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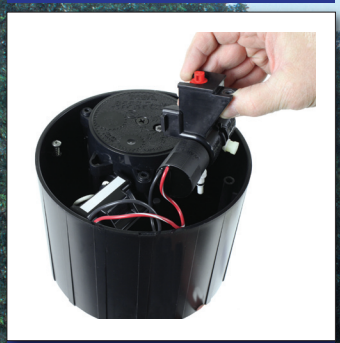

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The ninth hole at West Bend Country Club shows the slopes and contours develeped by Langford in 1930.

Hazards should be placed so that any player can avoid them if he gauges his ability correctly, so that these obstacles will make every man's game more interesting, no matter what class player he is.
By Architect William Boyce Langford, Civil Engineer and Golf Course Architect 1887-1976
This quote by Langford expresses his golf course design theories.

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THE GRASS ROOTS

is the bi-monthly publication of the Wisconsin Golf Course Superintendents Association. No part of the THE GRASS ROOTS my be used without the expressed written permission of the editor.

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2014 WGCSA OFFICERS AND DIRECTORS
Front Row: Chad Harrington, Jim Van Herwynen, Jon Canavan, Josh Lepine. Back Row: Jeff Millies Brett Grams, Jeff Barlow, Kevin Knudtson, Mike Bremmer, Joe Sell. (Not pictured Steve Wasser and Scott Bushman.)

WGCSA Board Hosts Strategic Planning Meeting

By Chad Harrington, Golf Course Superintendent, Autumn Ridge Golf Course

The weather seems to finally be turning for the better after one of the coldest off seasons our State has ever seen. The golf courses are slowly greening up, and the golfers are making their way to the tee. It hardly feels like we have hit the Golf Season, but we have already had two of our Summer meetings. I would like to thank our host Superintendents and courses, Matt Kregel at The Golf Club at Strawberry Creek and Bruce Worzella at West Bend Country Club. It is an honor to have such great facilities in fantastic condition to be able to hold our events at. Thanks again to all who have offered their courses to hold our events.

On March 19, 2014 members of the Wisconsin Golf Course Superintendents Association Board of Directors met and held a strategic planning session with GCSAA Associate Director of Chapter Outreach Steve Randall and Great Lakes Field Staff Representative John Miller. The mission of the session was to help the WGCSA design a roadmap of activities for the coming months and years to build additional momentum of a well-organized chapter.

The members were asked to write down ideas and expectations that we would like to accomplish during the session. Some of them were:

- Learn where we have been and where we are going
- Educate the golfers as to what we do
- Fill vacant positions from within the region
- Members understand the value of membership
- Educate public to our existence
- Increase our status as leaders within the golf industry as a whole
- Commitment to UW
- Communication and participation with allied associations
- How to keep assistants involved
- Communication between the board members, not leave it all to Brett (Chapter Manager)

The board then went into the SCOR analysis to determine the Strengths, Challenges, Opportunities and Risks of the chapter.

PRESIDENTS MESSAGE

STRENGTHS:

- Strong board with young/savvy personalities
- Fall symposium
- Camaraderie/networking
- Strong chapter executive
- Official newsletter – The Grassroots
- Financial standing (money for research, etc.
- Economics of golf industry in Wisconsin
- Strong industry partner program
- Diverse board, different regions from the state, different facilities involved
- Membership – consistent from number stand-point, are leaders in the industry
- History – strong group who have been influential for seasons
- Education
- Web site
- Communications
- University of Wisconsin connection

CHALLENGES

- Ensuring the younger generation sees value
- Getting more members
- Declining golf revenue/declining staff/declining time to accomplish things for the chapter
- How easy are we to do business with? Using Pay-Pal – is that the best?
- Knowing what members want…Would a survey make sense
- Geography (large)
- Communicating to allied organizations and avid golfers what we do/what our value is
- Being seen as the "voice" with issues affecting golf/golf course management
- Professional image –Branding
- Offering education that we should

OPPORTUNITIES

- Utilizing field staff
- Promote/Proactively talk to media to discuss golf
- Larger variety of education topics
- Roughly ½ of courses are members
- Fall symposium
- Schedule/Format
- Grow and make it a true regional show
- Giving back to the industry – scholarship, re-search, industry presentations
- Volunteer work
- Using Facebook with other social media
- Tap into other associations to help portray image – not utilizing synergy (two-way street)
- Web Site – content to non-members
- Regional Education
- Using technology – share documents, use for SOPs
- Developing our own foundation

RISKS

- Competing with other shows/education opportunities
- Costs
- Economy – potential hyper-inflation
- Staff leaving/taking them for granted
- Being complacent
- Competition among other association
- Environmental issues/concerns

Wisconsin Chapter GCSAA

GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

PRESIDENTS MESSAGE

Mission Statement

Following the SCOR analysis, we moved into a discussion on the mission statement. We decided to take some of their existing statement and condense it. The following before and after mission statements are below.

Was: The Wisconsin GCSA is committed to serve each member by promoting the profession and enhancing the growth of golf through education, communication and research.

New: The Wisconsin GCSA is dedicated to ensuring members have the resources to provide quality playing conditions, advocating on behalf of the golf course management profession and supporting the future of golf.

Vision Statement

Following the mission statement discussion we moved into the vision statement for the chapter. Ultimately the vision points out how the chapter should be viewed by its members. It also provides a forward-thinking thought process to uncover a bigger picture perspective. The vision statement is as follows:

Was: The Wisconsin GCSA 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*

New: The Wisconsin GCSA is dedicated to increase the value provided to its members and to the profession by:

- **Be recognized as the leading golf organization in the state**
- **Growing and serving a diverse membership**
- **Advocating environmental stewardship**
- **Offering valuable educational programs at the forefront of technology and communication**
- **Being critical to the enjoyment and economic success of the facility**

I would like to thank the WGCSA Board of Directors, Executive Director Brett Grams, the Golf House of Wisconsin for hosting our meeting, and the GCSAA Team of John Miller and Steve Randall that helped to facilitate the planning session. It was obvious that a lot of thought and research had been done prior to the meeting and helped to promote a lot great discussion. I wish all of you the best of luck in the 2014 Golf Season and I hope to see each and every one of you at one of our Summer event. Thank you for your support of our Association.

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Chapter Update

By Brett Grams, Chapter Manager, Wisconsin Golf Course Superintendents Association

Well it's Mid May but feels like early April. Central Wisconsin has been at least month behind in our daily temperatures. I sure hope Mother Nature provides us with some more seasonal weather as the golf season gets into full swing.

Our chapter events are off to a great start. Our April meeting in Kenosha at Strawberry Creek was a fun day for all who attended. Our May meeting at West Bend CC was a little soggy and shortened but still well attended. I challenge all members to come to our meetings as your schedule allows. Your WGCSA Leaders have put a good deal of time lining up great venues and quality education. Thanks to our generous host superintendents and facilities we are able to see some fantastic operations at very reasonable prices. Thanks to our generous vendor companies you also have a good chance of going home with a nice flag or event prize as well. I hope to see all of you at our events in the coming months!

The WGCSA Members Directory and Handbook will soon be in your mailbox. It contains a lot of useful information for all members. Meetings, by-laws, our new mission and vision statement, and complete listing of all members, affiliated companies, and board contacts are included in the annual directory.

The member directory is the last of the larger administrative projects that I complete each off season. In addition we again ran a great PAR 4 Research Auction. I am also happy to report that we are on track for improved sponsorship by this year's Industry Partnerships. Our membership level remains steady from the past few years as well.

My summer season efforts will focus on "tweaking" our offerings on our member side of the website. We have some pages that are not as used as others. I will be making some changes to offer more information. I will also be reviewing our online payment options with the hope that it will be more user friendly and flexible to the many users who now make payments electronically with the chapter.

Do you have any issues or items that I can be of service? Please contact me if you would like my assistance. I would be happy to help as I can!

Sincerely,

Brett Grams
WGCSA Chapter Manager
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Management of Mound Building Ants in Turf

By Dr. R. Chris Williamson, Department of Entomology, University of Wisconsin - Madison

Ants can be quite annoying pests on golf courses, especially in high-profile areas, such as putting greens, tees, and fairways. Because of the wide use of sand-based putting greens and tees, empirical evidence suggests that ants are a growing problem. This is not to say that they are uncommon in roughs; however, they are considerably less noticeable there. Worker ants excavate underground nest chambers, pushing up soil that creates volcano-shaped mounds. Mounds not only disrupt the smoothness and uniformity of putting-green surfaces, but also smother patches of turf and dull mower blades. As a result, golf-course superintendents often make surface applications of fast-acting (i.e., quick knockdown) conventional insecticides to eliminate this nuisance pest. However, this approach may not be the best solution for managing mound building ants!

Lasius neoniger is native throughout the United States and Canada. It is a relatively small ant and is commonly referred to by golf-course superintendents as the "turfgrass ant" (which is not a common name officially recognized by the Entomological Society of America). This ant species is a social insect that lives in colonies that comprise thousands of sterile female workers and typically only one reproductive queen. An individual ant nest is commonly composed of multiple interconnected chambers approximately 2-3 feet deep. Each passage to the surface is capped with a mound. Depending on the time of year (i.e., spring vs. summer), there can be a considerable fluctuation in the number of ant mounds per nest, ranging from 2 to 10. Generally, the number of ant mounds steadily increases from early spring to late summer, as the colony grows. Previously conducted research has revealed that as food resources become more abundant in the spring, the queen steadily increases egg production; however, once peak production occurs, the offspring from this brood develop relatively slowly, starting in May and continuing into July. Soon after, new adult workers (all females) begin to emerge, after which mound-building activities intensify. Finally, as the ant colonies begin to mature, by late summer and even into early autumn (late August–October), a sizable portion of the colony develops into winged reproductives (swarmers) consisting of reproductive females and drones.

