The GRASS ROOTS

AN OFFICIAL PUBLICATION OF THE WISCONSIN GOLF COURSE SUPERINTENDENTS ASSOCIATION

VOL. XLII
ISSUE 3
MAY/JUNE 2013

E-Cut™ Hybrid fairway and greens mowers.
With wires instead of hydraulic lines, these mowers virtually eliminate the possibility of a damaging hydraulic leak right before, say, the member-guest tournament. Plus they deliver a precise cut that'll leave even the pickiest players speechless. Contact your John Deere Golf rep for a demo—and discover all the other ways you can **Consider us part of your crew.**

JOHN DEERE
GOLF

J. W. TURF, INC.
14 N 937 US HWY 20
HAMPSHIRE, IL 60140
(847) 683-4653
www.jwturfinc.com

J. W. TURF, INC.
717 MAIN STREET
ALLENTON, WI 53002
(888) 959-8873
www.jwturfinc.com

BT10CU1C44573-00348309

TABLE OF CONTENTS

ABOUT THE COVER

Bruce Schweiger, Manger of the Turfgrass Diagnostic Lab on the Par 3 10th Hole At South Hills Country Club in Fond du Lac.

Visit our Website at

www.wgcsa.com

Fate makes our relatives; choice makes our friends. **By French Poet Jacques Delille, 1738-1813**

This quote by Delille not only can be used to shape our friendships but also to shape our hiring and retention practices as employers. Do you have friends or employees that drag you down? Choose to remove them from your life and focus on those that help your life.

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.

EDITOR
David A Brandenburg, CGCS
Rolling Meadows Golf Course
PO 314 Theresa, WI 53091
grassroots@wgcsa.com

2013 WGCSA OFFICERS AND DIRECTORS
Front Row: Chad Harrington, Colin Seaburg, Jim Van Herwynen, Jon Canavan. Back Row: Brett Grams, Jeff Millies, Jeff Barlow, Josh LePine, Jake Schneider, Scott Bushman, Kevin Knudtson. (Not pictured Steve Wasser.)

Patience

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

I have always told people and felt that one of the greatest benefits to our profession is the fact that every day, every season, and every year is different and will bring new challenges. Not that I have a problem with a routine, as I have found out a routine can be very nice, but I personally enjoy the diversity each new day brings…..at least until this spring.

The early start that many of the Wisconsin Golf Courses enjoyed in 2012 has seemed to bring a false and extremely unrealistic expectation to golfers in our region. I am not sure we collectively have enough fingers to count the times I have heard about how great the weather was last year or how many rounds were played at this time in 2012. I am still looking for the polite and courteous method to explain that although we take great pride in the property we represent, we can do very little about the weather conditions that occur at the facility. One would think that the average golfer would understand that, but we do seem to get the blame.

I know I have mentioned that my favorite part of our industry is the diversity that comes with it, but I will say that 2013 has started a bit mean to many of us. The "Spring" issues at our facility actually started way back in January with the heavy rains that melted much of our snow base and filled our wetlands, lakes, and streams. I was asked multiple times to gaze into the crystal ball and predict what the outcome would be for our turf as we get started for the season. Every course responds differently to weather events, but our facility usually drains fairly well, so I was not overly concerned about the water we had just received seeing that most of it had drained into our wetlands and lakes. My crystal ball must have had a crack! Little did I know that we would get another three plus feet of snow and completely overwhelm our drainage areas.

So much for being prepared for the hundred-year flood. I did find it almost humorous when my son told me that the fishing was great on the thirteenth fairway. One cleaned out drain tile and a week without rain and we were good to go. See how our jobs keep us learning new and exciting things to keep us interested and on our toes. I wish this is all I was able to learn this year, but unfortunately it was not.

Warm weather has finally made a bit of an appearance to our state and many of us had to fire up the irrigation and we are no different. Flooded in one spot, dry in another. This year became even more exciting than most for what I would consider a "regular" task. I am sure like many of you, we had the occasional broken head or cracked pipe that somehow had a bit of water that didn't get blown out, but unfortunately that was not it. I again got to learn something new for 2013. I found out that when you have a fire protection system in your facility that is hooked to your irrigation system and pump station, and that fire protection system has a leak, you can pump a lot of water into a building at one time.

This type of issue has very little to do with turf maintenance, but many of are responsible for clubhouse maintenance as well, and this event has definitely allowed me to learn a couple of new skills. One of them is patience. No one ever likes to pay an insurance premium, but make no mistake, it is important. Thankfully a couple of weeks into this process things are starting to get back to normal and shortly I will be able to move back into my office that will have a bit of a facelift. I have been amazed what the loss of something as simple as an office, and of course everything that was in it, can affect my daily routine. Maybe I need to rethink my opinion about a regular routine, this year that doesn't sound bad at all.

Some of you have probably heard, but for those of you who have not, we are losing one of our valued board members. I would like to congratulate Colin Seaberg on accepting the Superintendent position at Barton Hills CC in Ann Arbor, Michigan and wish him the very best. I have appreciated the dedication, hard work, and enthusiasm Colin has displayed as a member of the WGCSA and our Association's Board of Directors. Thank you for all of your efforts Colin.

For the members who have attended our first two golf-meeting events this season, you may have noticed something new at our registration table. We have been working with Ping Apparel to be able to provide WGCSA logo merchandise to our association at a great value. Many of the other allied golf associations have offered branded apparel for many years and we felt it would be prudent to be able to make the same offer.

If you have not been able to attend one of our first events or missed the order form at registration, there will be one included in this copy of *The Grass Roots* and look for an electronic link on our web site shortly. All of the clothing orders will be shipped directly to you from Ping and are a great way for us to show the pride we share of our profession.

I wish all of you the best of luck in the 2013 season and thank you for being a part of this exciting and ever changing profession and association.

Wisconsin Chapter GCSAA
GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

Make a Big Impression

Without Leaving One

The new Toro® Reelmaster® 3550-D floats effortlessly over contours in fairways and green surrounds. Featuring a productive 82" cutting width, turf friendly tires, a Tier 4 compliant engine, the superior traction of a Series/Parallel 3-wheel drive system, and a weight of less than 2,000 pounds*, the Reelmaster® 3550-D is the new lightweight fairway champion.

*Gross vehicle weight for standard configuration, including five 18 inch cutting units with no optional accessories.

Reinders

Solutions & Supplies for the Green Industry

W227 N6225 Sussex Road | Sussex, WI
800.782.3300 | www.reinders.com

TORO®

Count on it.

www.toro.com

COMMERCIAL EQUIPMENT SALES

Derek Kastenschmidt 414.313.5260 | Mark Robel 414.313.5296
Scott Neary 608.220.6593 | Scott Thompson 715.573.3602 | Andy Brownlow 715.892.2027

Spring Office Activities

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

All of you are very aware of the long winter and then cold and wet spring we had this year and had everything in WI off to a slow start. I look forward to the first Saturday each May which is historically the start of our Fishing Season. This year I could have ventured to my favorite lakes in Northern WI but I refused to ice fish in May! In fact many lakes finally had "ice out" the weekend of May 10th. I have yet to talk to an "old timer" that recalls a later start to spring than this year. I wish all of you who experienced winter damage a speedy recovery and that your tee sheet and membership rosters start to fill up quickly.

While we all waited to get the golf season underway I was quite busy with our annual spring efforts. The start of the year is a busy one for me as we have to update our annual membership and collection of dues. Thankfully the majority of you renewed by the Feb. 1st deadline which makes the administration of this task far easier. I have been working at getting the last of our members renewed since that time. I still have 12 of you left to go but I could not wait any longer to print our directory. I am happy to report that with the printing and mailing the last of my spring projects is complete! In addition to the membership renewal/directory I have also secured the Industry Partnerships from our generous and dedicated Vendor Companies.

We have seen a reduction of overall participation as companies are cutting back, downsizing staff, or merging which has changed how much money is being sent on advertising in our *The Grass Roots*, sponsoring our meetings, and underwriting our WI Hospitality Room. Please consider the companies that sponsor our events and advertise in this magazine when you make buying decisions! The leaders of the WGCSA will address this by being careful in our expenditures and look to additional ways to raise funds and maintain revenues. One successful fundraiser that has helped raise turf research funding at UW Madison has also been completed. I am happy to report that we raised over $11,000.00 during Masters Week thanks to the generous member clubs and courses that donated rounds for our 4th Annual PAR 4 Research Auction. This brings our net total to the UW of over $40,000.00.

This event takes a fair amount of my time in creating the website and managing the donations, processing and collecting funds and mailing out the various prizes and certificates. I find it especially rewarding as the relationship with the UW and the education and research provided is part of our core missions since our chapter was formed 83 years ago. Thanks to Dustin Riley (chairman) and Jake Schneider who are so helpful with securing donations and helping promote the event. I could not do this without their help!

I am happy to report that we raised over $11,000.00 during Masters Week thanks to the generous member clubs and courses that donated rounds for our 4th Annual PAR 4 Research Auction. This brings our net total to the UW of over $40,000.00.

It was with mixed feelings when I learned that Colin Seaberg, CGCS resigned his spot on our Board of Directors this month. I am happy for Colin who is taking a new Job at the prestigious Barton Hills CC in Michigan but I was sad to lose his leadership and dedication. Colin was always quick to offer suggestions and support and did a great job of monitoring the Governmental Regulations Committee in recent years. Colin represented our association and members in some important meetings and for that we should all be grateful. Colin has promised to remain a member and I am confident that we will remain an influential leader in our industry even though he is out of state.

It is hard to believe that June will mark the start of my fifth season as Chapter Manager. I have been fortunate enough to work with four dedicated servant leaders as they took the time as Chapter President. President Chad Harrington started his term this year and you are already seeing his impact and initiates that he is bringing to our membership. Chad has given a lot of his time and thought making sure that we are adding value to our membership and promoting our chapter and profession. One of his first projects is the creation of a very nice line of apparel thru Ping that will carry our chapter logo. I challenge all of you to find an item or two for yourself, staff, or spouse. This is not a revenue generating effort, rather we are trying to offer you a great price for golf related clothing which will also showcase and promote our membership and chapter.

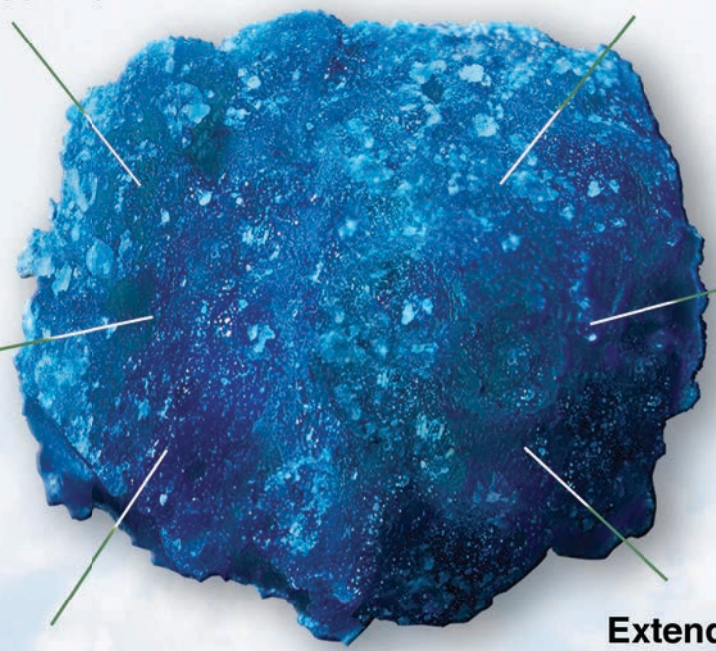
The WGCSA board has also been busy with the various committee assignments. We have our speakers and meeting dates set for the remainder of the year. Work is being done to finalize the last of the speakers for the Turf Symposium, and the board will soon be making plans to conduct a long range planning meeting this fall.

Thanks to good leadership the WGCSA is financially healthy, has a stable membership, and will be working at enhancing new initiatives and efforts to better serve our members and industry in the years to come. I wish all of you a successful golf season and hope that you and your family and friends can find some time to enjoy our much deserved summer season! . If any of you would like to share ideas, make suggestions or simply have a question or issue that I may be of assistance please contact me. I am happy to help all members any way that I can.

MESA®

Patented Controlled Release Nitrogen

A little bit of blue makes a whole lot of green



DHD TURF & TREE

More brands.
Better performance.

LebanonTurf

Best of All Worlds™

www.LebanonTurf.com 1-800-233-0628

How Reliable is Soil Testing?

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

Who hasn't heard the phrase "Don't guess, soil test!", or listened to a speaker tout the importance of soil testing prior to planning out a fertility program? But the truth is a soil test is only as good as the method used and the research data supporting it. And unfortunately, the methods are not always appropriate and the data behind the soil test interpretations is thin or non-existent. But soil testing can be an effective part of your fertilizer program when used properly. In this article we'll cover the most common soil testing mistakes and how to avoid them.

One of my favorite quotes on soil testing comes from O.J. Noer's book The ABC of Turfgrass Culture (1928). O.J. worked under Emil Truog, a Soil Science Professor at the University of Wisconsin who pioneered soil testing as we know it today. So as a turfgrass agronomist with at great deal of technical knowledge about soil testing, O.J. said:

"There is a tendency to place undue emphasis upon the value of chemical soil tests. This is true of some technical workers as well as salesmen. These methods have a promising future but their present usefulness is limited by imperfect [methods] and for a lack of definite correlation with field experience."

