seed to develop into new plants (Kendrick and Danneberger, 2002), germination can occur in 5 to 10 days in the absence of competition from other plants. While he realized intraseeding into an existing bentgrass turf provided little chance for new seedlings to develop, the superintendent I was visiting this spring asked me if it was possible to build up a creeping bentgrass seed bank that would be able to compete against the native *P. annua* seed bank. Interesting idea: Dr. Brian Horgan (Minnesota) and Dr. Frank Rossi (Cornell) have both shown constant intraseeding into sports turf areas helps keep decent turf on the fields. However, it's not clear if their work was really building a seed bank or providing a constant source of new seed to germinate in bare areas.

Building a seed bank with creeping bentgrass so it can out-compete *P. annua* may be tough. In one study of a golf green, *P. annua* seed numbers in the soil fluctuated from 2,788 seeds per square foot in the autumn/winter to over 19,500 seeds per square foot in the spring (Lush, 1988). Bentgrass seed numbers were just under 300 per square foot. My graduate Mark Garrison is investigating the potential of turfgrasses to be

invasive: so far he's found that only about 40% of creeping bentgrass seeds survive in the soil for 12 months. We don't have *P. annua* in our trial, but in a different study about 40% of *P. annua* seeds germinated in late spring after being stored under controlled conditions from the previous fall (Williams, 1983), so there may or may not be much difference between survival rates. Part of the problem with the Williams (1993) study was that germination was used to determine survivability, while in our work we also use the tetrazolium test to distinguish between dormant seeds and those that are really dead. A head-to-head comparison of survivability between the two species would be needed. Whoever does this work will need to use numerous varieties/ecotypes from several environments.

Assuming one did want to interseed, the next question would be which variety or varieties to use? The National Turfgrass Evaluation

Program trials probably provide about the best information available. Our most recent trial was planted in late summer 2003. While some varieties have succumbed to environmental stresses over time, others have improved while some have stayed relatively constant. Table 1 shows the relative establishment rate averaged over locations in seven states. Pennncross had among the best establishment rate, yet many superintendents are planting newer varieties because they have superior turf quality (Table 1). Varieties that had among the quickest establishment rates and were in the top group for quality three years after planting were Shark, Authority, CY-2, 007, and Mackenzie. CY-2 and Declaration have significantly better quality in Wisconsin than all but Tye, Shark, 007, Authority and 13-M when grown on a silt loam and mowed at 0.125 inch height (data not shown), but only C-2, Shark, 007,

Table 1. Creeping bentgrass establishment rates and 2006 annual turf quality from the 2003 National Turfgrass Evaluation Program for putting green trials.

Variety	Establishment rate (% cover) ¹	Annual average quality ²
Tye	69.2	6.9
CY-2	73.5	6.9
Shark	77.2	6.8
Declaration	71.1	6.7
007	72.9	6.7
Mackenzie	72.8	6.7
Authority	75.3	6.6
Penn A-1	75.5	6.5
Independence	74.5	6.5
Memorial	75.6	6.4
LS-44	73.0	6.4
13-M	71.6	6.4
Bengal	75.7	6.2
Benchmark DSR	65.1	6.2
IS-AP 9	72.1	6.2
Kingpin	70.0	6.2
Alpha	71.4	6.1
T-1	76.9	6.1
Pennlinks II	73.9	5.7
Pennncross	77.0	5.1
LSD	6.3	0.3

¹ Average value of percent ground cover during establishment from seven states.

² Average turf quality when grown on native soil from 10 states, three years after planting.

Mackenzie and Authority were in the top group for establishment rate. However, data from establishment rates in the late summer may not correlate to establishment rates during the cooler temperatures of spring. In any case almost all varieties were relatively close to the fastest-establishing variety, so deciding the best cultivar may depend more on other characteristics such as quality or color than establishment rate.

Ultimately the best method for restoring greens from winterkill damage rests with the equipment and labor (i.e., budgets) at hand along with the need to quickly restore a high quality putting surface. Some clubs are more relaxed than others. If all else fails, there's always hope!