Ant mounds on a closely mown putting green can disrupt playability and dull mowers.

Once the colony reaches this stage, reproductive females and drones typically swarm by the thousands, typically in the late afternoon on warm days. This event is especially common after rain and thunderstorms. During this swarming process, the reproductive females and drones partake in a nuptial flight in which they mate while flying. Soon after, the queens seek out new locations to build chambers, but before constructing a new chamber, the new queens chew off their wings. Oddly enough, most queens die before making a chamber; however, those that do survive typically construct a small chamber in the soil. Surviving queens typically lay a relatively small number of eggs in the chamber. Within several weeks (<6), new worker ants (which are typically about half the size of normal workers) break open the chamber to forage for food. At this point, colony activity ceases as winter weather arrives. The ant colonies that survive the winter typically resume activity in the spring as the temperatures become favorable and food sources available.

Research at the University of Kentucky (Potter Lab) suggests that each nest has only one queen, and the future of the colony is largely dependent on her. This is not to downplay the importance of workers; they too serve a crucial role both by protecting the colony and foraging for food for the colony. Different ant species have various food preferences, Lasius neoniger appears to prefer foods that contain the three primary nutritional components: protein, carbohydrate (sugar), and fat. In turf, ants commonly forage on the surface for small insects and insect eggs, but they also feed on subterranean root aphids to obtain the sugary honeydew that the aphids produce. Because these mound-building ants are important predators of the eggs and small larvae of sod webworms, white grubs, and other insect pests, they are also considered beneficial insects.

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Management

Unfortunately, ant control in turf is so simple, managing ants can be challenging. Throughout much of the growing season the queen ant, eggs and larvae (young) are located in chambers or nests about 2-3 feet underground. Consequently, surface applications of contact insecticides are effective only in controlling workers on the turf surface, such insecticide applications have little to no impact on the queen safely protected below the turf surface. So, unless the queen is eliminated, additional worker ants will continue to be produced.

Currently, there are three different recommended approaches for managing mound-building ants (Table 1): 1) insecticide applications of relatively short-residual, contact insecticides in the spring when ant mounds first appear (only workers are affected); 2) applications of long-residual insecticides; and 3) the use of granular ant baits. Because ants are sensitive to the freshness of the bait, it is theorized that moisture often renders most baits unattractive, likely due to staleness of the bait. Therefore, it is critical to apply baits to dry turf, avoid applications before anticipated rainfall events, and to make sure to withhold irrigation for approximately 48 hours. Non-bait insecticide should be watered-in immediately following treatment application with no more than 0.1 inches water (e.g., a syringe cycle).

Throughout much of the growing season the queen ant, eggs and larvae (young) are located in chambers or nests about 2-3 feet underground.

To further complicate the difficult challenge of controlling mound-building ants, during the late summer and early autumn, ants have a distinctively different behavior where swarmers (i.e., winged adults) begin to emerge from their nests in the late afternoon. In this situation, the most effective ant management approach is to apply a short-residual contact insecticide to the turf surface with the intention of controlling the swarming ants before they have an opportunity to make and construct new brood chambers.

Table 1. Insecticide treatments for ant control and appropriate timing

	Short-residual Insecticide (controls only workers/foragers)	Long-residual Insecticide	Ant Bait	Swarming Ants in late-summer – early fall
Insecticide (active ingredient)	Bifenthrin Chlorpyrifos Cyfluthrin Deltamethrin Indoxacarb Lambda-cyhalothrin	Clothianidin Thiamethoxam * either insecticide can be combined with bifenthrin or cyfluthrin to enhance performance	Hydromethylnon	Bifenthrin Chlorpyrifos Cyfluthrin Deltamethrin Indoxacarb Lambda-cyhalothrin

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Decreased Pink Snow Mold Associated with Low Soil Potassium

By Dr. Doug Soldat, Department of Soil Science, University of Wisconsin – Madison

Potassium is an essential plant nutrient that plays an important role in osmotic regulation and stomatal movement (water relations), cell elongation, protein synthesis, enzyme activation, and photosynthesis. It is often described more simply as a "stress" nutrient that is important for minimizing traffic stress, heat stress, cold stress, and disease stress, among others. I wrote a two-part series in 2011 in the Grass Roots on the scientific evidence supporting each of these claims (part 1) and how I'd fertilize turf based on the weight of that evidence (part 2). In this article, I'll report on some interesting observations on the effect of potassium on pink snow mold (Microdochium nivale) incidence over the winter of 2013-14 from our ongoing soil test potassium calibration trial at the O.J. Noer Facility.

Here is a brief overview of the study methods. In 2011, we began a trial to attempt to identify the lowest level of soil potassium that would still provide high quality putting green quality. We also wanted to create severe potassium deficiencies to document those symptoms for teaching purposes. We used an 'A4' creeping bentgrass putting green on a 100% sand root zone. The green was previously used for the phosphorus soil test calibration study (Kreuser and Soldat, 2012). We mowed five days per week at 0.125", and fertilized with 0.2 lb urea N per 1000 ft2 every two weeks, and irrigation was applied as needed based on soil moisture.

The treatments are different levels of potassium, including no potassium, and 0.1, 0.2, and 0.6 lbs K2O per 1000 ft2 every two weeks. An additional treatment of 0.2 lbs per 1000 ft2 of calcium sulfate was also included in the treatment list and was intended to decrease potassium in soil and tissue even more rapidly that the control. Liquid fertilizer treatments are sprayed every two weeks during the growing season in two gallons per 1000 ft2.

Beginning in 2012, we used a golf cart simulator to provide traffic stress three times weekly. Fungicides have not been applied since 2011 in order to quantify potential differences in disease. Each month, we collected data on turfgrass color, quality (1-9, 6 being acceptable), clipping mass, Mehlich 3 soil potassium, and tissue potassium content.

Visually, this study has been about as boring as it gets. In three seasons, we have yet to observe any statistical differences in color, quality, or clippings (Table 1). However, after the snow melted this spring, differences among the treatments in pink snow mold damage were apparent.

I counted infection centers in each plot and had Dr. Paul Koch estimate the percent of plot area affected by the disease. While disease pressure was low, it was clear that the snow mold damage was influenced by the potassium treatments. Treatments receiving no potassium were essentially free of damage, and treatments receiving 0.2 - 0.6 lbs K2O/1000 ft2 biweekly had roughly 10 infection centers per plot, covering about 3.5% of the turf.

The treatment receiving 0.1 lbs of K2O/1000 ft2 biweekly had statistically similar damage as the controls. As you'll notice in Table 2, as potassium in the leaf tissue increased, the calcium in the leaf tissue decreased. Magnesium was less affected by potassium than calcium was. Snow mold damage (infection centers or % damage) was positively correlated (r2=0.95) with tissue potassium and negatively correlated with tissue calcium (r2=0.91).

We do not yet understand the mechanism, but it is possible that the effect of potassium is to lower the calcium levels to a point where the plant becomes susceptible to fungal infection.

Table 1. Average turfgrass color, quality and daily clipping mass for the three study seasons. Color is measured using the Spectrum CM-1000 on a scale from 1-999 (greenest) and quality is rated using the NTEP scale of 1-9 (best). Results followed by different letters within each column are statistically different according to Fisher's Least Significant Difference (alpha=0.05).

Treatment	2011			2012			2013		
	Color	Quality	Clippings	Color	Quality	Clippings	Color	Quality	Clippings
	1-999	1-9	g	1-999	1-9	g	1-999	1-9	g
0.2 lb Ca/M (gypsum)	219 A	6.31 A	2.5 A	239 A	6.17 A	2.9 A	238 A	6.15 A	2.3 A
Control (no application)	217 A	6.06 A	3.1 A	227 A	6.21 A	2.9 A	236 A	6.10 A	2.4 A
0.1 lb K_2O/M (K_2SO_4)	215 A	6.28 A	2.4 A	229 A	6.08 A	2.0 A	232 A	5.80 A	2.0 A
0.2 lb K_2O/M (K_2SO_4)	217 A	6.38 A	2.7 A	235 A	6.13 A	2.2 A	231 A	5.85 A	2.2 A
0.6 lb K_2O/M (K_2SO_4)	214 A	6.13 A	3.1 A	235 A	6.21 A	2.7 A	232 A	5.90 A	2.1 A

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Table 2. Pink Snow Mold (PSM) Infection rates as a count of infection centers and percentage of plot area occupied by infection from 4/2/2014. Tissue and soil nutrient content data was collected on 9/28/2013, the most recent sampling date prior to winter. Results followed by different letters within each column are statistically different according to Fisher's Least Significant Difference (alpha=0.05).