Although this was written 85 years ago, many aspects of this quote still ring true. We'll go through the three highlighted parts individually and I'll try to explain their continued relevance to our situation today.

"Imperfect Methods"

Soil testing is a relatively straight forward practice. You collect some soil, you send it to a laboratory. The laboratory dries and grinds the soil, then takes a pinch and adds a half ounce or so of a chemical extractant and shakes the soil/liquid solution for a few minutes. Next, the solution is poured through a filter and the clear solution is analyzed for the nutrients in the soil. The chemical extractant is usually some sort of acid (ph < 7) combined with salt. The acid is used to extract the plant available phosphorus, while the salt is used to measure the exchangeable cations like potassium, calcium, and magnesium.

For acidic soils, commonly used extractants include the Bray-1 and the Mehlich-3. For high pH soils, the Olsen extraction is a good choice. Often, soil testing labs will use several different extractants on the same soil. For example, they may use the Bray-1 for phosphorus and ammonium acetate for potassium and other cations. Soil testing laboratories usually use the tests that are most appropriate for the soils in their region, so if you are sending samples across the country it makes sense to make sure the proper extractant is being used on your soils. Table 1 gives some general guidelines, although exceptions may apply. Some soil test reports do not list the extractant that was used. In that case, simply call the laboratory and ask. You'll notice that Mehlich-3 shows up in every category in Table 1. While Mehlich-3 may not be the best test for all situations, it is regarded by many as the most versatile extractant and it's the one we have the most calibration data for here in Wisconsin, with the Bray coming in a close second.

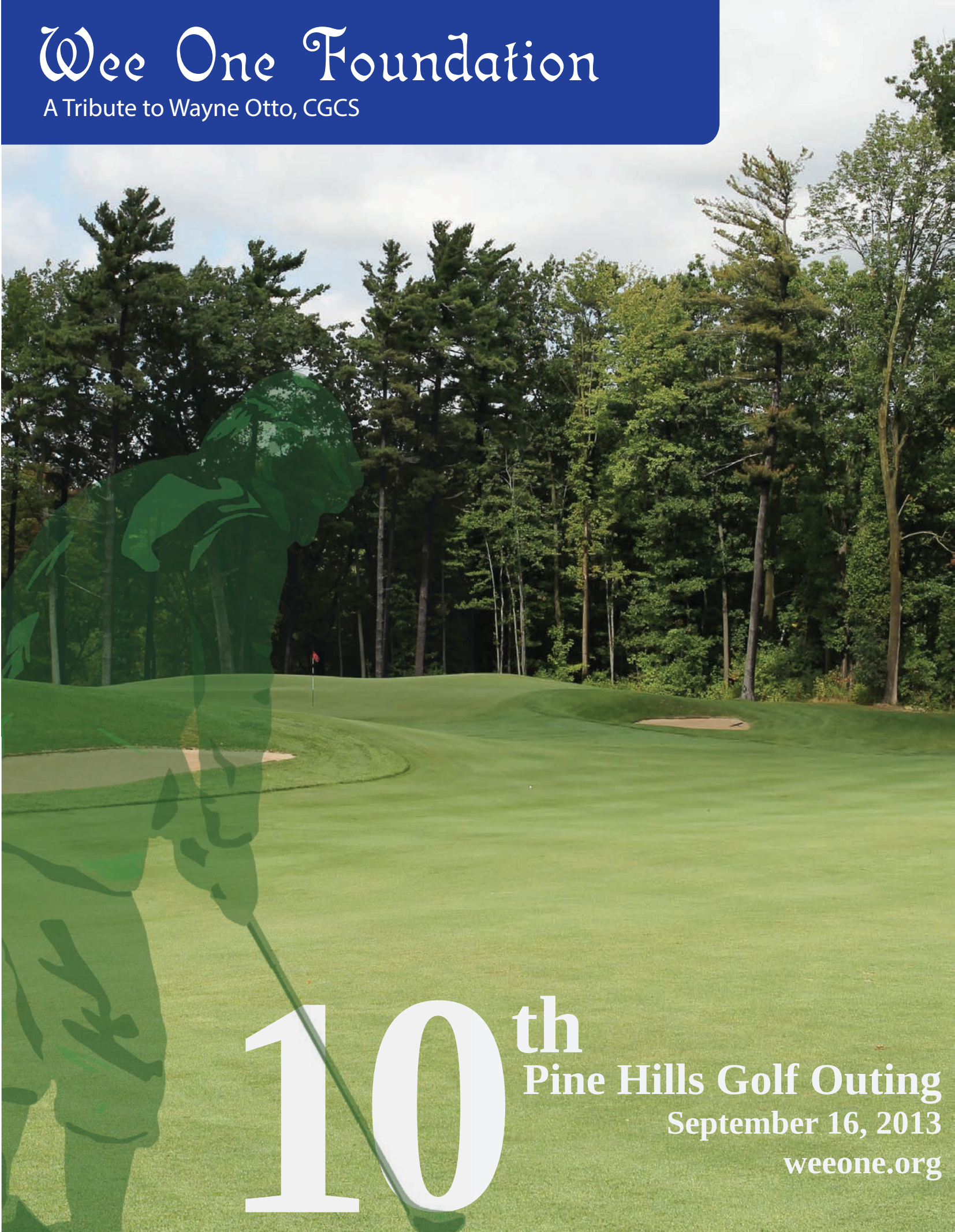
Assuming the correct extractant is chosen, there is another important but overlooked step in getting good results: pulling the sample properly. Nutrients aren't uniformly distributed in the soil like they are in agricultural fields. Because we usually apply fertilizers to the soil surface and do not till them in, over time certain nutrients, especially phosphorus, accumulate near the surface and are at lower levels deeper in the soil. This means that that the deeper you push the probe into the soil, the lower your soil phosphorus levels will appear. I have fielded many phone calls where the manager explained that the soil phosphorous levels rose rapidly from one year to the next, even though the manager applied no phosphorus fertilizer. This could be attributed to a shallower testing depth than the year before. For this reason, it is critical to maintain a consistent sampling depth over the years. Use a sharp tool to score a line on the probe at your desired testing depth - I recommend something between 10 and 15 cm – and make sure you use a consistent sampling depth from year to year.

Table 1. General guidelines for appropriate soil tests for low and high pH soils.

Nutrient	High pH Soils (>7)	Low pH Soils (<7)
Phosphorus	Olsen, Mehlich-3	Bray-1, Bray-2, Mehlich-1, Mehlich-3, Morgan, Modified Morgan
Potassium, Calcium, Magnesium, Sodium	Buffered ammonium acetate (pH=8.5), Mehlich-3	Neutral ammonium acetate (pH=7), Mehlich-3
Micronutrients	DTPA, Mehlich-3	DTPA, Mehlich-3

Wee One Foundation

A Tribute to Wayne Otto, CGCS



10th Pine Hills Golf Outing

September 16, 2013

weeone.org

"Lack of definite correlation with field experience"

In general, soil test reports do not offer a user-friendly experience. In fact, most people understandably skip the details and decimal points and go straight to the section where says either low, optimum, or excessive. The often overlooked question, however, is how was the assessment of low, optimum, or excessive developed? Soil test data are specific to a crop type and a soil type. That means the "optimum" number for corn on a Batavia silt loam will be different from that of corn on a Miami silt loam. Or, the "optimum" level for soybeans on a Batavia silt loam will differ from that of corn on the same soil. That means that we need to run a whole bunch of studies for each crop type and each soil type to have reliable data. Much of this work has been done in agriculture because of the economic significance of food production. But soil testing research for turfgrass is hard to find. The little work that has been done is only specific for a particular grass species (or even variety), and the soil type that is was growing on. For example, we ran the study shown in Figure 1 to show that for a high pH sand root zone with 'A4' creeping bentgrass the optimum Mehlich-3 phosphorus is above 7 ppm. Under no circumstances could I assume that 7 ppm would be ideal for a loam soil growing Kentucky bluegrass. We'd need to run another study for that number which we haven't done yet. So, to get around this issue, we take the data we have (in this case 7 ppm) and round it up for safety. At the Wisconsin state soil testing laboratory, any Mehlich-3 soil test less than 25 ppm will say "low" – even though the true definition of "low" is probably much lower.

In essence, I suppose you could say most soil test interpretations for turfgrass are simply educated guesses. If you sent the same soil sample to six different labs, chances are you'd get at least three different interpretations. Now you can fully appreciate the irony embedded in the phrase "Don't guess, soil test". Turfgrass researchers continue to improve the soil testing recommendations, but that type of research is time consuming and expensive. It is also worth noting that every time a researcher conducts one of these studies, they tend to find that the levels required are lower than what we previously thought – meaning that "low potassium" you got on your last soil test report might be optimum down the road.

"Undue Emphasis"

Without understanding all the limitations that we just covered, it's easy to see how one could get carried away by attempting to find the "ideal" level of every nutrient in the soil. One common over-interpretation is when soil test reports recommend balancing the soil cations using the base cation saturation ratio or BCSR. BCSR-style interpretations use the same methods as described above, but recommend that the soil cations (calcium, magnesium, and potassium) are balanced in an "ideal" ratio. Unfortunately, after years of research we still have no evidence that this approach works, but we do know that someone who follows this approach ends up spending a lot more money . (1)

To avoid over-interpretation or relying solely on your laboratory's (or consultant's) interpretations of your soil-testing results, I recommend you compare your results with PACE Turf's Minimum Level for Sustainable Nutrition guidelines which can be found here: www.paceturf.org/PTRI/Documents/1202_ref.pdf.

Instead of drawing their interpretations from a single study, these minimum levels are based on a very large database of soil testing results where the turf was deemed to be performing average or above average (all soil samples from poor performing turf were thrown out).

The "minimum level" was set at the lower one-third of the dataset.(2) That means about 33% of the soil samples with good turf had soil test levels (for potassium or phosphorus, etc.) below that minimum level. While you could argue this remains a conservative approach, the minimum levels published by PACE are drastically lower than many traditional soil test interpretations, and likely more accurate.

In conclusion, soil testing can be useful for fertilizer planning, but is far from a perfect system. More research is required to continue to defining and re-defining optimum soil test levels for the multitude of soil types and grass varieties. While our soil testing methods have come a long way in the last 85 years, there is still a tendency to place undue emphasis on the value of soil testing.

For best results:

1. Make sure you have a consistent depth when you pull your soil samples.
2. Send your samples to the same reputable laboratory year after year, and ensure they are using a proper extractant based on your soil pH.
3. Don't over interpret your soil test results. Avoid balancing cations and double check the laboratory or consultant's recommendations with the PACE Turf's MLSN Guidelines before making decisions on corrective action.

"Notes"

(1) For an extensive summary of this research, check out "A review of the use of the basic cation saturation ratio and the 'ideal' soil" by Drs. Peter Kopittke and Neal Menzies in the March/April 2007 edition of the *Soil Science Society of America Journal.*

(2) It's actually a bit more complicated than this, and you can read more here: http://www.plantmanagementnetwork.org/pub/ats/proceedings/2013/root-zones/8.htm

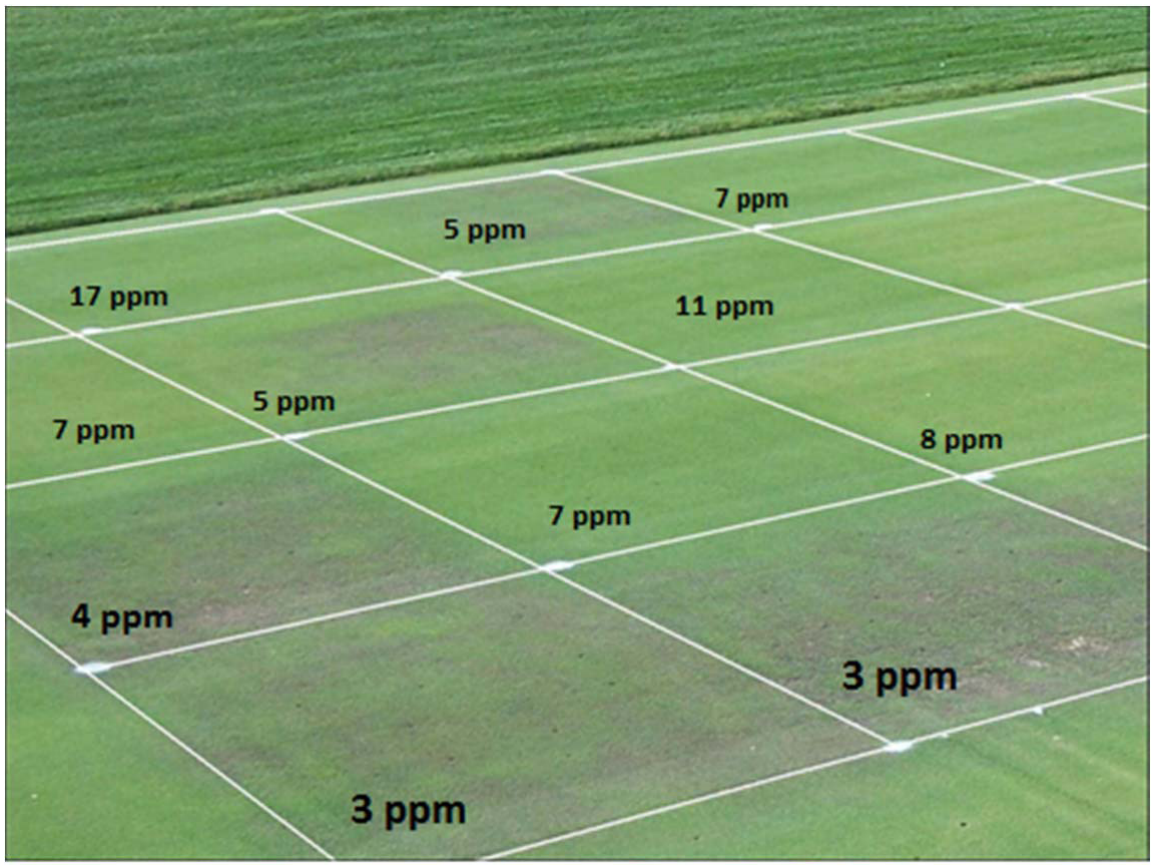


Figure 1. Phosphorus deficiency of creeping bentgrass on a high pH sand based root zone. Deficiency symptoms disappear above 5 ppm Mehlich-3 extractable soil phosphorus.

