



Figure 1: This general bronzing was common of many of the leaf spot samples submitted to the TDL in 2009.

a back breaker for some facilities. But as quick as the heat came in, it left, never to return for the most part in 2009.

The rest of the summer saw the usual suspects in varying numbers as humidity levels rose and fell. Take-all patch and necrotic ring spot were prevalent in moderate numbers in late June and early July. Bipolaris leaf spot was once again a severe and frustrating problem for several courses in July and August. Even foliar and basal rot anthracnose made an appearance at several courses in late August and September, with most of the severe damage caused by basal rot anthracnose. Autumn was continued quiet for the most part, with mild and dry conditions preventing any major disease outbreaks.

Several consecutive mild summers have kept intensive, summer long disease pressure at bay for the most part. But the return of a strong El Nino, which was prevalent in the mid to late 90's, could signal the return of hot and humid weather in 2010. But as 2009 showed us, it doesn't take hot and humid weather to cause a sample submission to the TDL. Here's wishing for a safe, relaxing holiday season and I hope to see many of you in San Diego.

Thanks to our 2009 contract members

As most of you know, the TDL doesn't receive a single penny of support from the University or state of Wisconsin. Industry support is therefore critical to the success of the lab in maintaining excellent equipment that allows for faster, more accurate diagnoses and better sample reports. Much of this industry support comes in the form of contract memberships with the lab, and the vast majority of contract memberships are from the golf course industry. In trying economic times when several hundred dollars can help in many areas of



Figure 2: Summer did still make a guest appearance in 2009, and along with it came brown patch and a little bit of Pythium blight (pictured).

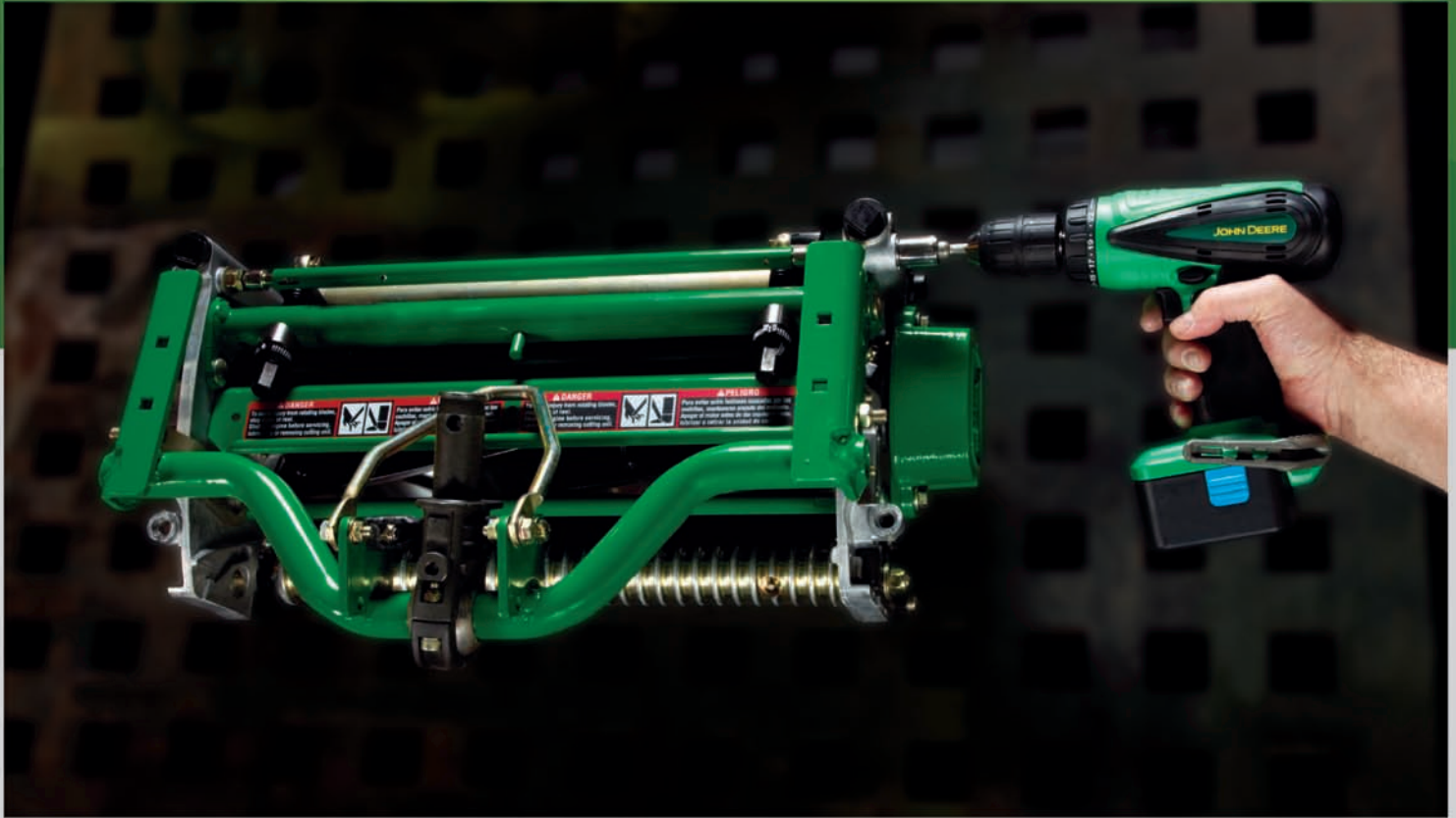
the budget, I greatly appreciate the 74 contract members from 2009 shown in Table 2. If there is any way you think the TDL can improve its services to contract members, please do not hesitate to call (608-845-2535) or email me (plkoch@wisc.edu).