Treatment	PSM Infection Centers	PSM Damage	9/28/2013 Tissue Content			9/28/2013 Mehlich 3 Soil Test		
	#/plot	-------%-------	--- % K ---	--- %Ca ---	--- %Mg ---	K (ppm)	Ca (ppm)	Mg (ppm)
0.2 lb Ca/M (gypsum)	0.5 B	0.0 B	1.42 D	0.69 A	0.46 AB	21.5 C	934 A	243 A
Control (no application)	1.0 B	0.5 B	1.45 D	0.61 B	0.48 A	26.2 BC	875 A	248 A
0.1 lb K_2O/M (K_2SO_4)	6.0 AB	2.5 A	1.81 C	0.57 B	0.47 AB	33.6 B	803 A	233 A
0.2 lb K_2O/M (K_2SO_4)	9.8 A	3.3 A	2.02 B	0.51 C	0.43 BC	33.1 B	930 A	252 A
0.6 lb K_2O/M (K_2SO_4)	8.8 A	3.5 A	2.19 A	0.48 C	0.41 C	45.9 A	848 A	234 A

Other researchers have observed increased snow mold with increasing potassium applications (see Soldat, 2011a for a list), so this finding is another brick in the wall of that body of work. Interestingly, researchers at Rutgers reported decreased anthracnose as potassium increased (Schmid et al., 2013). Details from that study have yet to be fully reported in the literature. However, these findings suggest that the optimum way to manage potassium on a sand root zone is to allow the soil potassium levels to drop near the PACE Turf/Asian Turfgrass Center's MLSN level of 35 ppm, then begin spoon feeding potassium in spring through summer, and stopping in August to allow the tissue levels to decrease and calcium levels to rise (which will happen naturally). I intend to continue managing the study until the point where the turf begins to show visual symptoms of potassium deficiency. I hope that happens sooner than later, but for now the study has finally yielded a piece of information that I hope you'll find useful as you plan your fertilizer programs for 2014. See you at field day!

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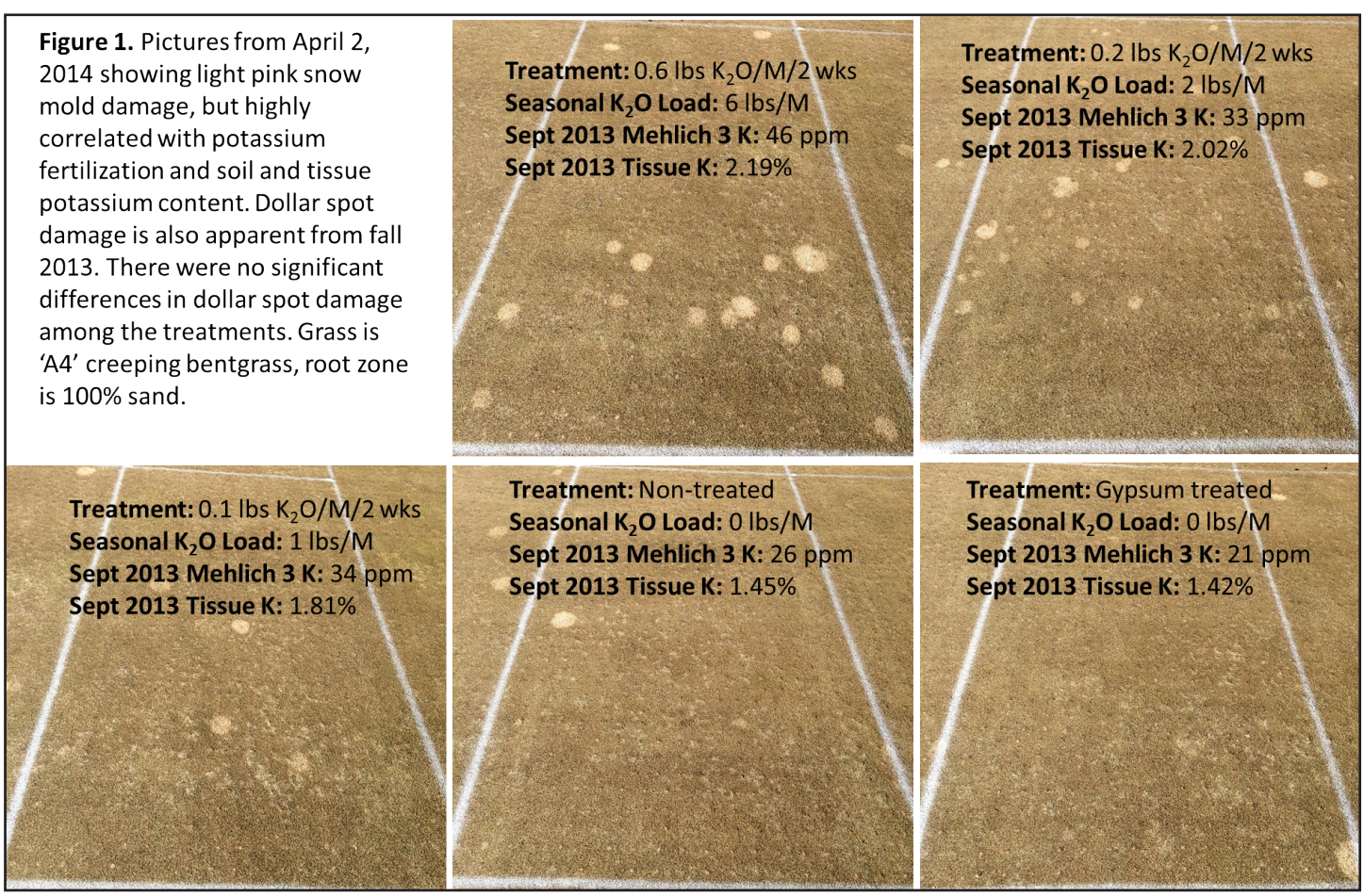
Soldat, D. 2011b. How I would manage potassium on cool-season turf: Part II. *The Grass Roots*. 40(4):p. 20, 22.

Figure 1. Pictures from April 2, 2014 showing light pink snow mold damage, but highly correlated with potassium fertilization and soil and tissue potassium content. Dollar spot damage is also apparent from fall 2013. There were no significant differences in dollar spot damage among the treatments. Grass is 'A4' creeping bentgrass, root zone is 100% sand.



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Lab Updates and Projects

By Bruce Schweiger, Turfgrass Diagnostic Lab Manager, O.J. Noer Turfgrass Research and Education Facility

By the time this article is read I will have celebrated my one-year anniversary as your Turfgrass Diagnostics Lab Manager. Yes one year in and hopefully all prepared for the next one. I am constantly asked what I do in the winter, this is a question I have been answering my entire career, as all of you have. After snow mold trail applications were finished I was looking forward to the coasting season, winter.

My thoughts leaned toward no disease samples maybe I could talk Paul into sending me to Florida to recruit for new contract members. This did not happen, so what was I going to do. My new boss, Dr. Koch, started his new position January 1, congratulations to him. I wondered what that would mean in my world. As I expected Dr. Koch came out of the gates swinging with some fresh new ideas and projects.

The biggest project of the winter was re-modeling to lab. With a little help from my friends we removed virtually everything in the lab and had the floors re-finished. As this was happening Dr. Koch and I began re-designing the lab and our office space and adding ergonomics to the equation. I encourage anyone that may be in the area to stop by our lab and see our new set-up. Change can be good and from what I remember the lab has been the same since before Steve Abler was here. Time will tell but so far the lab is functioning very efficiently.

The next big project was to re-build the tdl.wisc.edu website. With the help of Dixie in the IT Department there have been many changes. The new website is much easier to manage than the old site. To make changes to the old website we had to actually go down to campus and Russell Labs to get access through a secured server.

The new website allows us to make changes remotely. This will allow us to post updates and keep everything very current. All of the research will continue to be posted, that will not change. With the more user friendly access Dr. Koch is looking at adding some new additions to the site, more on those at a later time. I feel the biggest upgrade is that all the sample submission forms are available online. You can now open the forms from a computer, tablet or your smartphone and fill them out. Once filled out they will be automatically sent to me. This alerts me that a sample is coming to the lab.

My request is when you fill out the form please fill them out completely so when the samples arrive I can match the proper form to the proper sample, we do receive more than one sample in a day. If you have pictures you can send them to me at bschweiger@wisc.edu or text them to me at 608-445-5490. The new system will allow me to know ahead of time when samples are arriving and if for some reason I am out of the office, I can notify you or contact the reserve personnel (Dr. Koch) to have them process your sample. Dr. Koch has some great ideas on how we can utilize the website to enhance our service to homeowners and growers alike. Stay tuned for more on these ideas as he rolls them out.

One of my new assignments is that of the trainer for the Pesticide Application Training class offered over the winter by DATCP. These training sessions are team taught by Dr. Koch, PJ Liesch and me. In January prepping for these classes started in earnest. Even though I have been a Certified Applicator for many years, I had much to learn. With the guidance of Dr. Koch and PJ Leisch (Phil Pelliteri's temporary replacement) I was able to be ready for our first class in late January in Madison. The day arrived and I was a little nervous to get up in front of the huge crowd and give my sections of the training. As usual with winter classes the snow came and attendance dwindled to 12 attendees. The day went well and I was ready for the next 5 classes over the next 2 months all over the state. Many of our training sites had 100+ attendees. There were a few of you at the trainings and to date I was never booed or had any rotten fruit thrown at me, so for year one I consider that a huge accomplishment.