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NOER FACILITY'S EXPONENTIAL GROWTH IN NEW STUDIES COME SEE ALL THE NEW PROJECTS AT SUMMER FIELD DAY

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

Summer Field Day is the annual event when the UW-Madison and WTA introduce new and innovative turf management projects to the turf industry of Wisconsin. That is certainly the case for this year's show. So many projects are being constructed at the Noer Facility this spring; it mirrors many of Wisconsin's potholed roadways. See all the activity first hand at this year's Field Day being held on Tuesday, July 22 at the O.J. Noer Facility in Verona. If you haven't already received your registration brochure, you will be receiving it shortly. You may also download one at www.wisconsinturfgrassassociation.org.

What are all the new studies, you may ask. To begin with, four new putting greens are being constructed on the Noer Facility this spring. One of the new greens will look at phosphorus and plant growth regulator levels needed to grow in greens in the fastest and most environmentally sound way. A creeping bentgrass variety trial will be installed on another new green, and shaded green problems will be studied on the other new ones. Two other new greens are scheduled for construction later this summer as well, but what will be investigated on them is yet undetermined.

Another new project to learn about at Field Day will focus on conservation of water at the Noer Facility during the summer. Rainwater will be collected off the roof of the Noer Facility and stored in rain barrels both above and below ground to be used in watering the front lawn. Differing depths of buried drip irrigation lines will be used to determine parameters to make this a viable method to maintain turf. A rain-out shelter was also built this spring at the facility to improve



Grad student Eric Koeritz prepares three new plots to study a quicker germinating Kentucky bluegrass.



Two new putting greens that were built by grad student Ben Pease will soon have structures installed over them to study growing greens in the shade.



Turf student Bill Kreuser puts the finishing touches on his newly constructed USGA Green.



Dr. Doug Soldat's new rainout shelter.



Two 4,000 gallon rain barrels that will be used to store rainwater to irrigate the Noer Facility front lawn.

researchers' ability to study turfgrass maintenance in drought conditions. The shelter is on wheels and is connected to a sensor, pulley and motor that will move the shelter over the plot whenever rainfall is detected.

Many other new studies are being installed this year as well. The Noer Facility is as torn up with installation of new studies as it's ever been. Although some of these studies will be too new to give results by field day, others will provide information that will be very useful at your facility.

Here is the list of studies that will be talked about during the research tour:

- The Future of Dollar Spot Control
- Localized Dry Spot: Prevention and Management
- Does *Primo* Change Putting Green Fertilization Requirements?
- Early Season Dollar Spot Control
- Nitrogen Source and Rate Effects on Velvet Bentgrass
- Kentucky Bluegrass Varieties for Fairways
- Carbon Sequestration "In The Rough"
- *Cutless* PGR for Controlling *Poa* in Fairways
- Going Green: Rainwater Harvesting and Drip Irrigation
- Compost Tea as a Turf Management Option
- *Quik-Germ* Kentucky Bluegrass for Lawn and Sports
- Bentgrass Removal from Lawns with *Tenacity*
- New Products for Crabgrass Control
- Latest Information on Managing Emerald Ash Borer
- Winterkill of Perennial Ryegrass in Lawns

The research tour that takes place in the morning is only half of what field day offers. The large trade show in the afternoon will feature thirty to forty exhibitors to help you with all your commercial inquiries. They'll have information on every product, service, and piece of equipment that you could ever need to help you in your job. Many will let you test drive equipment to com-

pare features between different makes and models.

New for 2008 is a lawn care industry workshop which will be offered in the afternoon of Field Day for an additional fee. The workshop will provide information on identification and control strategies for weeds, insects, turfgrass species, and disease. Calibration of granular and liquid application equipment and other relevant topics will be included. Be sure to tell any lawn care providers you know of this new educational offering.

Come see all the new studies at the Noer Facility on July 22. Many of them will provide great information that you can put into practice on your own turf. This is true no matter what turf you manage; be it golf, sports, sod production, lawn care, or other commercial turf. Contact the WTA office if you have any further questions about this important event at 608-845-6536 or ajander2@wisc.edu.

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