Thank you to the 2009 TDL contract members!!!

- | | | |
|--------------------------|------------------------------|----------------------------|
| Abbey Springs CC | Antigo Bass Lake | Big Foot CC |
| Blackhawk CC | Blue Mounds CC | Bristlecone Pines GC |
| Blackwolf Run | Brown County GC | Brynwood CC |
| Bulls Eye CC | Chenequa CC | Debuck's Sod Farm |
| Eagle River GC | Eau Claire CC | Fox Valley GC |
| Frontier FS Coop | Green Bay Packers | Greenwood Hills CC |
| Hayward Golf & Tennis | Horst Distributing | House on the Rock Resort |
| Kenosha Grounds Care | Koshkonong Mounds GC | La Crosse CC |
| Lake Arrowhead GC | Lake Geneva CC | Lawsonia GC |
| Long Sod Farms | Lurvey Farms | Maple Bluff CC |
| Milwaukee CC | New Berlin Hills | New Richmond GC |
| North Hills CC | North Shore CC | North Shore GC |
| Oconomowoc CC | Olds Seed Solutions | Oneida Golf & CC |
| Oshkosh CC | Paul's Turf and Tree Nursery | Pine Hills CC |
| Portage CC | Racine CC | Reedsburg CC |
| Reinders | Rhineland CC | Rolling Meadows GC |
| SAS Management | Sentryworld GC | Silver Bay CC |
| South Hills CC | Spring Valley Turf | St. Germain GC |
| Stano Landscaping | Summit Seed | Syngenta |
| The Bruce Company | Tripoli CC | Tuckaway CC |
| Twin River Turf | Two Oaks North GC | University Ridge GC |
| Volkening Consulting | Watertown CC | Wausau CC |
| Weed Man Lawn Care | West Bend CC | Westmoor CC |
| Whispering Pines GC | Whistling Straits GC | Windy Acres GC |
| Wistl Sod Farm | Zimmerman Kettle Hills | |

Table 2.

By the time you read this, your height-of-cut could have been adjusted.