Spring has been slow to come to Wisconsin and as I wrote this I was in Missouri visiting my new Grandson while Sam Soper and Dr. Koch were traveling in the arrowhead of Minnesota finally doing the last of our snow mold ratings. No we had not just been lazy and not made the trip north, they have been getting snow and every time we planned a trip north they would get 4+ inches of snow. We did however sneak in Snow Mold field Days at Wausau CC April 23rd. The week before even Wausau was covered in snow. The results at Wausau were amazing. The data is posted on the tdl.wisc.edu website. If you want the nickel tour of the results and see the snow mold pressure at Wausau you can go to the tdl.wisc.edu website and on the main page click on the link to GCSAATV.

TDL
TURFGRASS DIAGNOSTIC LAB
Turfgrass Diagnostic Lab
O. J. Noer Turfgrass Research
& Education Facility
2502 Highway M,
Verona, WI 53593-9537
www.tdl.wisc.edu
E-mail: bschweiger@wisc.edu
Phone: 608-845-2535
Fax: 845-8162

TURFGRASS DIAGNOSTIC LAB

This year's Snow Mold Field Day was filmed by Epic Creative and is being hosted on GCSAATV. The video is under 9 minutes and Paul is a natural, we hope Network news never see this video. We know that it is hard for people to take the time early in the season when courses are opening and staff is limited to join for Snow Mold Field Days, so we partnered with GCSAA to have the day filmed and posted on GCSAATV. Please let us know if you found this helpful and beneficial.

Sample submission to the lab this spring have been slow. This I am sure will change with the cool, wet weather, perfect for root pathogens. When the weather breaks I assume to rest of the diseases will begin in earnest. Snow Mold questions have been the most prevalent issues, why did this not work or homeowners curious about Microdocium nivale (pink snow mold) in their yards. The top questions this spring has been how do I re-seed my lawn, what type of grass do I plant and can I still re-seed after the pre-emergent application has been made?

Well that was my winter and early spring. I am ready for warmer weather and the season to start. If you get a chance please remind Paul that we need to find more contract members and Florida is begging for a good Diagnostics Lab. As I always I am willing to sacrifice my time for the success of the program.

Summer Research Preview

By Dr. Paul Koch, Department of Pathology, University of Wisconsin – Madison

After a brutally cold winter and frustratingly cold spring, summer is finally upon us. The summer season is the busy season for most of us, and here at the university it is no different. Samples are flowing into the diagnostic lab, fungicide testing is in full swing, and much of our research is 'in the ground.' Turfgrass research can take on many forms, from research that is conducted entirely in the laboratory to research that is done entirely in the field. Most of the research that we will conduct in the years to come will have some element of both, but to get started in my first summer as a faculty member we will conduct several projects that are completely field-based (or 'highly applied' in academic lingo). A brief summary of each project is below, and all of them will be available for viewing at the Turfgrass Summer Field Day on July 29th.

Reduced-risk disease management

Fungicides are an integral part of any successful disease management program on golf course turfgrass. That is not an inherently bad thing, as the majority of research suggests there is relatively little risk to the general public and the environment when pesticides are used properly. However, that doesn't mean that toxicological improvements can't be made, and that they won't be mandated in future years. This small research project will include four treatments, 1) a non-treated control, 2) a traditional fungicide program designed for golf course fairways, 3) a reduced-use program basing fungicide applications on the Smith-Kerns dollar spot prediction model, and 4) a reduced-use AND reduced-risk program basing fungicide applications on the same Smith-Kerns dollar spot prediction model. While treatments 3 and 4 will both base their application timings on a mathematical model developed by Dr. Damon Smith and Dr. Jim Kerns, there is one key difference. Treatment 3 will employ a rotation of conventional fungicides currently available for use on dollar spot, while treatment 4 will only use those fungicides labeled as reduced-risk by the Environmental Protection Agency (Table 1). As table 1 shows there aren't a lot of options for initiating a completely reduced-risk program, but reduced risk products are available that will control the vast majority of turfgrass diseases we see in Wisconsin. The primary objective of this research is to determine whether exclusively using reduced risk fungicides in cooperation with a disease prediction model will yield acceptable disease control with a significantly lower environmental impact.


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Dual-fan nozzles and reduced water volume

Reducing the amount of water volume used in a given application can have clear benefits in application efficiency. Less water means fewer trips back to the shop to refill. However, going too low can impact the quality of disease suppression and defeat the purpose of making the application at all. An informal survey conducted this past spring found most Wisconsin golf course superintendents used a water volume between 1 and 1.5 gallons per 1000 ft2. Air induction nozzles have been widely adopted by superintendents in recent years for their ability to decrease drift while maintaining adequate fungicide coverage on the plant. More recently, dual fan nozzles have been introduced with reports of increased plant coverage. Some superintendents have made claims that the dual fan nozzles allow for significantly reduced water volumes to be used because of the excellent coverage provided by the nozzle. This study will investigate the ability of both air induction and dual fan nozzles to provide adequate disease suppression at a number of different water volumes.

Left: Tee Jet Air Induction Nozzle
Right: Greenleaf Technologies Dual Fan Nozzle

Dollar spot suppression provided by strobilurin fungicides

The strobilurin (or QoI) fungicides are an important class that includes widely used products such as Heritage, Insignia, Compass, and Disarm. These products provide excellent suppression of a number of important golf course diseases including brown patch, anthracnose, and both pink and gray snow mold. However, the most prevalent disease found on Wisconsin golf courses is dollar spot, and none of the strobilurin products are labeled for dollar spot control. Some research has even suggested that dollar spot is worse on turf where Heritage is used. Though not labeled for dollar spot control, Insignia is labeled for dollar spot suppression, and has been found in some instances to significantly increase the duration of dollar spot suppression when combined with the new BASF fungicide Xzemplar (the combination of Insignia and Xzemplar is known as Lexicon). This study will attempt to examine the impact, both positive and negative, that all the strobilurin fungicides have on dollar spot control. Nearly every fungicide application made in Wisconsin during the growing season needs to have some sort of dollar spot control. If one or more of the strobilurins are indeed found to decrease dollar spot severity, it would allow superintendents more flexibility in developing their spray program.

Azoxystrobin
Boscalid
Fludioxonil
Penthiopyrad
Trifloxystrobin

Table 1. Reduced-risk fungicides currently labeled for use on turfgrass from the Environmental Protection Agency website (www.epa.gov).

National Golf Graphics

Terry Velour Cotton Towels
11x18 $2.25 each
16x26 $3.25 each

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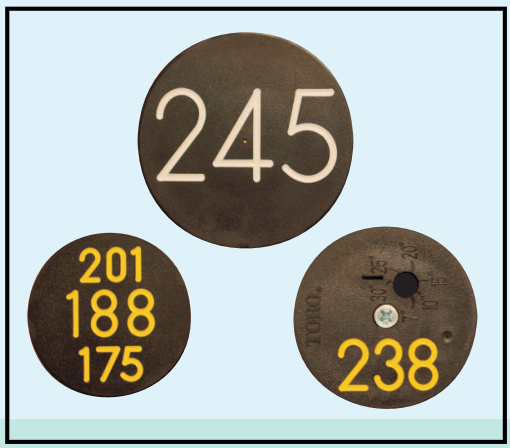
Toro, Rain Bird, Hunter



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News and Notes From WGCSA Members

By Matt Kinnard and The DHD Team

Career Moves

Over the winter, Deer Track Golf Course near Oconomowoc, hired **Jared Stuebner** as its new superintendent. Jared returns to his home state having completed his turfgrass management degree at Rutgers University and working at several golf courses across the country.

In 2002, Jared started working at Fire Ridge Golf Club in Grafton for Stan Lushine. He said, "The admiration for my first Superintendent, Stan Lushine, directed me into the industry. I was an adolescent slacker who cared more about social activities than being a productive member of society. His direction and ability to extract the most out of every crew member was truly inspirational and transformative. Since then I have made it my goal to do the same for every crew member of mine."

Since working at Fire Ridge, Jared interned at Brookline CC on Long Island, The Oaks Club in Sarasota, Florida, and The Aspen Club in Carbondale, Colorado. He was the Assistant Superintendent at Brightwater GC, Rifle Creek GC and Lakota Canyon Ranch, all in Colorado.

Jared is married to his wife, Whitney, and they have two young daughters and a couple Australian Shepherds. In his spare time he mountain bikes, snowboards, and plays guitar. While in Colorado he was an avid ski mountaineer, summiting five 14,000-foot peaks and has ridden his snowboard down countless summits above 12,000 feet. Until he moved, Jared also played in a Colorado band for the past seven years. Now his focus is Deer Track. Welcome back to Wisconsin and congratulations on the new job, Jared!

I'm happy to report that **Andy Kronwall** was hired as the Superintendent at Abbey Springs Golf Course in Fontana, WI. Andy was born and raised on a dairy farm in southeast Wisconsin, tinkered with customizing and painting vans in high school but found working on a golf course the most satisfying job. He attended a local technical college studying horticulture and began working at Lake Geneva Country Club in 1980 as a general laborer for the late Gil Gergdoll. When Gil became ill and had to retire in 1983, Andy was asked to step in as Superintendent and held that title for an incredible 30 years.

Andy outlined the progress LGCC made in the last decade, "In 2003 we started a ten year plan to renovate/update the golf course doing much of the work "in house". Our objective was to make the course challenging for all skill levels without compromising the 1895 design. We removed trees, added tees, moved bunkers, changed fairways and returned many greens to their original square shape. It was a lot of extra work, but I really enjoyed the process of taking a dated design and turning it into a gem once again. In the spring of 2013 we celebrated the completion of our course renovation with the opening of the newly gassed and re-grassed greens."