Beneficial Insects: Our Most Loyal Employees

By Glen R Obear and PJ Liesch, Department of Entomology, UW-Madison

We are all very familiar with problematic insect pests, but what about insects that do NOT cause damage? It turns out that despite the huge diversity of insect life in the world— 700,000 to over 1,000,000 discovered species—less than 1% of them are actually pests. So what are 99% of insects doing if they are not causing a problem? It turns out that a large group of insects, referred to as "beneficial insects," are controlling our insect pests for us. However, we still do not understand these insects fully, despite the valuable services they provide.

Insects can be classified based on the ecological niche they fill—in other words, how and what they eat. Most of the insects that we consider to be pests of turfgrass feed on plant tissue. These insects are very diverse, including many species of beetles, butterfly/moth larvae, and "true bugs" with piercing-sucking mouthparts.

There are some insects that strictly feed on other insects, called predators. Common predators are also quite diverse, including tiger beetles, ground beetles, rove beetles, ladybugs, dragonflies, praying mantids, and ants (just to name a few). Many of these predators tend to be generalists, meaning they feed on a number of different species of insects.

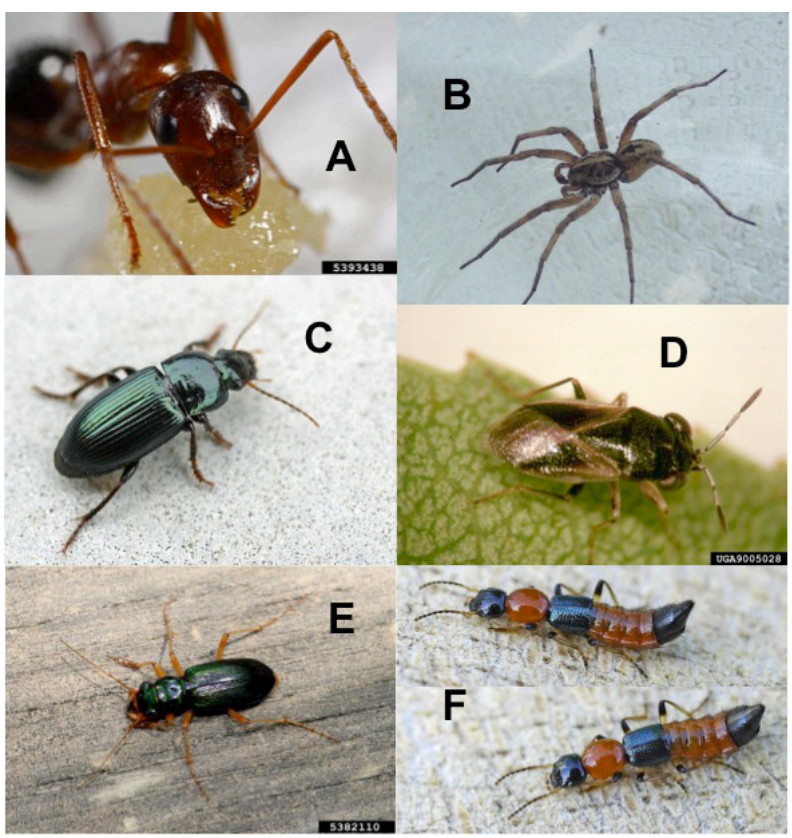


Figure 1. Common groups of arthropod predators in turf systems. A. Ant (photo: Joseph Berger, Bugwood.org); B. Wolf spider (photo: Patrick Edwin Moran, 3 October 2005, central North Carolina, USA. Hogna helluo (male), a species of wolf spider.) C. Ground beetle (photo ©entomart; Wikipedia Commons). D. Big-eyed bug (photo: Bradley Higbee, Paramount Farming, Bugwood.org). E. Tiger beetle (photo: Whitney Cranshaw, Colorado State University, Bugwood.org) F. Rove beetle (photo ©entomart; Wikipedia Commons).

There are also insects called parasitoids. These insects actually lay their eggs either inside (endoparasitoid) or outside (ectoparasitoid) the body of other insects. When the eggs hatch, the larvae begin growing and feeding on its host, where they grow to adulthood. At this point, they leave their host and fly away to mate and find a new host for their offspring. Parasitoid insects primarily include many families of small wasps, and these insects tend to be highly specific in the hosts they choose.

Predators and parasitoids can help to keep pest populations in check. The trouble is that it is difficult to determine the economic value of biological control, and these beneficial insects work on their own time, not ours. Still, beneficial insects provide us with free biological control of our insect pests, so we certainly owe it to them to gain a better understanding of who they are, what kind of services they provide, and how our management practices might affect them.

Beneficial Arthropods in Turfgrass

A study at Auburn University (Auburn, AL) was conducted to identify predators of black cutworm larvae. Larvae were pinned in place into the surface of putting greens at a research station and on a golf course. The cutworms were put out just before dusk, and then they were monitored every 30-40 minutes until 1:00-3:00AM. Using flashlights, the researchers collected insects that were seen to be feeding on the cutworms, and took them back to the lab for identification. We replicated this study on putting greens and fairways at University Ridge Golf Course, and the O.J. Noer Turfgrass Research and Education Facility.

From our study and the Auburn study, a number of black cutworm predators were identified on putting greens, including tiger beetles, rove beetles, ground beetles, click beetles, assassin bugs, ants, wolf spiders, and even earwigs (Fig. 1). Many of these predators are also known to eat the eggs and larvae of other turfgrass pests, including white grubs. There is much less known about parasitoids of insect pests, but these insects have been shown to target white grubs, caterpillars, and mealybugs.

Minimize Our Impact, Maximize Their Services

Chemical control is certainly a valuable tool— a well-timed insecticide application can often save us from sustaining significant damage from an insect infestation. However, certain products that we use are more toxic than others, and this has implications for beneficial insects. Kentucky bluegrass plots treated with isazofos and carbaryl had 70% less predation of Japanese beetle eggs, and lower predator abundance. Plots treated with these products during the Japanese beetle oviposition period actually experienced higher infestations of white grubs relative to untreated plots, suggesting that the beneficial insects may provide significant control of Japanese beetle eggs (Terry et al., 1993). By ignoring the role of beneficial insects, we are potentially missing out on a great gift from nature- free control of our insect pests.

There are some things that we can do to minimize our impact on beneficial insects, thus maximizing their services. The insecticide industry has experienced a broad shift since the 1990's from curative control to preventive control, and the newer insecticide chemistries have relatively low toxicity to mammals and birds (Held and Potter, 2012). There are a few promising products on the market that selectively target our pest species, leaving beneficial insects relatively unharmed.

Chlorantraniliprole, an anthranilic diamide insecticide, has a very favorable environmental profile. This product displays a >500 fold differential selectivity towards insects over mammals, and features an LD50 of >5000 mg/kg and no signal word (i.e., CAUTION, WARNING, or DANGER) (Cordova et al., 2006). This product has excellent long-term residual activity, and can provide control of most of our major turfgrass pests with relatively low use-rates.

Spinosad is a reduced-risk insecticide that comes from the fermentation of an actinomycete fungus. This product has short residual efficacy, but can provide effective against most of our major turfgrass pests if applied during at the correct time. This product also tends to be more selective towards pests, with lower risks to beneficial insects. One study investigated the activity of spinosad on over 100 species of predator insects, and found that the product was non-lethal to 70-80% of them. The researchers did find that this product was lethal to 75-85% of parasitoids tested (Williams et al., 2010). However, due to the short residual efficacy of this product, a carefully timed application could control insect pests without posing a great risk to beneficial insects.

Figure 2. Sign highlighting environmentally-friendly practices being conducted at University Ridge Golf Course in 2010. Some examples include Audubon Cooperative Sanctuary program certification (A), examples of wildlife on the course (B), the use of a hybrid greens mower (C), and information about the Ice Age Trail (D), which is open to the public and runs through wooded and natural areas of the golf course. This sign was strategically placed near a tee where golfers often wait several minutes for the group ahead of them before hitting their tee shot, giving them plenty of time to check it out.

In addition to chemical control options, growing diverse plant communities also increase the number and diversity of predators in the area, and these predators in turn can help reduce pest populations. Incorporating natural areas adjacent to turf on the golf course increases biological control of insect pests, including Japanese beetle eggs, fall armyworm eggs and larvae (Braman et al., 2002), and black cutworm larvae (Frank and Shrewsbury, 2004).

The future of insect pest control is moving towards an integrated approach- one that does not rely solely on chemical treatment. Furthermore, the attention given to negative effects on non-target insects is increasing, and pest control strategies will have to take these organisms into account. For example, neonicotinoid insecticides have been implicated in a recent decline in honeybee populations, referred to as colony collapse disorder, and this claim has been greatly debated in the scientific community. Whether the neonicotinoid insecticides are playing a role in colony collapse disorder, or whether it is a combination of other factors, one thing is certain: as people who use these products, the public eye is on us. It will be more important than ever to keep accurate records, follow product labels, and justify our actions when controlling pests. If we are proactive in adopting this integrated approach, we will be well prepared for potential future regulatory challenges.

Making our integrated approach highly visible to our club members, customers, and neighbors will go a long way towards improving society's perception of how we manage our pests. For example, the Audubon Cooperative Sanctuary certification program promotes wildlife preservation on golf courses. Strategically placed signs near cart paths can show pictures and highlight the practices we are doing to preserve wildlife on the golf course (Fig. 2). Maintaining a blog online can help communicate conservation practices to your members and the community. Finally, don't forget about things you might already be doing: raising mowing heights, adjusting fertility and irrigation, returning clippings, maintaining sharp mower blades, and overseeding insect-damaged areas are just a few examples of management practices that we might take for granted, but certainly help reduce pest-damage without insecticides (Held and Potter, 2012).

While we still don't understand them fully, beneficial insects might be our most loyal employees. These insects are helping to keep our pest populations down, so we have much to gain by working to minimize our impact on them, and allowing them to do what they are best at.

Literature Cited:

Braman, S.K., A.F. Pendley, and W. Corley. 2002. *Influence of commercially available wildflower mixes on beneficial arthropod abundance and predation in turfgrass.* Environ. Entomol. 31:564-572.

Cordova, D., E.A. Benner, M.D. Sacher, J.J. Rauh, J.S. Sopa, G. P. Lahm, et al. 2006. *Anthranilic diamides: a new class of insecticides with a novel mode of action, ryanodine receptor activation.* Pestic. Biochem. Physiol. 84:196-214.

Frank, S.D., and P.M. Shrewsbury. 2004. *Effect of conservation strips on the abundance and distribution of natural enemies and predation of Agrotis ipsilon (Lepidoptera: Noctuidae) on golf course fairways.* Environ. Entomol. 33:1662-1672.

Held, D.W., and D.A. Potter. 2012. *Prospects for managing turfgrass pests with reduced chemical inputs.* Ann. Rev. Entomol. 57:329-354.

Terry, L.A., D.A. Potter, and P.G. Spicer. 1993. *Insecticides affect predatory arthopods and predation on Japanese beetle (Coleoptera: Scarabaeidae) eggs and fall armyworm (Lepidoptera: Noctuidae) pupae in turfgrass.* J. Econ. Entomol. 86:871-878.

Williams, T., J. Valle, and E. Vinuela. 2010. *Is the naturally-derived insecticide Spinosad® compatible with insect natural enemies?* Biocont. Sci. and Tech. 13:459-475.

Office: 847.537.2177

www.arthurclesen.com

ARTHUR CLESEN INC

Quality Products. Quality Service. Quality People.