Over the winter, Abbey Springs restructured its management team and Andy received a phone call from his close friend and Abbey Springs Director of Grounds, David Smith. David asked Andy if he would join the team as golf course superintendent. The answer was an enthusiastic, yes!

Andy said, "It's funny how things work out. I am now part of a management team in the twilight of my career working with one of my closest friends." In his spare time he and his wife, Kathy, enjoy playing golf and riding their motorcycles. Congratulations Andy and much success at Abbey Springs!

Last fall, The Legend at Bergamont confirmed **Jered Kamin** as their new golf course superintendent. Jered's first taste working on a golf course was during high school and college while working at Oconomowoc Golf Club. He had attended MATC and UW-Whitewater but was still unsure of the career path he wanted to take. Oconomowoc Golf Club Superintendent, Dustin Riley, approached Jered one summer and asked if he had considered turfgrass management as a career. With some help and guidance from Dustin, Jered enrolled in the Penn State University turf program where he graduated in 2007.

Jered interned at Weston Golf Club in Weston, MA before returning back to Wisconsin to work at The Legend at Brandybrook as the second assistant. He then moved to another Legend course, this time in Madison at The Legend at Bergamont as the first assistant. Now in his first full season as the superintendent at Bergamont, Jered is enjoying the challenges that come with being a new superintendent. He still finds time to bow hunt, ice fish and hit up a Brewer game once in a while.

Jared also recently celebrated his two year anniversary with his wife, Amanda, in May. Congratulations Jered!

Retirement

Wisconsin golf course superintendents maintain an incredibly demanding workload and schedule yet are some of the most talented and professional people of any industry. With that said it's a significant accomplishment to start and finish your career as a superintendent. What's more remarkable? Doing it at the same golf course. For 43 years, **Lenny Eibl** has been the golf course superintendent at Bristol Oaks Golf Course in Bristol (Kenosha), WI. Over the winter he decided it was time to retire.

Before he began his days on the golf course, Lenny served his country in the Vietnam War. For his service, Lenny was honored with a Purple Heart and Bronze Star.

He started his career in golf as the superintendent at Bristol Oaks in 1970. Despite the challenges every superintendent faces Lenny always had Bristol Oaks in great condition. Now, in his retirement, Lenny can spend more time with his wife, Bonnie, their four children and four grandchildren.

Having worked with Lenny over the years, there isn't a more genuine person in the industry… just one of the many reasons why he was so successful and enduring. Congratulations Lenny and wishing you an enjoyable retirement!

Please call or email me with any significant news or happenings around the state so we can spread the good news. I can be reached at matt@pro-turfsolutions.com or (262) 720-0251

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State Of The Art Research And The Basics - A Great Year To Bring Your Staff!

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

Most of you have been to the WTA Summer Field Day many, many times. This year's Field Day is a great opportunity to bring your staff who may have never experienced this great educational event. The UW turf professors and staff have lots of innovative research to share with you. There will additionally be plenty for your staff to brush up on, including sprayer and spreader calibration, weed control, grass selection and so much more. The morning education will be geared more towards the basics, while the afternoon will be focused on some of the most up-to-date research findings coming from your UW turf research program. Whether you're a veteran or new turf manager, you will have loads to learn at this year's Field Day.

Here is a list of some of the presentations that are scheduled for Field Day:

- Factors Affecting Weed Control
- Sprayer & Spreader Calibration
- Grass Selection in Seed Science
- Japanese Beetle Life Cycle
- Managing Rust on Lawns
- Tree & Shrub Ornamental Applications
- Reduced Water Volume Disease Control
- Recovery From the Harsh Winter
- Reduced Risk Disease Control
- Soil Testing for Potassium
- Cooling Turf with Fans & Syringing

Please see the registration form for specific times of these presentations. Many other research projects will have signs and information displayed on plots so that you can visit them on your own schedule as a self guided tour. The professors and research staff will have time between talks to discuss any specific questions you bring to them. Catch them between talks or over lunch and they will be happy to work with you to give you the answers you need.

Field Day 2014 is on Tuesday, July 29th at the OJ Noer Turfgrass Research Facility in Verona. The registration form is included in the newsletter. Also note, the pricing structure has been changed for 2014 to allow you to bring more staff from your organization. Staff can register for a $10 discounted price after the first registrant. What do you get for registration? First and foremost – great education. But a close second – donuts and coffee in the morning, a great lunch at noon, and a wonderful opportunity to share ideas and camaraderie with peers throughout the day.

One other benefit is the ever popular Field Day Tradeshow. There will be over 30 companies at this year's trade show. Helpful vendors will display and give details about their equipment, products and services to help you manage your landscapes better. Several equipment vendors allow test drives of their machines so you can compare performance between the different makes.

Summer Field Day is a great way to learn about the latest research coming from the UW-Madison, to compare the newest commercial offerings from the trade show, and to visit with colleagues over a great lunch. You will surely leave Field Day with many ideas to put into practice back home. Contact Audra Anderson, WTA administrative assistant, at 608-845-6536 or ajander2@wisc.edu if you have any questions.

Your Field Day brochure is included in this newsletter or may be downloaded from the WTA website, www.wisconsinturfgrassassociation.org. You may also register and pay online from the website. Field Day 2014 is going to be the best ever, and we hope to see you there on July 29th.

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Wisconsin Turfgrass Summer Field Day

Tuesday, July 29th 2014

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at the O.J. Noer Turfgrass Research and Education Facility in Verona, WI

The O.J. Noer Facility in Verona is where you need to be on July 29th to learn all the latest turf management innovations coming out of the UW Madison. Morning talks will focus on lawn-care, sports, & general turf tips, and afternoon will focus on golf turf management solutions.

What you will learn: Factors affecting weed control, Calibration of spreaders and sprayers, Seed selection, Japanese beetle life cycle, Managing rust disease, Tree and shrub applications, Recovery from harsh winters, Reduced risk disease control, Soil testing for potassium, Cooling your turf with fans and syringing, and so much more.

Fun and education for all. There will be turf tips and research findings for anyone working in lawn care, sports field management, sod production, and golf course management. Great lunch and camaraderie are included.

The trade show will have a huge variety of equipment and turf supplies / services to help you improve your maintenance program. Get expert advice from the many helpful exhibitors.

Registration Form and additional details on back or go to www.wisconsinturfgrassassociation.org to register and pay online

Questions - Contact Audra Anderson, WTA administrative assistant, at (608) 845-6536 or ajander2@wisc.edu

Field Day Schedule

8:00 – 9:00	Attendee Registration
9:00 – 9:30	Welcome Session
9:30 – 11:00	Lawn Care & General Turf
11:00 – 1:30	Trade Show Only Time
12:00 – 1:15	Lunch
1:30 – 3:00	Golf Turf
All Day	Trade Show

Registration Includes

- Donuts & coffee at registration
- Morning and afternoon turf education
- Wisconsin style cookout for lunch
- All day Trade Show
- Become a new WTA member and receive free admission to Field Day 2014. Contact Audra for details ajander2@wisc.edu or 608-845-6536

Lawn Care / General Turf 9:30 – 11:00

- Factors Affecting Weed Control
- Sprayer & Spreader Calibration
- Grass Selection in Seed Science
- Japanese Beetle Life Cycle
- Managing Rust on Lawns
- Tree & Shrub Ornamental Applications

Afternoon Golf Turf 1:30 – 3:00

- Reduced Water Volume Disease Control
- Recovery From the Harsh Winter
- Reduced Risk Disease Control
- Soil Testing for Potassium
- Cooling Turf with Fans & Syringing

O.J. Noer Facility Directions
3101 North County Road M
Verona, WI 53593 tel - 608-845-6536

- From Madison Beltline US-12 & 18
- Take Mineral Point Road exit
- Go West on Mineral Point Road 7 tenths of a mile to Pleasant View Road roundabout
- Exit roundabout onto South Pleasant View Road
- Continue 2.5 miles to O.J. Noer Facility

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Registration

Mail registration form and check payable to WTA by July 22nd to O.J. Noer Turfgrass Facility / 2502 Highway M / Verona / WI / 53593. Or register online at www.wisconsinturfgrassassociation.org. **Prices are for pre-registration if postmarked by July 22nd. Add $5 after July 22nd and for on-site registration.**

Name of all employees_____

_____

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Mailing address_____

City/State/Zip Code_____phone _____

WTA member - $35 = _____
Additional employees from same WTA member organization - - - - - $25 each x # emps ____ = _____
Or Not a WTA member - $40 = _____
Additional employees from same Non-WTA member organization - - $30 each x # emps ____ = _____
WTA membership (New member, get one free registration) - - - - - - - $125 = _____

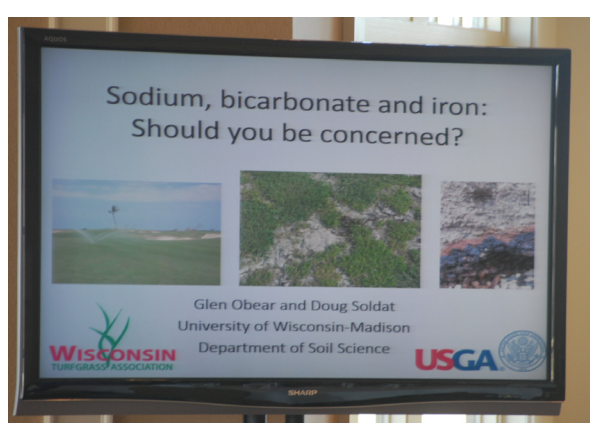
GRAND TOTAL = _____

April Meeting At The Club At Strawberry Creek

By Scott Bushman, Golf Course Superintendent, Fox Valley Golf Club

The WGCSA held the first golf and education meeting for the 2014 season at The Club at Strawberry Creek on Tuesday April 22. The hosts for the event were Matt Kregel golf course superintendent and Jeremy Dahl assistant golf course superintendent. The Club at Strawberry Creek is a Rick Jacobsen design golf course that opened in 2006. The property was originally the Thompsen Strawberry farm. It was a 150 acres of self pick strawberry fields. The owners of the strawberry fields decided to downsize and a group of investors had been looking at this property. Four main investors decided to purchase the property and build a golf course. One of the investors is Jay Hilgenberg a retired all pro from the Chicago Bears. The golf course and the housing development is 385 acres is size with the golf course consisting of 180 acres of that total. The golf course has a total of 52 acres of bentgrass, 44 of that acreage is fairways.