Fertilizers

Andersons
Grigg's
Lebanon
Redox
Shaw's
UMaxx

Chemicals

Aquatrols
Bayer
Phoenix
Syngenta
SePro
Valent

Seed

Classics
"Blue Tag"
Commercial line

Tree Care

Arborjet

Scott Bartosh, Golf Sales Representative • 262-221-5524 • s.bartosh@arthurclesen.com

Certified WBENC Women's Business Enterprise

John Anderson, Sales Manager • 630-669-0519 • j.anderson@arthurclesen.com

Relative Resistance of Creeping Bentgrass Cultivars to Sclerotinia Homoeocarpa and Typhula Incarnata

By Dr. Paul Koch, Department of Pathology, University of Wisconsin - Madison and
Dr. Jim Kerns, Department of Pathology, North Carolina State University

Editors/Author's Note: T*he following article was previously published in Applied Turfgrass Science (10.1094/ATS-2012-1022-01-RS) and subsequently in the January 2013 issue of Golf Course Management. It is reproduced here in part due to the generous contributions of the Wisconsin Golf Course Superintendents Association, in particular Eagle River GC Superintendent Ken Smith.*

INTRODUCTION

Creeping bentgrass (*Agrostis stolonifera* L.) has long been the preferred species of turfgrass on most golf courses in temperate climates of the world. The bentgrass cultivar 'Penncross' was introduced in 1954 by Dr. H.B. Musser at Penn State University and was the first widely-used seeded type of creeping bentgrass, replacing many of the vegetatively-propagated bentgrasses that had predominated since the turn of the century (10). Despite its continued utility, Penncross creeping bentgrass does provide challenges for the modern golf course superintendent. Penncross can segregate into genetically-distinct clones, producing a patchy or mottled appearance over time (2). Penncross is susceptible to thinning when managed for modern-day putting green expectations, allowing for annual bluegrass (*Poa annua* L.) encroachment (7). Penncross is also susceptible to a number of turfgrass diseases, namely dollar spot (caused by *Sclerotinia homoeocarpa* F.T. Bennett), requiring repeated fungicide usage to maintain acceptable quality (4).

A number of bentgrass cultivars have been released in recent years with improved characteristics, including increased shoot density and drought tolerance (3, 6, 11). A few cultivars, most notably 'Declaration' and 'Memorial,' have demonstrated partial resistance to *Sclerotinia homoeocarpa* (4). Bentgrass cultivars with improved resistance to fungal pathogens could potentially reduce fungicide requirements. Reduced fungicide usage would save golf course managers thousands of dollars per year and lower the environmental impact of golf course management. Yet, the upfront costs of a golf course renovation easily exceed normal chemical and fertilizer budgets. It remains unclear whether choosing a cultivar based solely on resistance to fungal pathogens can lead to a reduction in fungicide usage substantial enough to justify the costs of renovation.

The majority of disease resistance breeding efforts have focused on developing bentgrasses with improved resistance to S. homoeocarpa (4). For many golf courses in the upper Midwest, however, snow mold management is just as important as any other turfgrass disease (5). Many golf courses in the region spend $10,000 to 20,000 annually to manage snow molds such as Microdochium patch and Typhula blight. Differences among bentgrass cultivars with regards to Microdochium patch (*Microdochium nivale* (Fr.) Samuels & I. C. Hallett) resistance have been documented, but little information exists for Typhula blight (*Typhula incarnata* Lasch, *T. ishikariensis* Imai) (1, 5)Typhula blight is commonly separated into gray snow mold (caused by *T. incarnata*) and speckled snow mold (caused by *T. ishikariensis*), primarily to separate for differences in conditions conducive for disease development. Gray snow mold requires a minimum of 60 days of continuous snow cover to develop while speckled snow mold requires a minimum of 90 days of continuous snow cover to cause disease (5). Without information regarding the level of resistance bentgrass cultivars have to the Typhula blight pathogens, golf course superintendents in climates conducive for Typhula blight development cannot make an informed decision regarding cultivar selection for their site.

Bentgrass cultivars that exhibit significant resistance to a variety of fungal pathogens may limit fungicide expenditures and provide a long-term strategy towards sustainability in golf turf management. The objectives of this study were to (1) evaluate the relative resistance of eight bentgrass cultivars to *S. homoeocarpa* in a reduced fungicide program to determine whether the inherent resistance might reduce fungicide usage, and to (2) evaluate the resistance of the same eight cultivars to *T. incarnata* in the absence of fungicides to determine if resistance to this important pathogen exists at all.

EXPERIMENTAL DESIGN AND PLOT PREPARATION

Eight cultivars of creeping bentgrass were established during the summer of 2009 at the OJ Noer Turfgrass Research and Education Facility (OJN) in Madison, WI in a randomized complete block design with four replications. The eight cultivars tested were 'Penncross', 'Declaration', 'Memorial', 'Penn A-1', 'Penn A-4', 'LS-44', 'Syn-96', and 'Penn G-1'. Individual plots measured 1.5 × 3 m with four replications, and each cultivar was seeded at 48.38 kg ha-1. The experimental area was fumigated using dazomet (tetrahydro-3,5,-dimethyl-2H-1,3,5-thiadiazine-2-thione) applied as Basamid (Certis USA, Columbia, MD) prior to seeding to kill viable annual bluegrass seeds. Cultivars were maintained at a fairway height of 1.25 cm and fertilized with approximately 98.0 kg N ha-1 annually. The experimental area was not inoculated with either pathogen throughout the course of the study.

FUNIGICIDE APPLICATIONS AND DISEASE RATING

Pesticides were not applied to the experimental area during cultivar establishment or during the fall of 2009. Monthly applications of propiconazole and chlorothalonil were made to all plots on approximately June 1, July 1, and August 1 in 2010 and 2011. Propiconazole was applied as Banner MAXX® (Syngenta Crop Protection, Greensboro, NC) at the rate of 0.5 kg a.i. ha-1 and chlorothalonil was applied as Daconil WeatherStik® (Syngenta Crop Protection, Greensboro, NC) at the rate of 8.03 kg a.i. ha-1. This reduced rate was selected to allow for dollar spot development without the risk of a total loss of the experimental area to disease. Fall fungicide applications targeting Typhula blight were not made in throughout the study in order to evaluate resistance to *T. incarnata*.

Typhula blight severity was visually assessed as percent area of the plot diseased immediately following snow melt on March 18th, April 7th, and March 18th in 2010, 2011, and 2012, respectively. Dollar spot severity was assessed by counting individual foci as epidemics developed every two weeks throughout the growing season. The two most severe ratings from each year were combined and used for analysis, with the exception of 2009 when only two ratings were used because of cultivar seeding in mid-summer. The most severe rating dates used were 14 Sep and 29 Sep in 2009, 21 Jun and 8 Jul in 2010, and14 Jul and 11 Aug in 2011. Disease severity values were subjected to analysis of variance (ANOVA; PROC MIXED) and means were separated using Fisher's protected LSD using PDMIX macro (8) in SAS (Version 9.1; SAS Institute, Cary, NC). Due to differences in disease development each year, years were analyzed separately.

DOLLAR SPOT DEVELOPMENT

Overall, dollar spot severity was greater in 2011 than both 2010 and 2009 due to prolonged periods of temperatures above 30°C and relative humidity greater than 85%. (Table 1). Creeping bentgrass cultivar did affect dollar spot severity in all three years (p *value* ≤ 0.05). Over the entire 3-year study, dollar spot severity was lowest for Declaration and Memorial (Table 1). In general, dollar spot severity on Penn A-1, Penn A-4, LS-44, Syn-96 and Penn G-2 was similar or greater when compared to Penncross throughout the 3-year study (Figure 1).

These results suggest that the cultivars Declaration and Memorial are more resistant to the dollar spot pathogen relative to the other six cultivars tested. Resistance in these two cultivars is partial, however; by 2011 foci numbers exceeded 200 on the three most severe rating dates. The epidemic occurred despite monthly applications of reduced-rate fungicides during the summer and would have been deemed unacceptable by most golf course superintendent's standards. The frequency and amount of fungicide applied in this study was reduced compared to a standard program golf course superintendents in the Upper Midwest utilize for fairway disease management. If the reduced fungicide program used in this study could not provide acceptable suppression of dollar spot throughout the growing season, then it remains unclear if significant reductions in fungicide usage could be obtained solely through the use of partially disease-resistant bentgrass cultivars in the Midwest. However, limited fungicide usage may be achieved when Memorial and Declaration are used in conjunction with disease suppressive cultural practices and warrants further investigation.

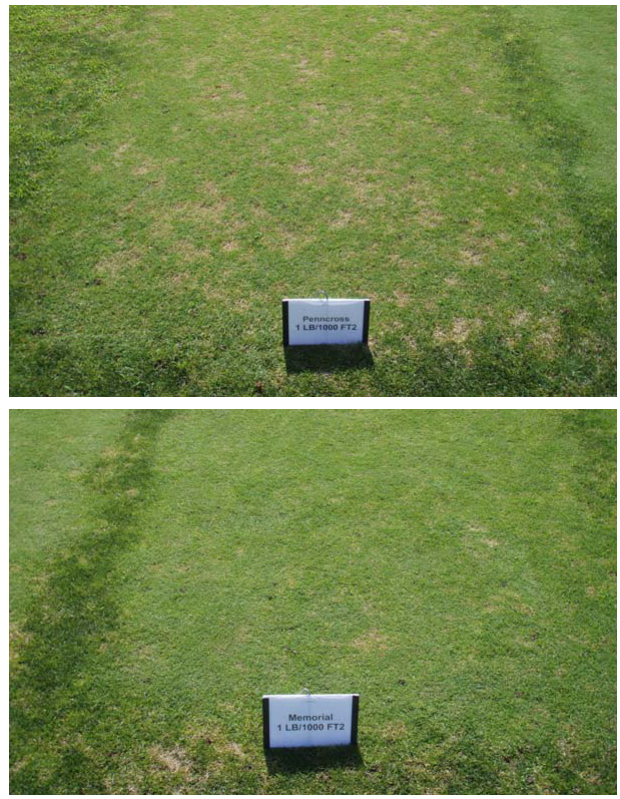


Figure 1. Dollar spot development on 'Penncross' compared to 'Memorial' creeping bentgrass on August 11th, 2011 at Eagle River GC in Eagle River, WI.

TABLES AND FIGURES

Table 1. Dollar spot severity on eight creeping bentgrass cultivars in 2009, 2010, and 2011 at the OJ Noer Turfgrass Research Facility in Madison, WI.

	Number of Dollar Spot Foci[y]		
Cultivar	2009	2010	2011
Penncross	135 a[z]	113 b	359 b
Declaration	60 bc	61 c	228 c
Memorial	44 c	36 c	275 c
Penn A-1	91 abc	76 bc	388 b
Penn A-4	101 ab	206 a	380 b
LS-44	99 ab	99 bc	388 b
Syn-96	104 ab	175 a	518 a
Penn G-2	109 ab	199 a	542 a

[y] Dollar spot severity was estimated when disease developed through the summer months. Data represents mean number of dollar spot foci per plot calculated from the two most severe ratings in each year. Plots were 4.5m^2.

[z] Means with the same lower case letter within a year are not statistically different according to Fisher's Protected LSD.

THE MOWER THEY DON'T WANT YOU TO SEE.

The competition doesn't want you to see the Jacobsen ECLIPSE® 322 riding greens mower. They can't match its **ZERO leak points**. They can't provide **individual reel control** to vary cut patterns. They can't offer **programmable frequency-of-clip** from an LED screen. And they can't get anywhere near the **true hybrid fuel savings** or **legendary quality-of-cut**. When it comes to the ECLIPSE® 322, the competition can't do *anything* except hope you don't see it. I guess we just ruined that for them, too.

JACOBSEN®

1.888.922.TURF | www.jacobsen.com

HORST DISTRIBUTING, INC.
CHILTON, WI
1-800-279-2341

Phone: 800-279-2341
Fax: 920-849-9576

www.horstdistributing.com
HORST DISTRIBUTING, INC.
CHILTON, WI

TYPHULA BLIGHT DEVELOPMENT

Typhula blight, caused by *Typhula incarnata*, was the only snow mold observed within the experimental area in all 3 years. Typhula blight severity was highest in 2011 and 2012 (*p value* ≤ 0.05) [Table 2]. Throughout the study, Typhula blight severity was lowest on Memorial followed by Declaration and LS-44 (Figure 2). Penncross displayed the highest amount of disease in 2010 and 2011, but the least in 2012. Though unclear exactly why so little disease developed on Penncross in 2012, high variability existed between replications and does not appear to indicate any disease suppressive characteristics of Penncross.

Fungicides were not applied to the research area to prevent Typhula blight development, and these results clearly show differences in the degree of resistance that select bentgrass cultivars have against *T. incarnata*. On fairway turfgrass in the upper Midwest, however, most golf course superintendents would consider Typhula blight severity above 5-10% on fairways unacceptable. This disease is of paramount importance in the upper Midwest because of the effects on spring and early summer golf course revenue, and prior to this study research investigating the resistance of modern bentgrass cultivars to Typhula blight was mostly absent. Most golf course superintendents would not risk going into winter unprotected against Typhula blight development, and typically make one fungicide application shortly prior to expected snow cover.. However, with declining budgets, the widespread and costly fungicide applications made to manage Typhula blight in the upper Midwest may be a potential area of financial savings. Since fungicides were not applied to these plots to manage Typhula blight, it remains unclear whether reduced rates of fungicides could be used on the partially resistant cultivars for acceptable Typhula blight suppression and should be an area of future research.

Figure 2. Example of Typhula blight (Typhula incarnata) development on 'Penncross and 'Declaration' creeping bentgrasses on March 18, 2010 at the OJ Noer Turfgrass Research Facility in Madison, WI.

Table 2. Typhula blight severity on eight creeping bentgrass cultivars in 2010, 2011, and 2012 at the OJ Noer Turfgrass Research Facility in Madison, WI.

	Typhula blight severity (%)[y]		
Cultivar	2010	2011	2012
Penncross	28 a[z]	68 a	10 d d
Declaration	11 bc	21 d	35 b b
Memorial	12 bc	21 d	24 c c
A-1	21 a	50 b	40 b b
A-4	13 bc	50 b	58 a a
LS-44	10 c	25 cd	38 b b
Syn-96	8 c	31 c	51 a a
G-2	18 b	64 a	54 a a

[y] Typhula blight severity was visually estimated as percent area of the plot diseased following snowmelt on March 18th, April 7th, and March 18th in 2010, 2011, and 2012, respectively. Plots were 4.5 m^2..

[z] Means with the same lower case letter within a year are not statistically different according to Fisher's Protected LSD.

TURN ON THE COLOR.

NEW, IMPROVED COLOR!

VISION PRO HD

HIGH DEFINITION TURF COLORANT

Take your greens and tees from standard to picturesque with Vision Pro HD turf colorant. Vision Pro HD provides natural-looking, long-lasting green color that won't fade to blue. Specially formulated for chemical compatibility and safe for all types of pump seals, Vision Pro HD can be used alone or in combination with plant health and protection programs. Add Vision Pro HD to your greens and tees spray programs and let the pride in your turf quality show for itself.

Scan to learn more.

800-232-5907 • beckerunderwood.com

BECKER UNDERWOOD
Inventing the Future

CONCLUSION

New cultivars of creeping bentgrass released in the past decade have shown varying levels of resistance to numerous fungal pathogens. In this study, Declaration and Memorial were the only cultivars to consistently exhibit partial resistance to both dollar spot and Typhula blight in comparison to six other cultivars tested. This suggests that the resistance mechanism of these two cultivars may be broad and effective against a range of fungal pathogens. None of the cultivars tested suppressed dollar spot to acceptable levels even with monthly applications of reduced-rate fungicides. Suppression of Typhula blight on Declaration and Memorial was significant compared to the other cultivars tested, though disease severity was unacceptable on all cultivars tested despite the low to moderate Typhula blight pressure experienced in Madison, WI. It remains unclear whether reduced-rate fungicide applications can provide acceptable Typhula blight suppression on Memorial or Declaration. Planting these particular resistant cultivars may not lead to appreciable reductions in fungicide usage for the management of dollar spot without implementation of other disease suppressive cultural practices. Thus, it may take many years to recover the cost of converting fairways, tees, and/or putting greens to disease-resistant creeping bentgrass cultivars and attributes other than disease resistance should also be taken into account when considering golf course renovation.

LITERATURE CITED

1) Baldwin, C. B. 2010. Creeping bentgrass cultivar response to pink snow mold disease, 2009. *Plant Disease Management Reports* 4: T017.

2) Beard, J. B. 1973. *Turfgrass: Science and Culture*. Prentice Hall, Englewood Cliffs, NJ. p. 78.

3) Beard, J. B., Croce, P., Mocioni, M., DeLuca, A., Volterrani, M. 2001. The comparative competitive ability of thirteen *Agrostis stolonifera* cultivars to *Poa annua*. Intl. Turfgrass Soc. Res. J. 9: 828-831.

4) Bonos, S. A., Clarke, B. B., Meyer, W. A. 2006. Breeding for disease resistance in the major cool-season turfgrasses. Ann. Rev. Phytopath. 44: 213-214.

5) Hsiang, T., Matsumoto, N. Millett, S. M. 1999. Biology and management of Typhula snow molds of turfgrass. Plant Dis. 83: 788-798.

6) Liu, X., Huang, B. 2001. Seasonal changes and cultivar difference in turf quality, photosynthesis, and respiration of creeping bentgrass. *HortScience* 36: 1131-1135.

7) Samaranayake, H., Lawson, T. J., Murphy, J. A. 2008. Traffic stress effects on bentgrass putting green and fairway turf. *Crop Sci*. 48: 1193-1202.

8) Saxton, A.M. 1998. A macro for converting mean separation output to letter groupings in Proc Mixed. In Proc. 23rd SAS Users Group Intl., SAS Institute, Cary, NC: 1243-1246.

9) Settle, D., Fry, J., Tisserat, N. 2001. Dollar spot and brown patch fungicide management strategies in four creeping bentgrass cultivars. *Crop Sci*. 41: 1190-1197.

10) Stier, J. C. 2006. A short history of creeping bentgrass. *The Grass Roots*. 35(1): 4-9.

11) Stier, J. C., Hollman, A. B. 2003. Cultivation and topdressing requirements for thatch management in A and G bentgrasses and creeping bluegrass. *HortScience* 38:1227-1231.

Aquatrols Revolution®

Aquatrols Dispatch® Injectable

Aquatrols Dispatch® Sprayable

Aquatrols AQUEDUCT® SOIL SURFACTANT

Aquatrols AQUEDUCT® Soil Surfactant SWDG®

For over 50 years golf course superintendents worldwide have put their trust in Aquatrols soil surfactants to optimize soil moisture, improve irrigation efficiency, and save water and energy. Our patented chemistries, Revolution and Dispatch, provide unique performance and playability advantages versus all other wetting agents.

Larry Lennert
Territory Manager
Greenfield, WI
llennert@aquatrols.com
(773) 620-2382

Aquatrols®
www.aquatrols.com

News and Notes From WGCSA Members

By Matt Kinnard and The DHD Team

It is a very busy time of year for all of us, so lets get right to the news.

Career Moves

Eric Jasin has been promoted to the position of Director of Buildings and Grounds at Lake Arrowhead Golf Course in Nekoosa, WI. Eric hired two new superintendents for the two eighteen hole golf course there.

Tom Speltz has been hired as the new Superinendent of the Pines Course at Lake Arrowhead. Tom spent the last two years as the superintendent at Tempealeau Mountain Golf Course. He worked on the summer crew at Hartford Country Club in high school and after acquiring his Turf Degree from Anoka Technical College he worked at North Hills Country Club, Menomonee Falls, as Randy DuPont's Assistant Superintendent for seven years. Tom is an avid bow hunter, so if he's not out on the course in the fall, you'll find him in a bow stand.

At age sixteen, Adam Freeman, started working on the Lakes Course at Lake Arrowhead during the build and grow in; now he is the new Superintendent at the course. Between summers working at Lake Arrowhead, Adam graduated from UW-La Cross in 2005 with a degree in Marketing and Economics.

Unfortunately, right out of college, he wasn't happy working in marketing or sales (huh?), and wanted to get back on the golf course. With some encouragement from Eric Jasin, Adam went back to school at Rutgers University and received the Turf Management Certificate in 2009. Adam had the opportunity to intern at Pebble Beach for two years and from 2011-2013 was the Assistant Superintendent at Minocqua Country Club.

Congratulations to Eric, Tom and Adam on your new positions at Lake Arrowhead!

Originally from the great city of Fargo, North Dakota, Cris Kittleson has been named the new Superintendent at Bristol Oaks Golf Club in Bristol (Kenosha), WI. Cris received his Bachelors in Turf Management from the University of Minnesota – Crookston. While in college he completed his internship at Lake Geneva Country Club in 2004. After graduating he took the Assistants position at Lac La Belle GC (now Rolling Hills GC) for a year before settling down as the Superintendent at Country Club Estates in Fontana for seven years. Cris must have really impressed his Country Club Estates General Manager, Maria, because they are now engaged to be married. Aside from working on the course, Cris stays busy flipping houses and religiously following NCAA hockey. Congratulations Cris!

Dan Meidl accepted the position of golf course superintendent at the nine hole track, Bridgewood Golf Course in Neenah WI. Dan graduated from Gateway Technical College with a degree in Horticulture and Turf Management and was the superintendent at Weywont Run Country Club in Weyauwega, WI for many years. He also spent time working at Kenosha Country Club and Waupaca Country Club. I think Jazz, Dan's Rhodesian Ridgeback, is going to have a lot of fun running around Bridgewood. Congratulations Dan!

If you're going to experience working at only one golf course, Erin Hills might be the best place to do such a thing. Alex Beson-Crone has been hired as the new Assistant Superintendent at Erin Hills Golf Course. In 2005 Alex was taking some time off from what he was currently studying in college and began working at Erin Hills during the construction of the course in 2005. While working there, he found he had a growing interest in golf course maintenance and with a little encouragement from Superintendent Zach Reineking, Alex went back to school and graduated with a B.S. in Soil Science from UW-Madison in 2012. Congratulations Alex!

Jacob Rath is excited to move back to his hometown after accepting the position of Assistant GC Superintendent at North Shore Country Club in Menasha. He graduated from the University of Wisconsin – Stout in 2012. While in college Jake interned at Blackhawk CC in Madison for two summers, then spent 2012 as the Assistant Superintendent at Bishops Bay CC in Madison. Like so many of us, what started out as a summer job at the age of 16, he said, has turned into a career and something that he truly loves. Congratulations Jake!

Baby News

Steve Blake, the golf course superintendent at Ridgeway Country Club in Neenah, WI, welcomed his new daughter, Adeline Mae into the world on February 12th. At birth, Adeline Mae weighed 8 lbs 6oz and was 19" long. Congratulations to you and your family, Steve.

Passings

The Northern Great Lakes Golf Course Superintendents Association lost a long time active member and past president with the passing of Steven Spears on May 6, 2013.

The 48 year old Spears was superintendent at St. Germain Golf Club for the past 17 years.

He and his wife Marci lived in Sugar Camp with their two children Ethan and Ella.

A memorial golf tournament was held June 11 to raise funds for Ethan and Ella's education.

Participation is key for the success of this article, so please don't hesitate to forward any news you would like to share about yourself, employees or colleagues to me.

Please pass along any significant news or happenings around the state to Danny, Mike or me. We want to spread the good news. You can also email me at m.kinnard@sbcglobal.net or call at 920-210-9059.

National Golf Graphics

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

Sprinkler Head Yardage Caps
Toro, Rain Bird, Hunter

Staff Clothing
Polos, Hats, Sweats, Outerwear,
Workwear and T-Shirts

Cart Directional Signs
Hazard and Rope Stakes
Rinowood and Recycled Plastic

Flags

Embroidered, Screened
and Digitally Printed

Tee Signs

Bronze, Aluminum
Redwood, Plastic
and Granite

877-710-9363 ~ www.nationalgolfgraphics.com

WTA Summer Field Day - Don't Miss It

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

The WTA Summer Field Day will be here before you know it. The date is set for Tuesday, July 30, 2013. This is a great opportunity to visit the O.J. Noer Facility and learn about all the new turfgrass research being conducted at the University. There are over 60 ongoing studies this summer and several of the most pertinent ones will be showcased during the research tours. The education will describe new turf maintenance findings to help all turf managers on their sports fields, golf courses, sod farms, lawn care sites, parks, and other commercial turf areas.

Comments from attendees of previous field days asked for longer discussions during the educational tour. This year's presentations by UW-Madison turf researchers promise to be more in-depth than in past years. Bring your questions and be ready to learn from the researchers about their latest findings. There will be education both in the morning and afternoon, with the morning focused on lawn care and general turf issues, and afternoon focused towards golf turf. Attendees will gather relevant information from both sessions.

The morning turf research updates include these topics and more:

- Rust management for sod and lawns
- Choosing the right nitrogen source for the job
- Grass selection and fertility influence on weed populations
- New strategies for broadleaf control
- Environmentally sound lawn management
- Pre and post drought turf management
- Controlling ants

The afternoon golf turf research tour includes these topics and more:

- Spray volume affects on fungicide efficacy
- Fine fescue management
- Tools and technology for precision turf management
- Earthworm management in turf
- Wetting agent selection and application strategies
- Pigments and photochemical efficiency
- Chemical problems in putting green root zones

The education will be complemented by the ever popular summer field day tradeshow. Helpful vendors will offer expert advice about their latest equipment and supplies/services to help you manage your maintenance program better. Several equipment vendors allow test drives of their products so you can compare performance.

Summer Field Day is a great way to learn about the latest research coming from the UW-Madison, compare the newest commercial offerings from the trade show, and 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 pay online from the website if so desired. Field Day 2013 is going to be the best ever, and we hope to see you there on July 30th.

Wisconsin Turfgrass Summer Field Day

Tuesday, July 30th 2013

WISCONSIN TURFGRASS ASSOCIATION

UW Extension Learning for life

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 30th to learn all the latest turf management innovations coming out of the UW Madison. Morning research will focus on general turf research and afternoon will focus on golf turf research.

Research updates: Rust management, Choosing the right nitrogen source, Controlling weeds with fertility and grass species selection, Environmentally sound lawn management, Pre and post drought turf management, Earthworm and ant problems, Fungicide efficacy, Fine fescue management, Tools and technologies for turf management, Wetting agents, and So much more.