The day started with a presentation by Dr. Doug Soldat titled Sodium Bicarbonate and Iron buildup in USGA putting greens, should you be concerned? Doug presented the results of some of the studies done on the layering that can form at or near the gravel layers under USGA putting greens. The samples were obtained from golf courses throughout the U.S. Many tests were performed to determine the affects of Sodium Bicarbonate and Iron buildup. Doug talked a lot about the ph levels and how that has a big impact on the results of the studies. Optimum ph levels should be between 6.0 and 6.5.



Dr. Doug Soldat gave a talk titled Sodium, Bicarbonate and Iron: Should You Be Concerened?

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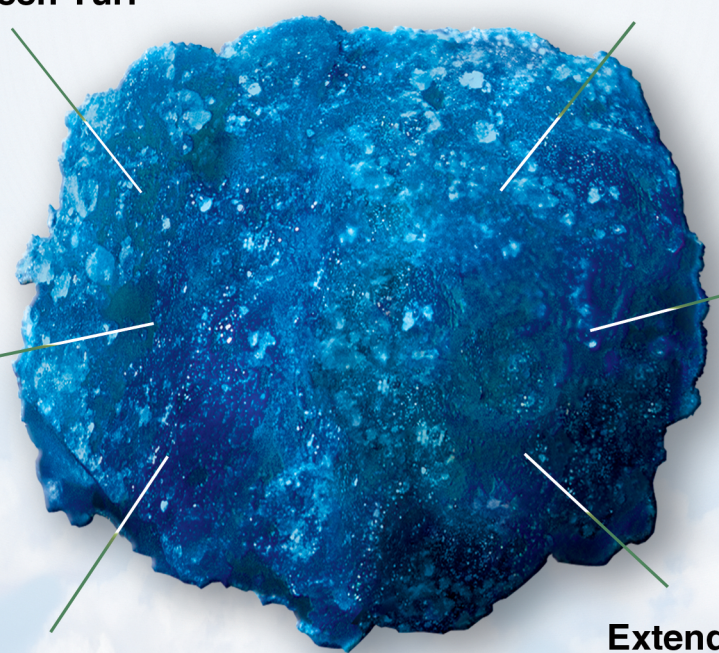

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After lunch 60 golfers participated in the four person scramble event for the day. The golf course was in excellent condition. Matt and his staff did a great job of preparing the golf course for the event. The cooler temperatures and being very windy made for a tough test of golf. It was not as difficult for a few teams as it was for others judging from the winning scores. The winners of the four person scramble with a score of 12 under par 60 were Mike Schmeiden, Brian Johnson, Travis Krauklis and Sparky Lockhardt. Flag event winners were Brad Legnaioli with long drive on #1. Kevin Knudtson long drive on #13. Darren Dase closest to the pin on #12. Mike Schmeiden closest to the pin on #8. Scott Bushman longest putt on #9. Thank you to all those who attended making this a successful event. Look forward to the next event on May 12 at West Bend Country Club.

TOP LEFT: First Place team of Brian Johnson, Travis Kauklis, Sparky Lockhart and Mike Schmieden.

TOP RIGHT: 5th Place team of Nick Strain, Aaron Goninen, Omar Zaldivor, Chad Grimm.

BOTTOM LEFT: 9th place team of Mark Thurow, Brian Kimbrough, Dave Kloss and Erich Lange.

BOTTOM RIGHT: 13th Place team of Cubby Obrien, Jeremy Dahl, Dave Busse and Randy Lusher.

Our hosts Matt Kregel and Jeremy Dahl

Above: The links course played firm and fast for our event but did not match the in-season beauty of the mature native grasses in the file photo of the 8th hole below.

How Trees Impact USGA Course Rating™ And Slope Rating®

By Adam Moeller, Agronomist USGA Green Section

Editors Note: "This article is reprinted from the Vol. 52 (8) April 18, 2014 of the USGA Green Section Record. Copyright United States Golf Association. All rights reserved."

Trees are common features on golf courses that add aesthetic beauty and challenge for players. Unfortunately, trees can make it very difficult to maintain a healthy, uniform stand of turf. Trees create shade, restrict air movement and compete with turf for water and nutrients in the soil. All of this can result in poor turf performance and undesirable course conditions when trees are located too close to playing areas. When investigating the underlying problems associated with poor turf performance, start by examining trees and their impact on growing environments. When turf suffers and playing conditions are compromised because of trees, golf facilities are wise to routinely remove problematic trees, especially those near the most important playing areas.

Tree removal is often met with resistance from golfers despite the negative impact trees have on turf. Golfers are often concerned with how removing trees might impact the difficulty of a particular hole or the course in general. The phrase "we cannot remove that tree because the hole will become too easy" has been muttered often. This sentiment is highly subjective from a golfer standpoint, but understanding the USGA Course Rating System™ can provide some valuable insight for this concern.

USGA COURSE RATING AND SLOPE RATING

The USGA Course Rating System is used to predict the difficulty of a golf course for a scratch golfer under normal course and weather conditions. A Slope Rating® is the USGA mark that indicates the measurement of the relative playing difficulty of a course for players who are not scratch golfers compared to the Course Rating.

USGA GREEN SECTION RECORD

The USGA Course Rating System is the standard by which the USGA Handicap System™ is established, and it determines adjustments in a player's handicap for a particular course. For instance, the USGA Course Handicap™ Calculator determines that a golfer with a Handicap Index of 9.6 playing a course with a Slope Rating of 140 will have a Course Handicap of 12, which is the number of strokes received in relation to other players on that set of tees.

Course yardage is the primary determinant of a Course Rating, with adjustments for effective playing length factors such as roll, prevailing wind, and altitude above sea level. There are also 10 obstacle factors taken into consideration, such as water hazards, trees, out of bounds, rough difficulty, putting difficulty, etc. Each obstacle is assigned a value of 0 to 10, depending on the difficulty it presents to a scratch or bogey golfer on a given hole. When the evaluation is complete, the obstacles are totaled and multiplied by a relative weighting factor. The weighted obstacle values are applied to scratch and bogey formulas and then converted to strokes. Those strokes are added to or subtracted from the Yardage Rating to produce a Bogey Rating™ and a Course Rating. The difference between those two values multiplied by a constant factor is the Slope Rating.

From a Course Rating perspective, tree obstacle ratings are twofold. First, the distance trees are located from the middle of the landing zone or putting green is evaluated. Second, the recovery potential from those trees is determined to be minor, moderate, significant, or extreme. Other adjustments for unusual situations such as chutes or obstructing trees are determined as necessary. Trees that obstruct the landing zone or putting green and those that define doglegs receive a higher obstacle value than trees located on the periphery of the hole, which come into play less often and usually offer good recoverability. However, trees with limbs extending to the ground (e.g., unpruned spruce trees) do not offer much recovery and receive a higher obstacle value.

Trees located 30 yards or more from the centerline of the hole often have very little impact on the obstacle value. This is especially true around and behind putting greens. It is important to note that the most detrimental trees on golf courses are frequently located around and/or behind putting greens.

Trees creating shade, limiting air movement, and/or causing tree-root competition on putting greens are a serious agronomic concern. These trees have very little impact on Course Rating and Slope Rating because they are 30 yards or more from the centerline of the hole.

When calculating USGA Course Rating, trees adjacent to landing zones and putting greens have the most impact on obstacle value compared with trees inperipheral areas. The same is true for trees that define the dogleg of a hole.

Also, keep in mind that two to three significant trees adjacent to the landing zone could produce the same obstaclevalue as a fairway lined with many trees. Obstacles in the landing zone are focused on more heavily than obstacles in peripheral parts of the hole, because they are more likely to come into play. The obstacle value for trees is also increased as the length of the shot to reach the landing zone or putting green is increased due to wider shot dispersion on longer shots.

A CASE STUDY

To illustrate how trees may impact the Course Rating and Slope Rating, a simulation from a golf course with minimal trees is provided. The actual Course Rating and Slope Rating are 73.8 and 128, respectively. When a moderate obstacle value for trees is added to all 18 holes, the Course Rating and Slope Rating rise to 74.4 and 139, respectively. When a high obstacle value for trees is added for all 18 holes, the Course Rating and Slope Rating rise to 75.0 and 147, respectively.