Former UW-Madison graduate student Bill Kreuser was recently hired as assistant professor at the Univ of Nebraska. He'll be returning to field day to talk about his latest research on pigments.

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

Where Does The Money Go?

By Mark Kienert, WTA Treasurer, Certified Golf Course Superintendent, Bulls Eye Country Club, Wisconsin Rapids

A reminder of where your donations have gone can be helpful as we ask for continued support from industry and our members. In July we will have the WTA Field Day to allow you to see the great research going on at the Noer Center. Followed by the WTA Golf Fundraiser benefitting the Wisconsin Turfgrass Research Sustainability Fund at Maple Bluff Country Club on September 23rd.

$2,463,256 in contributiions for Turfgrass Researcha and Education shows the WTA's committment to the University and our Industry. Keep in mind those funds do not include reserach funding from 1980-1996, the donation of the Noer Center or in kind gifts such as land work or materials contibuted.

Congratulations to the turgrass industry for your work and dedicaiton!

What has the WTA done with your contributions?
As of February 28, 2013

Educational-Fund Raising Activity Income (since 1996)

Summer Field Day	$	97,805
Golf Outing	$	131,245
Expo	$	161,790
	$	390,840

Other funding comes from dues & generous Contributions.

Grants Awarded (since 1996)

Scholarships	$	36,800
Endowment Accounts	$	298,395
Research	$	589,365
	$	923,760

Graduate Student Fellowships (since 1996)

Berbee Fellowship (Book values)	$	250,000
Kurth Fellowship	$	250,000
Kussow Fellowship	$	250,000
Newman Fellowship	$	250,000
Sustainability Fund	$	148,656
	$	1,148,656

TOTAL Contribution for Turfgrass Research & Education	$	2,463,256*

*This Total does not include the OJ Noer Research Facility in Verona. It also does not include research funding from 1980 to 1996. It does not include total endowment account values since inception. The total does not include gifts in kind like land work and materials contributed. Mark Kienert, WTA Treasurer.

A ariel shot of Maple Bluff Country Club near Madison. Maple Bluff will host the Wisconsin Turfgrass Association Golf Fundraiser September 23rd.

Wisconsin Turfgrass Association Golf Fundraiser

Benefitting the

Wisconsin Turfgrass Research Sustainability Fund

Maple Bluff Country Club – September 23

Where: Maple Bluff Country Club
500 Kensington Drive
Madison, WI 53704
(608) 249-2144

Cost: $125 per person

What: Golf, Cart, Practice Range, Lunch, Door Prizes, Golf Awards, Hors d' Oeuvres

When: Monday, September 23, 2013

9:30-11:00	Registration
9:30-11:30	Range
10:30-11:30	Lunch
11:45	4-Person Best Ball Shotgun Start
After Golf	Hors d' Oeuvres, Reception, Prizes, Cash Bar

Questions: (608) 845-6536

Directions from Interstate: West on Hwy 30 / Hwy 30 becomes Aberg Ave. / Left on Sherman Ave. / Right on Oxford Place / Right on Kensington Dr. (one block) into lot.

Maple Bluff Country Club

Maple Bluff Country Club, which today stands as one of the oldest and finest golf clubs in the Wisconsin, has a rich history that dates back to 1899. It was common in those days to see members arrive in horse and buggy or by steamboat which would leave the university area several times a day and land near the property. In 1901, MBCC was one of nine state golf clubs to form the Wisconsin State Golf Association. The club grew and prospered and in 1916 was enlarged to a full 18 hole course. The many course improvements over the years will thrill your game.

You are invited to play this classic Wisconsin treasure on September 23rd. Course superintendent Josh LePine, his staff, and the members of Maple Bluff Country Club, welcome everyone to this WTA event. Proceeds from the golf outing will be used by the UW-Madison turf faculty to develop new techniques for managing turfgrass with the most environmental approach.

ENTRY FORM – WTA Golf Outing Fundraiser

Name: _____ Phone: ( ) _____

Name: _____ Email: _____

Name: _____

Name: _____

# of People Attending ____ x $125 per person = _____

You May Also Sponsor A Golf Hole or Make an Additional Tax Deductible Contribution

Optional Tee Sign Golf Hole Sponsorship x $100 = _____

Name To Be Printed on Tee Sign --- _____

or Additional Tax Deductible Contribution = _____

- Please make check payable to WTA and return to 2502 Highway M / Verona,WI / 53593
- Refer questions about the outing to Audra Anderson at @ 608-845-6536 or ajander2@wisc.edu
- Registration deadline is Tuesday, September 17, 2013
- You may register by yourself or as a foursome

Winter Damage to Turfgrass in Wisconsin.

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

Editors Note: We welcome Mr. Bruce Schweiger as the new manager of the Turfgrass Diagnostic Lab at the O.J. Noer Turfgrass Research and Education Facility.

As we all know the summer of 2012 was possibly as difficult as we have ever experienced in Wisconsin. Now add to that the winter of 2012-2013and our turf has suffered. This past winter weather caused damage to the turfgrass throughout the state from golf courses, parks, landscapes and home lawns. Each and every one of us has been bombarded with people looking for answers. Below is a Memorandum that Dr. Paul Koch, Dr. Doug Soldat and I put together and are posting on the TDL website (tdl.wisc.edu). Please feel free to pass this article out or send people to the website to educate them on the turf conditions. I hope this proves to be helpful.

Severe Damage to turfgrass around the State

The drought of 2012 inflicted major damage to home lawns, golf courses, parks and other turfgrass areas throughout the state of Wisconsin and around the Midwest. However, severe damage as a result of the stressful winter conditions has also been noted here at the Turfgrass Diagnostic Lab and many turfgrass areas around the state are in need of partial or complete renovation.

Many of the current problems can be traced back to cultural practices conducted last fall. In an attempt to replenish the lawn prior to winter, many homeowners fertilized the lawn using quick release nitrogen fertilizers into late October. This late fall fertilization kept the turfgrass growing long after it should have been going dormant for winter, and prolonged stretches of deep snow cover and thick ice presented exceptionally difficult conditions for turfgrass to survive.

Unfortunately, much of the state's turfgrass could not survive the harsh winter conditions, especially on the heels of such a stressful summer. Fine fescues appear to have taken the brunt of the damage, followed by perennial ryegrass and Kentucky bluegrass. This has left the state with a very high percentage of dead turf. This phenomenon, coupled with the damage from the 2012 drought, has affected all types of turf; including home lawns, golf courses, athletic fields, and parks. Even experienced golf course superintendents are suffering from significant winter injury.

Our recommendation at the University of Wisconsin for recovery is to renovate using seed or sod, followed by proper cultural practices (i.e. fertilization and irrigation) to re-establish a healthy stand of turfgrass. See UW Extension publication Lawn Renovation and Reestablishment for detailed information on how best to proceed. Unfortunately, seeding turfgrass in the spring has significant challenges compared to seeding in the fall, one of the most significant being weed encroachment in the turfgrass stand. Be prepared to treat any weeds that emerge with a post-emergent herbicide, but be sure to read the herbicide label to ensure adequate weed control with limited harm to the turfgrass. With the delayed spring this year, it is important to establish healthy turfgrass now before the heat and humidity of summer make growing grass much more difficult.

Please don't hesitate to call the Turfgrass Diagnostic Lab with any questions you may have.

Turf covers did not protect this golf course green from the long 2013 winter. Damage from repeated freeze and thaws and ice cover are frustrating for staff and golfers.

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

THERE IS NO SUBSTITUTE.

Only Jacobsen® Genuine Parts can assure you greater productivity, lower maintenance and Jacobsen's legendary quality of cut.

There's a reason Jacobsen is known for quality of cut. Our standards and expectations for the parts and accessories we use to build our machines far exceed the norm. And when it comes to replacement parts, only Jacobsen Genuine Parts provide the best performance and superior results. With a 6-month factory warranty and same-day shipping, Jacobsen Genuine Parts keep your team productive and your course in pristine condition.

More information and downloadable manuals are available 24-hours a day at www.jacobsen.com.

GENUINE PARTS

www.Jacobsen.com

CONTACT US AT:

Burris Equipment
Waukegan
2216 N. Greenbay Rd.
Waukegan, IL 60087
(847) 336-1205 Phone
(847) 336-2697 Fax

Burris Equipment
Ingleside
27939 W. Concrete Dr
Ingleside, IL 60041
(815) 363-4100
(815) 363-4109

Burris Equipment
Frankfort
10351 West Laraway Rd.
Frankfort, IL 60423
(815) 464-6650
(815) 464-6951

Burris EQUIPMENT

JACOBSEN® A Textron Company

Rained Out at Strawberry Creek

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

April 23rd started out as one of the nicer mornings of 2013 but hopes for golf at The Club at Strawberry Creek quickly faded as rain moved in and temperatures plummeted. After the golf event was officially cancelled only a few diehard golfers braved the elements to enjoy the course provided by Host Superintendent Matt Kregel and his staff.

The wind driven rain did not stop Dr. Tom Voigt, Extension Specialist at the University of Illinois from speaking on The Trials and Tribulations with Un-Mowed Roughs. As many courses have gone from wall to wall groomed turf to allowing out of play areas to grow naturally the maintenance headaches caused by these areas have turf managers looking for answers.

The quest for a un-mowed turf that is weedfree and easy to find a golf ball and play a golf ball is a honorable one but it is not maintenance free or inexpensive. The group listened intently for advice from Dr. Voigt.

Successful low maintenance areas are defined by; 1. Appealing to look at. 2. Weed free. 3. Easy to find a golf ball. 4. Possible to hit a golf ball. 5. Low maintenance. Dr. Voigt quickly said the keys to success are choosing the correct plant for the correct environment and managing it correctly.

As much as the crowd wanted to hear and as much as Tom wanted to tell us the secret to allowing 50 year old stands of blue/rye/fescue roughs to grow up and be playable without maintenance we soon realized there is no secret to the impossible. Instead we have thick fallen over grasses make it impossible to find a ball much less play it and keep the weeds out.

To produce successful native areas turf mangers usually have to start from scratch and kill off the existing turf and plant a desirable species that matches the environment. One challenge we have in the badger state is our environment is too good with healthy soils and ample moisture causing thick turf or weed invasions.

Common native grasses such as big bluestem, indian grass and switch grass can be seeded while prairie cord grass needs to be plugged or have rhizomes spread. On the positive side these grasses are attractive, can be low maintenance and only need an annual mowing or burning. The negatives are they are slow to establish and can look ugly during establishment, are usually not playable and are easily invaded by weeds and undesirable species.

Other grasses that are shorter include buffalo grass, blue grama, side oats grama, little bluestem and prairie dropseed. These grasses are native to the great plains and attractive but again the negatives are slow establishment, ugly during establishment, slow to green up in spring and there is limited weed control.

Fine fescue can provide a playable turf but Dr. Voigt suggested avoiding creeping red and chewings fescue. Hard and sheeps fescue can work if kept on the dryer side when seeded at 1# per thousand square feet. Compacted sites need to be avoided. The areas should be mowed in the fall and if clippings are abundant they should be collected to avoid smothering the turf. At 1 to 1.5 pounds of nitrogen per year they areas may not get too thick but often the plants topple over in late summer causing problems with appearance and finding balls.

Dr. Tom Voigt, Associate Professor at the University of Illinois speaking on the Trials and Tribulation of Un-Mowed Roughs.

Burning can be used and Dr. Voigt suggested fall burning is hotter and favors forbs while spring burning is cooler and favors warm season grasses.

Research done at the Midwest Golf House showed blue grama provided a good un-mowed turf with inexpensive seeding and easy establishment at 20# per acre. It can be used alone or with buffalo grass and is easy to find and hit balls from. The negative was a slow spring green up even in Illinois. A trial should be done at your site to determine the results before trying any widespread planting.

I had asked the best way to convert our Heinz 57 mix of turf to a native mix and Tom suggested a roundup application followed by a tight mowing with clippings removed followed by another roundup application and slit seeding.

Dr. Voigt finished with advice on seed quality and storage. Native grasses are sold and planted by PLS or Pure Live Seed which is the % pure seed x the best germination rate. In the field the germination rate will be less depending on many factors. Seed should be used in the year purchased as the germination rate of many species can quickly fall.

Although we did not get the magic we were looking for to convert our thick blue/rye/fescue roughs to a playable maintenance free turf Tom did provided us with the tools to do some trials and see what works in our environment.

TOP: Our Hosts Assistant Superintendent Jeremy Dahl and Golf Course Superintendent Matt Kregel.

MIDDLE: Hole 2 at the Club at Strawbery Creek shows off the many native grass areas the course features.

BELOW: The group listens for advice on native areas from Dr. Tom Voigt.

Random Thoughts

By Jake Schneider, Assistant Superintendent, Blackhawk Country Club

One of the sure signs that the golf season is upon us is that my article submissions to our vastly underappreciated editor become later and later. I like to think that I'm normally pretty good at meeting the deadlines that David sets, but this article has embarrassingly set a new standard of personal tardiness. Between running a marathon that was much too warm for Green Bay in mid-May and trying to keep up with the grass that just won't seem to slow down, life's been busy.