The Course Rating and Slope Rating increase as the obstacle value for trees increases, but this simulation accounts for more trees across all 18 holes on the course. In the event that a few trees are removed or added to a single hole, it is highly unlikely that the Course Rating or Slope Rating will change at all. This is particularly true when trees are 30 or more yards from the centerline of the hole.

CONCLUSION

Several championship venues have undergone major tree removal programs— some removing more than 75 percent of their trees — to restore the original architectural intent of the golf course. The Course Rating and Slope Rating were largely unaffected

at these facilities, and the same would likely be true at your course. On golf courses with tree-lined fairways, it is very likely that 50 percent of the trees on the periphery of a given hole, or even the entire golf course, could be removed without significant change to the Course Rating or Slope Rating.

Remember, Course Rating and Slope Rating are derived from the expected score from the scratch and bogey golfer. Scratch golfers will rarely hit the ball far enough offline to have serious challenges with trees, and these players often recover well after wayward shots. Bogey golfers may find themselves with tree troubles two to three times over 18 holes on some rounds, which could impact one to two strokes of their score, while on other rounds they may have no tree trouble at all.

When averaging the impact of trees over 10 rounds, it becomes clear that trees have a very small impact on Course Rating. Slope Rating and a player's Handicap Index are unlikely to be affected, in most cases, if trees are added or removed from a few holes.

When trees need to be removed to improve sunlight penetration, air movement, and/or eliminate tree-root competition, golfers should not fear that the Course Rating and Slope Rating will dramatically change. However, the challenge of a particular hole may change if a key tree is removed for agronomic purposes. In this instance, work with your USGA agronomist and golf course architect to develop the most reasonable solution to provide healthy turf and desirable golfer challenge. Also, keep in mind that when shade, limited air movement, and treeroot competition are reduced, other variables impacting Course Rating and Slope Rating are likely to be affected.

The tree fronting the left side of this putting green will impact the obstacle value on this hole, but it is unlikely that the Course Rating and Slope Rating will change dramatically if it is removed.

The obstacle value for trees increases with the length of shot required to reach the landing zone.

For instance, with fewer trees around a landing zone or putting green, sparse rough can transform into a healthy, dense stand that becomes more difficult. Likewise, healthier putting greens due to increased sun and/or air movement may be maintained to create more difficult playing conditions, such as drier, firmer putting surfaces, which would impact Course Rating and Slope Rating.

The argument that tree removal will negatively impact Course Rating and Slope Rating should not be used when evaluating long-term agronomic decisions. Good golf conditions require healthy turf, and that sometimes requires removing trees.

COMING EVENTS

Coming Events!

Monday June 23rd, WGCSA Tournament Meeting, Brown Deer GC, Milwaukee

Tuesday July 29th, UW – Summer Field Day, OJ Noer Facility, Verona

Tuesday August 11th, Joint meeting w/Northern Great Lakes Chapter, Brown County GC, Green Bay

Monday September 15th, Wee One Fundraiser, Pine Hills CC, Sheboygan

Tuesday October 7th, WTA Fundraiser, University Ridge GC, Verona

Saturday October 4th, Couples Outing/Party, Wild Rock GC, WI Dells

Wed and Thur Dec 3rd-4th , Turfgrass Symposium, American Club, Kohler (CHANGED DATE)

WELCOME NEW MEMBERS

Corey Betz	North Shore CC	Jordan Mock (C)	Golf Courses of Lawsonia
Rick Biddle (S)	Lakeshore Technical College	Travis Nordstrom (A)	Spooner GC
Adam Dempsey (C)	Bishops Bay GC	Robert Parduhn (A)	Mayville GC
Brian Fenney (C)	Geneva National GC	Dustin Peterson (E)	Rain Bird International
Adam Freeman (A)	Lake Arrowhead GC	Josh Peterson (C)	Blue Mound CC
Jeff Gibson (E)	Waterwell Solution Group	Matt Smith (C)	Sentryworld GC
Aaron Hansen (S)	UW-Madison	Tom Speltz (A)	Lake Arrowhead GC
Matt Kinnard (E)	Proturf Solutions	Benjamin Steeger (A)	Vitense Golfland
Barry Larson (E)	Textron	Michael O. Stein (A)	Dretzka GC
Gabriel Lopez (E)	Irrigation Protection Services	Michael Walczak (E)	On Course
Luke McGhee (S)	UW-Madison	Tyler Wessyldyk (C)	Nassau Country Club

May Meeting At West Bend Country Club

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

Jeff Gibson of Water Well Solutions was on hand to present "Maximizing Efficiency Of Wells, Pumps and Controls. Jeff provided a informative talk on regular maintenance to allow pumps and motors to run efficiently to allow for a longer life. Just like cars pumps and motors need regular service to avoid catastrophic untimely failure.

When a minor loss of flow is detected a bowl and impeller can easily be restored to "like" new specifications. However if the parts are allowed to deteriorate beyond repair, replacement can be costly.

Well maintenance can be hard to get grasp of as we operators never see the actual well. A well should be rehabilitated before it has a 20% loss in specific capacity.

Gibson also discussed the causes and cures of decreasing water flow including new technology in Air Bursting.

As Jeff was finishing up and our thoughts were turning to lunch and golf the skies turned black and opened up a 3/4" deluge of rain in a short time. As we looked out the clubhouse windows we saw a course white with rain water. Rivers flowed down the 9th and 18th holes during the storm.

As attendees were making plans for early returns home after lunch host superintendent Bruce Worzella announced we would wait an hour re-group and play 9 holes. I for one did not believe him, but I was proven wrong.

As the rain stopped we loaded our clubs and headed out to a amazingly dry golf course. In our 9 holes I saw one puddle in the grass and one in a bunker.

With 30 plus years of service at West Bend Country Club Worzella showed he knew the property and how well it drains.

Set on Kettle Moraine glacial till soils West Bend Country Club was designed by Langford and Moreau in 1930 with a second 9 designed by David Gill in 1960. Given the limited ability to move soil in the 1930's West Bend is a incredible layout with steep banks and deep bunkering.

According to the West Bend Country Club website William Langford would build greens with a steam shovel to make a big pile of dirt on the green pad. Then he simply scraped off the top. He let the dirt fall at its natural angle of repose, creating those steep sides.

Then workers would rake out the banks and hazards by hand giving his courses a very natural flowing look.

Bruce Worzella started at West Bend CC in 1979 after time spent at The Ridges and Bulls Eye both near his hometown of Wisconsin Rapids. Not only has Bruce worked at the club for going on 35 years he has lived on the course with his wife Mary raising their three children Beth, Marci and Michaeyln.

Bruce served on the WGCSA board starting in 1984 and as Chapter President in 1992 and 1993. After his presidency he did not disappear but stayed active in the industry serving on the Golf Turf Symposium Committee and Wee One Foundation.

Bruce is looking forward to retirement at the end of the season and moving north a bit to relax and enjoy life with Mary.

Host Superintendent Bruce Worzella with GCSAA Director John Fulling. Fulling was on hand to congratulate Bruce on his years of service to the industry and West Bend Country Club.

The Par 3 eigth hole shows some of the slopes and banks Langford's design features.

Thank you to our hosts Rick Weiterman, Burce Worzella and Brian Bonlander

Above: The Par 5 Third Hole Has A Challenging Green

Middle: Mark Robel Hits His Approach Shot

Below: Jeremy Dahl Drives On Hole 9

Above: Speaker Jeff Gibson Presented Information On Maximizing Effeciency Of Our Pumpstations.

Right: "Partners" Donated By The Family of Dr. Robert Dunlop welcomes players to the first and tenth tees.

Summer Is Here!

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

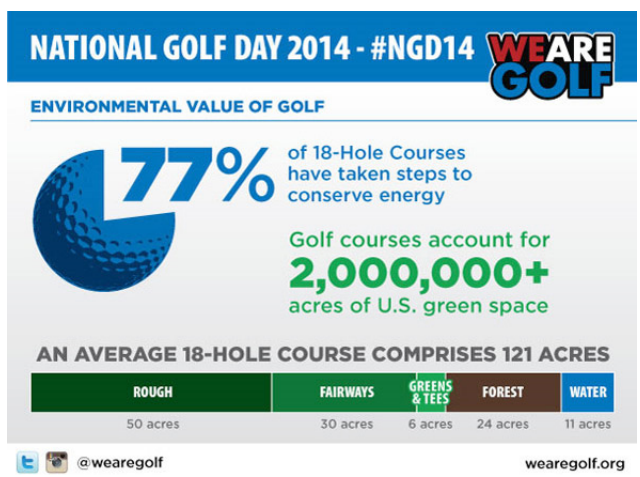
After what could be called the slowest spring ever summer seems to be here. For us in Fond du Lac this had to be the latest the trees have leafed out in recent history. It seemed the Friday before Memorial Day we had no leaves and the Tuesday after the trees were full after some beautiful warm weather.

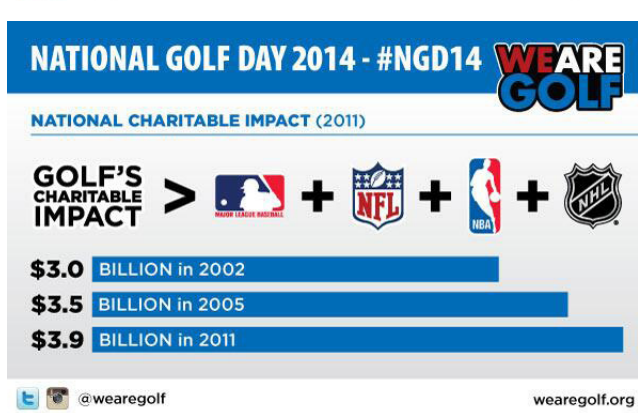
By the time you are reading this it will be mid June and time to think about when the student employees are heading back to school. Well okay, not quite but it really is not that far away and the summer months will fly by.

****

We Are Golf , hosted National Golf Day on May 21st on Capital Hill. We Are Golf is a coalition of leading golf organizations including the Club Managers Association (CMAA), Golf Course Superintendents Association (GCSAA), Golf Course Owners (NGCOA), PGA Tour, PGA of America, United States Golf Association, World Golf Foundation and U.S. Golf Manufactures Council.

Jack Nicklaus was in attendance to speak at the First Tee Congressional Breakfast and participate in the kick off in the Cannon Caucus Room.





EDITOR'S NOTEBOOK

The attendees participated in over 120 scheduled Congressional meetings and hosted a day long exhibit featuring live lessons for members of Congress and their staffs. Golf Channels Micahel Breed and LPGA Professional Dana Rader hosted a closest to the pin contest in a golf simulator along with a Republican vs Democrat putting challenge.

GCSAA had a turf educational display and focused conversations on environmental issues and proposed changes to the Clean Water Act.

The graphics on the previous page show the main points National Golf Day was promoting. The golf industry is a near $70 billion dollar industry with $4 billion in annual charitable impacts.

Golf's leaders shared the game employees over 2 million individuals and provides $55.6 billion in annual wage income.

****

We can promote the game all we want but in springs like this rounds will be down in the Midwest. According to Golf Data Tech rounds in May were up 14% in 2014 when compared to the also cold, often white April of 2013. 14% sounds great but not when compared to a normal year,

Jim Koppenhaver of Pellucid Corporation came out with end of the year numbers recently that shows the overall golfer base dropped by 5% in 2013 continuing a ongoing trend that had seemed to level off in 2012. He went on to show the biggest losses were with casual golfers who play 2-9 rounds per year and the involved golfers who play 10-39 rounds per year.

Koppenhaver is never one to beat around the bush or put a silver lining on a dark cloud did have some encouraging news that female participation grew slightly. Time will tell if this is from the many womens programs being held around the country or a anomaly.

Jim pointed out it seemed to be counterproductive for industry trade associations to continue going on record saying all is well when the industry should be making changes. In advice to individual clubs and operators Koppenhaver offered "To control our own destiny, our facility-level focus must continue to be on winning the battle for a larger piece of the shrinking golfer and rounds pie."

****

Congratulations to the David Jahnke, Washington County Golf Course, Dustin Riley, Occonomowoc Country Club, Scott Schaller, North Shore Golf Club and Jeff Barlow, Waupaca Country Club for recently renewing their Certified Golf Course Superintendent designation with GCSAA.

The association has over 1500 certified members who participate in at least 150 hours of continuing education and professional development every 5 years.

****

Be sure to visit page 37 and try to welcome one of our new members to the association. Also check out the event calendar as it is loaded with great dates.

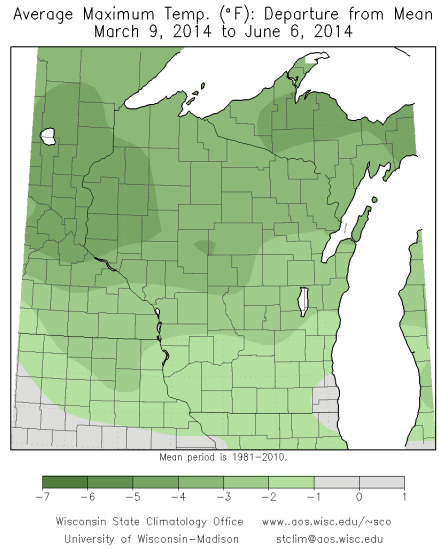
Next up is the tournament meeting at Brown Deer Park Golf Club on June 23rd. And no its only a serious tournament for the guy who wins. The rest of us are there for networking and education.

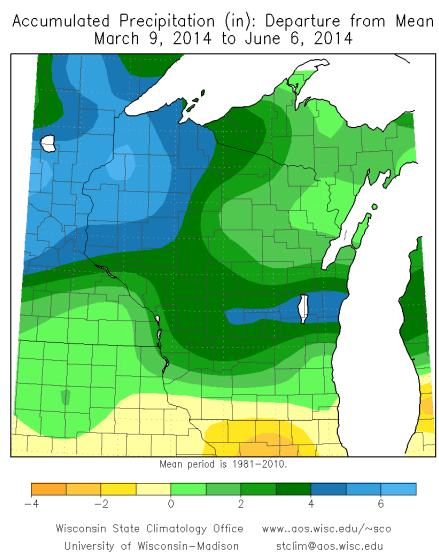
The WTA Field Day is July 29th with most of the golf turf research in the afternoon so we can work the morning and be educated after the lunch.

August 11th is the Joint WGCSA NGL-GCSA Meeting at Brown County Golf Course.

As the summer season continues be sure to get away and enjoy yourself and your families and friends.

Wishes of fairways and greens and soaking nighttime rains once a week to you and your staffs!





The maps above courtesy of the Wisconsin State Climate Office show the past 90 days were cooler and wetter for most of Wisconsin than the 30 year mean period of 1981-2010.

Fox Valley Hosts Super Pro

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

Host Superintendent Scott Bushman had to wait a year to host the Super Pro after mother nature's winter of 2013 took a toll on the links last spring and Bushman suggested the event be moved to another venue.

Bushman and the staff at Fox Valley worked hard last spring to return the course to normal conditions and this year the course was in great condition and the weather for the day was perfect.

Fox Valley Golf Club was designed in 1964 by Ed Locke with updates by Lohmann Golf Designs. The course is set on a nice rolling property with a variety of features.

The Super Pro follows the Chapman system with two person teams. Division one is for the traditional WPGA Member and WGCSA Member from the same club. Division two is open for other teams or those with one member without a handicap.

The Chapman system is named for Dick Chapman a great amateur golfer who regularly played at Pinehurst Resort. He also was invited to the Masters 19 times. On a par 4 Both players on a team tee off and then switch balls with player A hitting player B's ball and vice-versa. From there the players choose a ball to play alternately to the hole.

The team of John Freeman and Jeff Millies from Edgwood Golf Club returned to the winners circle after a 13 year absence with a net score of 62.70. A strong victory over the second place team of Chris Goodwick and Mike Blazich of Wild Rock Golf Club with 67.9. In third Michael Crowley and Travis Krauklis from Moningstar Golf Club with 68.35 while John Wallrich and Rod Johnson from Pine Hills Country Club took fourth with 68.4. Rounding out the money list in fifth was Jim Maguire and Lee Mahnke.

In the open division Mike Kactro and Craig Czerniejewski from Washington County won with a gross 75 net 66.

Thanks go to the WPGA for organizing the event and sponsor Premier Golf and Utility Vehicles. The Super Pro is a fun event offering networking opportunities between WPGA and WGCSA members.

Above: Chris Goodwick, Mike Blazich, Jeff Ellingson, Peter Meyer

Above Right: Joel Weitz, Ben Steeger, Lee Mahnke, Jim Maguire

Right: Justin Goosen, Chad Harrington, Jeff Barlow Scott LeMire

Above Left: Randy DuPont, Eddie Terasa, John Wallrich, Rod Johnson

Above Right: Our host Scott Bushman

Left: Seth Brogren hits his approach into hole 2.

Bottom Left: Travis Krauklis guides his shot in hole 2.

Super / Pro Past Winners

2013 - Charlie Brown / John Feiner (Johnson Park)
2012 - Seth Jamison / Craig Filley (Nakoma)
2011 - Eddie Terasa / Randy DuPont (North Hills)
2010 - Charlie Brown / John Feiner (Johnson Park)
2009 - Tom Dolby / Jay Pritzl (Timber Ridge)
2008 - Tom Dolby / Jay Pritzl (Timber Ridge)
2007 - Charlie Brown / John Feiner (Johnson Park)
2006 - Don DuChateau / Jim Van Herwynen (South Hills)
2005 - Charlie Brown / John Feiner (Johnson Park)
2004 - Eddie Terasa / Randy DuPont (North Hills)
2003 - Fred Hancock / Jeff Barlow (Waupaca)
2002 - Charlie Brown / John Feiner (Johnson Park)
2001 - John Freeman / Jeff Millies (Edgewood)

Above Left: 509 Yard Par 5 Third Hole

Middle Left: Division 2 Winners from Washington County GC, Mike Kactro and Craig Czerniejewski.

Above Right: 143 yard Par 3 Eigth Hole

Middle Right: Division 1 Winners from Edgwood GC, John Freeman and Jeff Millies.

Right: 352 Yard Par 4 Ninth Hole

Above: 498 Yard Par 5 Tenth Hole.

Top Right: Mike Kactro strokes a putt on hole 2.

Below Right: Jim Van Herwynen lazers in a apporach shot on the 6th.

Below: 198 Yard Par 3 Twelth Hole

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