Back to that darn grass… Not sure if it's just me, but the spring of 2013 seemed much busier than normal. It was the third latest opening date at Blackhawk (after last year's second earliest), and it seems as if we had to cram six weeks worth of into a three-week timeframe. But, so far, it's hard to complain too much. I was getting more than a little stir crazy with the winter that wouldn't end, but with the last three years that we've endured, a shortened year may not be the worst thing. Last year, we had a twenty-day stretch of rain-free weather in May, and thus far, the rains in 2013 have been timely and the temperatures have been fairly normal. Let's hope that it stays that way.

……

To say that the response to my last article concerning the First Tee project was underwhelming would be an understatement. I don't want to gripe and realize that money is tight, but it's disappointing to not have one company or individual express interest in helping to move the project forward. However, we do appreciate the willingness to help by those that Joe Sell and I have personally contacted. As of today (May 28), the project to build a chipping green for the First Tee program at Monona Golf Course has been approved by the city of Madison to proceed, and aside from lending our talents to a very worthwhile cause, those involved in leading this endeavor are going to do as much as possible to publicize and thank the generous contributors.

With that, it's not too late to help, and it appears as if monetary contributions will be needed the most. Again, please contact either myself or Joe Sell at Whistling Straits if you or your company would like to chip in for the chipping green.

……

MADTOWN MUZINGS

It humors me to no end that the USGA is so concerned with banning anchored putters. Maybe I haven't been paying close enough attention, but it doesn't seem as if there have been an alarming percentage of golf tournaments won by golfers who use an anchored putting stroke. Aside from that anecdotal observation, have putters really been driving changes in the game? It seems to me as if juiced up golf balls and drivers may be a bit more of an issue. On the flip side, I know that most average joes like the extra distance that these technological advances have brought, and if hitting the ball far helps to grow the game, I'm all for it.

Speaking of growing the game, I can't help but think that simplified golf rules would be a good thing. Lately, it seems as if every major golf tournament has some confusing rules gaffe, and I hope that prospective players aren't turned off by these complicated rulings that many seasoned players probably aren't even aware of.

…….

If you haven't watched the GolfdomTV interview with Matt Shaffer from Merion Golf Club, please take the time to do so. I found Matt's takes on golf course maintenance to be refreshingly candid and realistic. As a teaser, he likes grainy greens and hopes that a few of the players at the US Open have to hit from patches of white clover in the rough.

I hope that you and your golf club have a successful golf season, and by the time that the next *The Grass Roots* arrives, summer be nearing its end. Hopefully, my article will be on time for that issue or my time in this magazine might also be nearing its end.

Coming Events!

Tuesday July 30th, UW - Summer Field Day, OJ Noer Facility, Verona, Host - Tom Schwab

Tuesday August 20th, Joint meeting w/NGL, Stevens Point CC, St. Point, Host - John Femal

Monday September 16th, Wee One, Pine Hills CC, Sheboygan, Host - Rod Johnson

Monday September 23rd, WTA Golf Fundraiser, Maple Bluff CC, Host - Josh Lepine CGCS

Monday October 1, NGLGCSA Crew Outing - The Woods Golf Course, Ed Hoover

Saturday October 5th, Couples Outing/Party, Wild Rock GC, WI Dells, Host Michael Blazich

Tues and Wed Dec 10th-11th, Wisconsin Golf Turf Symposium, American Club, Kohler

Tuesday January 14th, WTA Turfgrass Research Day, Pyle Center, Madison

Feb 2-7, Golf Industry Show, GCSAA Conference, Orlando FL

Monday March 3rd, WGCSA Spring Business Meeting, Fond du Lac

Rays of Sunshine at North Hills County Club

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

North Hills Country Club Superintendent Randy Dupont delivered not only a pristine golf course on Monday, May 6, 2013 but also one of the nicer sunny days in the spring that wasn't.

Pre-meeting conversation focused on wet turf, dead turf and turf that was still half dormant from the cold weather.

The meeting started with the announcement by WTA Executive Director and WGCSA Historian Monroe Miller that Bruce Schweiger has been hired as the new Turfgrass Diagnostic Lab Manager at the O.J. Noer Center for Turfgrass Research. Monroe gave a great introduction and review of Bruce's career.

Schweiger is well known in the industry as a former superintendent and more recently a salesperson calling on many of us.

You can see more of Monroe's introduction and information about Schweiger on page 40.

The newly hired Schweiger quickly put on his Turfgrass Diagnostic Lab Manager hat and gave his presentation "Continuing to Build Momentum: My Vision for the TDL.

Bruce started with a history of the WTA and the Noer Center going way back to 1981 when Monroe Miller, Tom Harrison and other leaders in the industry got the ball rolling.

From that simple beginning to the building of the Noer center and giving it to the University to the opening of the Turfgrass Disease Diagnostic Lab. The lab changed from the TDDL to the TDL or Turfgrass Diagnostic Lab as the lab matured into diagnosing all types of turf problems for golf courses, home lawns and beyond.

This year there will be 80 different research plots at the Noer Center and the students are a big part of that work.

Bruce promises Dr. Koch will continue to look at every sample this year as he gathers his own experience. He also guaranteed accurate prompt diagnostic work as he works to increase the labs state and country wide stature.

Our Host, Randy Dupont, Golf Course Superintendent at North Hills Country Club.

The Entrance to North Hills Country Club.

The Clubhouse at North Hills Country Club.

Left: The par 4 5th Hole plays 383 yards from the Championship Tee. The leafless trees on May 6th are a indication of the cool spring.

Right: Garrett Luck hits his approach shot from the rough.

Schweiger is looking forward to helping develop a environmental tracking program using weather stations or monitors to help forecast disease outbreaks and applicaition timming.

Social media will be a bigger part of the TDL in the near future as instant communication will be importnant to getting the word out.

He also wants to be a sounding board for industry driven research so feel free to contact him. Bruce can be reached at bschweiger@wisc.edu, or 608-845-2535.

After a great sandwich buffet lunch the group hit the links for a nice afternoon of golf on the course designed in 1928 by John P Barr and redesigned in 1997 by Ken Killian.

The course is built on the 126 1/2 acre Charles Fuss farm in what was then known as Fussville. The site was selected because of the large wooded areas, rolling fields, and the Menomonee River meandering across the property.

Randy Dupont has been at the helm at North Hills since 1995 when he took over from Chad Ball who spent 4 years at the course. Bob Musbach spent 17 years from 1972-1989 after spelling Jim Markell who only spent one year at the course. Charles Shiley was superintendent from 1952 to 1970 and also served as President of the then Wisconsin Greenskeepers Association.

Ray Rolfs was the original "greenskeeper" when he stayed behind in the position after building the course for Pioneer Golf and Landscape Company. Rolfs was a charter member of the WGA and served as president from 1939-1941.

Randy and North Hills have hosted the Vince Lombardi Golf Classic each year since 1971 to raise funds for cancer research.

TWO PERSON BESTBALL RESULTS

GROSS SCORES-
1st place - Jim Shaw and Ed Witkowski 71
2nd place - Dan Wubbels and Peter Meyer 72
3rd place - Mark Lockhart and Travis Krauklis 74

NET SCORES -
1st place - John Meyer and Rod Johnson 63
2nd place - Bruce Worzella and Todd Fregien 66
3rd place - Cubby O'Brien and Matt Cavanaugh 66

FLAG EVENTS -
#2 closest to the pin Scott Bartosh
#7 longest putt Bruce Schweiger
#9 longest drive Matt Bazola
#12 closest to the pin Mike Skenadore
#18 longest drive Chad Harrington

WGCSA

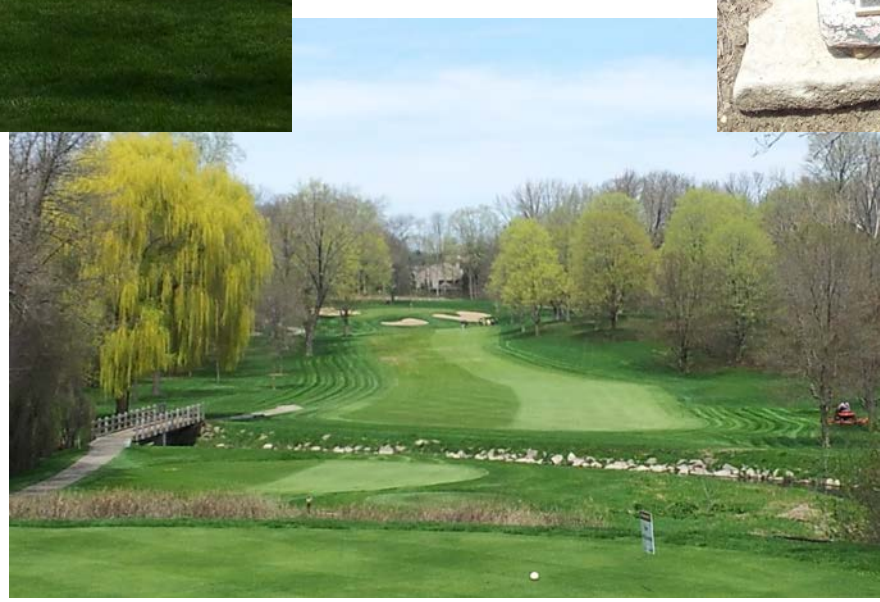
Top Left: Bruce Schweiger, Manager TDL.

Top Right: Monroe Miller, WGCSA Historian and WTA Executive Director.

Right: Players are reminded Golf Is A Constant Challenge on the 5th Tee.

Bottom: The Par-5 4th Hole

Left: The Par-5 18th Hole.



Bruce Schweiger Heads Turfgrass Diagnostic Lab

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course &
Monroe Miller, WGCSA Chapter Historian

Editors Note: Many parts of this article is from a introduction Chapter Historian, Monroe Miller gave when Bruce Schweiger was introduced at the May Meeting at North Hills Country Club.

There are few in the Wisconsin turf industry that do not know Bruce Schweiger as he has been involved in different ways since the early 1980's. But as much as we know Bruce many of us were surprised to hear he was going to succeed Dr. Paul Koch as the Manager of the Turfgrass Diagnostic Lab of the O.J. Noer Turfgrass Research and Education Facility.

Although we were surprised we also had a immediate comfortable feeling the lab is in good hands.

Bruce grew up in Madison, the son of a eastside pharmacist and early on he considered following his fathers footsteps until he determined pill counting was not that much fun. He entered UW Madison in the pre-pharmacy program but after two years of pharmacology the call of the golf course was too much.

Schweiger got his start as a summer employee at Maple Bluff Country Club and took a liking to outdoors and turfgrass management. After a talk with Dr. J.R. Love schweiger enrolled in the Soil Science Turfgrass Program and graduated in 1982 with a double major in soil science and horticulture. After college his experience at Maple Bluff Country Club with Tom Harrison allowed him to be hired as the golf course superintendent of Riverside Golf Course in Janesville.

Schweiger was promoted to general manager in 1985 and stayed in Janesville until 1989 when Tom Wentz hired him to work for OM Scotts and Son. He served as the regional sales manager for northern Illinois and southern Wisconsin for almost 11 years.

Bruce took that experience to Reinders in January of 2000 and spent another 10 years as an agronomist for them working with customers and sales staff. In 2006 he took a brief break from Reinders to serve as general manager of Marengo Ridge Golf Club in Marengo, IL.

In 2010 Bruce became the regional agronomist for Midwest Turf Products and served as such for almost 3 years when he took his current position.

Although his predecessors have had more experience in turf pathology I am sure Bruce will lead the lab into the future. He will have good teachers with former lab manager Dr. Paul Koch available to help him when needed as well as the rest of the UW-Madison turf team.

Schweiger and his wife Carol have three boys, Paul, Brad and Scott. With a attorney, a professor and an accountant in the family Bruce should be ready for any problem the family faces.

Through his 24 years in the turf industry Bruce has seen every turfgrass issue possible and has been involved in the construction or re-construction of 1,000 golf holes as well as sports complexes and landscape projects.

Carol does safety inspection, training and consulting work and met her husband to be in Dr. Jim Love's Soil Science 301 class.

Although a accomplished player golf has taken a back seat to other hobbies such as hunting and fishing along with consulting work Bruce does.

Welcome aboard and congratulations Bruce Schweiger!

Above: Bruce Schweiger at the Noer Center

Below: Bruce has been involved in the industry a long time as proven by this picture of him helping Joe Wollner draw prizewinners.

TDL
TURFGRASS DIAGNOSTIC LAB

O.J. Noer Turfgrass
Research
and Education Facility
2502 County Highway M
Verona, WI 53593

Phone: (608) 845-2535
Fax: (608) 845-8162
Email: plkoch@wisc.edu
Website:http://tdl.wisc.edu

Questions?

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

I was saddened when I heard Steve Spears the long time superintendent at St. Germaine Golf Course had passed away in early May. We were not good friends but friends just the same and we would talk at conferences and the occasional phone call. I knew him enough to know he know he loved working at the golf course and was excited about his young family.

We both served on the boards of our respective associations at the same time and we had both worked with the same golf professional giving us a reason to talk. Steve always had a smile to offer and seemed happy in the northwoods.

I was further saddened a couple days later when I heard Dick Henken a Fond du Lac native and former golf professional had passed away. I didn't know a lot about Dick but I knew his dad and brother well. The times I met Dick he had a huge smile and away about him that made people comfortable.

Dick has lived in Florida for some time with his wife and children. He was looking forward to his son's graduation and daughter's wedding this summer.

Dick and Steve died the same way, they took their own lives. Suicide is a hard word to say and a harder word to imagine. It leaves questions, anger and doubts in the minds of those behind. Why? Should I have known? Could I have helped? Did I cause this? Along with the questions it leaves feelings of grief and sadness for the family but also a feeling of helplessness.

From my point of view it seemed Dick and Steve seemed to have the best years of their lives in front of them. Neither was rich but neither was poor. They had families who loved them and they had jobs they seemed to enjoy. I am sure there were troubles as well but we all have troubles.

Steve Spears shown speaking at the NGLGCSA Spring Symposium in 2012. Steve passed away on May 6th, 2013.

So what can we as friends and family do? Perhaps nothing could have kept these two men around to see the golden years. We will never know the hows or whys of their situations. What we can do is keep in touch with friends and family. Stop a few minutes in our daily lives and call someone who you haven't heard from in a while.

Thank you to Jay Pritzle and the Northern Great Lakes chapter for organizing a golf fundraiser to set up a education fund for Steve and Marci's children Ethan and Ella. It was a beautiful day at the St. Germain Golf Course and a great time was had by all who attendend.

AGRICULTURAL CHEMICALS: Prices Paid
United States, March 2010-2013

Commodity	2010	2011	2012	**2013**
	Dollars per gallon			
2, 4-D, 4 lb./gal.	18.00	18.00	20.10	**20.40**
Acetochlor, 6.4-7 lb./gal.	70.30	69.60	70.80	**74.50**
Atrazine (AAtrex), 4 lb./gal.	18.90	17.30	17.60	**17.80**
Glyphosate (Roundup), 4 lb./gal.	22.80	16.80	17.90	**18.20**
Pendimethalin (Prowl), 3.3 lb./gal.	36.30	38.70	40.40	**41.60**
Simazine (Princep), 4 lb./gal.	25.60	24.50	25.40	**26.40**
Cyfluthrin (Baythroid), 2 lb./gal.	310.00	294.00	302.00	**303.00**

Source: USDA, NASS

FERTILIZER: Prices Paid
North Central Region 1/, March 2010-2013

Commodity	2010	2011	2012	**2013**
	Dollars per ton			
Anhydrous Ammonia	520	776	812	**877**
Nitrogen Solution, 28%	260	358	381	**395**
Sulfate of Ammonia	300	386	413	**487**
Urea 44-46%	446	519	547	**574**
Superphosphate	465	536	582	**636**
Muriate of Potash	501	594	641	**581**

1/North Central States: IL, IN, IA, MI, MN, MO, OH, and WI.
Source: USDA, NASS

FUEL: Prices Paid
Lake States Region 1/, March 2010-2013

Commodity	2010	2011	2012	**2013**
	Dollars per gallon			
Gasoline, unleaded				
Service station 2/	2.79	3.54	3.79	**3.67**
Bulk delivery 2/	2.84	3.56	3.80	**3.67**
Diesel fuel, bulk delivery 3/	2.57	3.54	3.66	**3.58**
L.P. gas, bulk delivery 3/	1.88	1.97	2.06	**1.79**

1/Lake States: MI, MN, WI. 2/Includes all taxes. 3/Excludes all taxes.
Source, USDA, NASS

FARM MACHINERY: Prices Paid
United States, March 2010-2013

Commodity	2010	2011	2012	**2013**
	Dollars			
Tractor, 2-wheel drive				
30-39 PTO horsepower	18,800	19,000	19,000	**19,900**
70-89 PTO horsepower	39,900	41,000	43,000	**44,000**
140-159 PTO horsepower	114,000	123,000	128,000	**133,000**
Manure spreader				
225-310 bu. capacity	13,500	14,200	15,700	**16,200**
Mower-conditioner, pull type				
8-10 ft. sickle	20,200	20,800	21,700	**22,400**
14-16 ft. sickle	30,600	32,700	33,500	**34,200**
Baler, 1200-1500 lb. round bale	25,100	25,900	28,000	**28,500**

Source: USDA, NASS

Numbers from the United States Department of Agriculture - National Agricultural Statistics Service show chemicals, fertilizer, gasoline and machinery are all on the rise.

Thanks to your donations the Par-4Research program raised $10,960 for Turf Research Programs at UW Madison.

Funds are raised through a online auction of donated rounds of golf and golf related items. The four year total is over $39,000.

Look for your chance to participate next spring.

As editor I apologize for the lateness of this issue. Work at the golf course takes precedence over work on the magazine and this spring kept most of us busier than usual as we fought with Mother Nature to maintain quality golf courses.

The problems from the herbicide Imprelis seem to keep growing as many courses are having arborists revisit their properties to look at additional pines as well as honey locust, poplars as well as other species.

The use of this herbicide caused many sleepless nights for golf course superintends but one recently confided in me that the payments from DuPont have been a savior in a way for his club.

That may be a overstatement but I do know the payments have allowed golf courses to invest in capital equipment and repairs.

The March issue of Golf Digest highlighted the top 50 professional players in earnings for 2012. At the bottom was Tom Lehman with only $3.1 million on course and $1.75 million off course earnings. I say only because Tiger Woods tops the list with $9.1 million in on course earnings and a whopping $77 million in off course earnings.

Arnold and Jack are listed Third and Fourth with $36 million and $28 million primarily in off course revenue.

The highest female was Paula Creamer at 44th with $875,000 on the course and $4.5 million off the course. Wisconsin's own Steve Stricker was 34th with $3.8 million on the links and $2.5 million off course.

Wisconsin Weekly Weather, Selected Cities, Ending as of 7:00 a.m. on June 23, 2013

City	Temperature						Growing degree days (modified base 50) 1/		Precipitation				
	Avg. max.	Avg. min.	High max.	Low min.	Avg.	Avg. dep. from normal *	Mar. 1 to Jun. 22	Mar. 1 To Jun. 22 normal*	Last Week	Since Jun. 1	Jun. 1 dep. from normal *	Year to date	Year dep. from normal *
Eau Claire	80	59	85	54	69	+2	702	782	2.30	3.85	+0.75	23.90	+10.48
Green Bay	78	56	86	45	67	+1	686	697	0.93	2.96	+0.56	16.72	+4.70
La Crosse	84	62	90	56	73	+3	826	889	2.56	4.40	+1.64	23.32	+9.61
Madison	81	60	86	47	70	+3	831	877	2.60	5.92	+3.07	26.01	+11.72
Milwaukee	77	58	85	49	67	0	668	n.a.	1.42	3.65	+1.19	23.16	+7.72

1/ Formula used: GDD = (daily maximum (86°) + daily minimum (50°))/2-50°; where 86° is used if the maximum exceeds 86° and 50° is used if the minimum falls below 50°. *Normal based on 1971-2000 data. Source: NCEP/NOAA Climate Prediction Center http://www.cpc.ncep.noaa.gov.
n.a.=not available. T=trace. Source: USDA, NASS, Wisconsin Field Office.

Cold and wet was the name of the game this spring as golf courses struggled to get open, provide good playing conditions and then attract play during cold wet weather. The chart above and right are from the United States Department of Agriculture – National Agricultural Statistics Service.

Above you can see temperatures and growing degree days are not too far behind normal but through June 23rd all areas surveyed are way above normal precipitation.

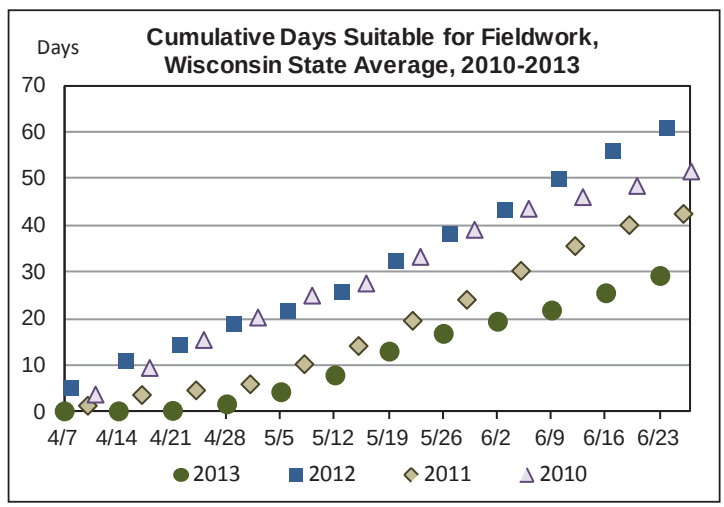
The chart on the right shows days suitable for field work which could correspond to days suitable for golf course work. After last years early spring and plenty of days for golf this year has been a rude awakening. The only good thing that comes from the rain days is polished equipment and spotless shop floors as crews were put on cleanup detail when it was too wet to work.

Application timing for seedhead suppression and take all patch became a crap shoot even for those using local growing degree days as a guide.

If I had a quarter for every customers who said "at least your saving money not having to run the pumps" I would be rich. I have given up on explaining the little amount pumping costs compared to the revenue losses we have seen.

It is easy for golf course staffs to get frustrated because work is not getting done but also because the reduced play levels will likely add to budget woes.

If you are looking to step back in time get out in your plus fours and hickory shafted clubs the Hickory Golfers of Wisconsin have officially been formed as a chapter of the international association. Along with the 4th annual Kummel Cup Aug. 16-18 at Lawsonia Links additional events will be held May 11 at Whistling Straits, July 27 at Tuscumbia and Sept. 28 at Cherokee CC.



It is hard to believe July 4th will have passed by the time you are reading this. I look forward to seeing many of you at the Wisconsin Turfgrass Field Day on July 30th at the Noer Center.

LEFT: The 2013 WPGA / WGCSA Super-Pro tournament was won by (left) Charlie Brown, PGA Professional and (right) John Feiner, Golf Course Superintendent with a net score of 66.

PREVIOUS WINNERS

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)

PGA Wisconsin Section

The WPGA / WGCSA Super Pro

at Brown Deere Golf Club, Milwaukee WI
HOSTS - Tim Wegner, Golf Course Superintendent and Scott Evans, Head Golf Professional

Wisconsin Chapter GCSAA Golf Course Superintendents Association of America

18 Hole Modified Chapman (Alternat Shot) Format

Top Ten in Division 1 -
Made up of PGA Members, Apprentices and Pre Apprentices and WGCSA Members from the same facility.

Place	Name - Pro Name - Super Name - Course	Gross	Hcp	Net Total	Team Winnings
1st	Charlie Brown, John Feiner Johnson Park GC	71	4.90	66.10	$550.00
2nd	John Freeman, Jeff Millies Edgewood GC	74	7.65	66.35	$420.00
3rd	Don DuChateau, Jim VanHerwynen South Hills	86	15.60	70.40	$330.00
4th	Scott LeMire, Jeff Barlow Waupaca CC	76	5.55	70.45	$260.00
5th	Peter Mogg, Mike Becker Horseshoe Bay GC	76	5.20	70.80	$200.00
6th	William Rabuck, Joe Kuta Hartford GC	77	5.85	71.15	$160.00
7th	Jason Haack, Scott Bushman Fox Valley GC	74	2.60	71.40	$120.00
8th	Michael Crowley, Travis Krauklis Morningstar	77	4.65	72.35	$ 80.00
9th	Jason Hogue, Steve Blake Ridgeway CC	74	1.55	72.45	
10th	Bill Graham, Jim Shaw Chenequa CC	78	4.55	73.45	

Top Ten in Division 2 - All other teams, including teams that have a member without a handicap.

Place	Name - Player 1 Name - Player 2 Representing	Gross	Hcp	Net Total	Team Winnings
1st	Mark Voeller, Mark Lockhart Golf Galaxy	66	3.50	62.50	$420.00
2nd	Jeff Ellingson, Peter Meyer Edelweiss Chalet / National GG	69	3.05	65.95	$280.00
3rd	Mike Schmeiden, Mark Robel Evergreen GC / Reinders	81	14.90	66.10	$180.00
4th	Steve Fischer, Darrin DiChristopher Premier Golf & Utility Veh	81	9.50	71.50	$120.00
5th	Andy Gieryn, Brian Blake Whitnall Park GC	92	20.00	72.00	$ 80.00
6th	Ryan Wagner, John Aufderhaar Watertown CC	75	1.30	73.70	
7th	Phil Frederickson, Martin Kennedy Door Creek GC	82	8.00	74.00	
7th	Hanc Spivey, Mike Stein Dretzka Park GC	92	18.00	74.00	
9th	Brian Johnson, Joe Shirk Evergreen GC	82	7.00	75.00	
10th	Wes Toton, Erich Lange Country Club Estates GC	82	6.50	75.50	

Honor®
Intrinsic™ brand fungicide

“Even the best turf can fall victim to disease. But with **Honor® Intrinsic™ brand fungicide**, I won’t go down easily. On top of unsurpassed disease control, research shows that **Honor Intrinsic’s plant health benefits** give me a better root system so I can stand up to stresses like drought and moisture events, extreme temperatures, and aerification—better than ever.”

Intrinsic brand fungicides don’t just fight disease; they give turf the resilience to endure stress. Find out more by contacting Randy Lusher, 630.810.1832, randy.lusher@basf.com.

BASF
The Chemical Company

Not registered in California.