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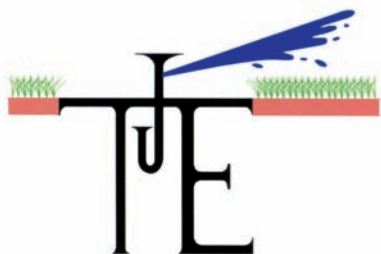


Cash or Credit?

After months of work and planning by the TDL, UW Communications, the UW Division of Information Technology, and CashNet credit card services; the TDL website is now available to accept online credit card payments. More and more facilities are turning to credit cards for their ease and efficiency, and both your sample submission fees and contract memberships can now be paid online using a credit card. Visit the TDL website (www.plantpath.wisc.edu/t dl) and click on 'Pay Online' on the front page to be directed to the secure pay page.

To pay for sample submission fees, simply type the invoice number in the 'Invoice' box and the amount of the invoice to be paid in the 'Amount' box and click submit. Up to three invoices can be paid at one time. Directions on paying for a contract membership online depend on if you are a renewing a membership or starting a new membership. Membership renewals should wait until their renewal forms arrive in the mail, then use their contract membership number as their 'Invoice' number and type their desired contract level in the 'Amount' box. New members should type 'newmember' in the 'Invoice' box and the desired membership level in the 'Amount' box. Be sure to fill in your contact information on the pay page, and I will contact you shortly about your new membership.

If there are any questions about the security or use of this pay page, please do not hesitate to contact me. Also please note that we cannot accept credit cards at the TDL facility inside the OJ Noer, so all credit card payments must be issued online. Credit cards that are accepted are VISA, Mastercard, American Express, Discover, and Diners Club. Note that cash and checks are still accepted forms of payment for both sample submission fees and contract memberships. 🌱



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ELIMINATE GUESSWORK WHEN SPRING FEEDING

Spring fertilization varies greatly on a number of factors. Cultural practices performed, soil amendments made, irrigation and drainage upgrades, fertilizers applied, and what happened last fall plays a significant role with this season's success. However, having a sound fertility program will provide you with your best chance of success for the upcoming season.

Typically, spring applications are applied after the early flush of shoot growth has occurred, but predicting spring weather can be a challenge when it comes to soil and air temperature, and precipitation. That's why choosing a fertilizer that performs in cool climates is so vital.



John Meyer
Regional Manager
AGROTAIN International, LLC

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Coated products are a great example of fertilizers that don't offer immediate plant nutrition and are subject to leaching once the protective coating breaks down.

Still other products rely on a process called mineralization, depending on soil microbes to break down nitrogen. Whereas soil microbes aren't fully active until the soil temperature reaches 55 degrees – which might not happen until late spring depending on the region – UMAXX begins working immediately and is not dependent on soil temperature for nitrogen release.

Although fine-tuning a spring fertilization program varies on many factors, its importance will be felt all summer long and even into the fall. The benefit of using an all-weather, long-lasting performer such as UMAXX provides immediate benefits, as well as a positive long-term impact. UMAXX gives the freedom to apply as a nitrogen component in a blend or part of a soluble fertilizer program. UMAXX offers consistent performance regardless of temperature or application type.

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Monroe S. Miller Literary Scholarship

By **Brian Zimmerman**, Chief of Operations, Milwaukee County Parks, Recreation and Culture

The WGCSA is proud to announce the Monroe S. Miller Literary Scholarship to be awarded to the top student written article published in *The Grass Roots*. This scholarship was created to honor the commitment made by Monroe and his family for the years of volunteer service as the editor of the award winning Grass Roots publication.

Raised on a dairy farm in Grant County, WI, Monroe was an undergrad at University of Wisconsin – Madison (turfgrass science major) from 1964 to 1968. He was drafted into the Army the day after graduation and spent two tours as a MP in Vietnam, at Long Binh Post about twenty miles north of Saigon. He returned home in late 1970 and spent two years in grad school under Dr. James R. Love at UW - Madison.

On 1/1/73 Monroe started his 36 years as golf course superintendent at Blackhawk Country Club in Madison. During that time Monroe served offices in the WGCSA, culminating as president in 1984 and 1985. He edited *The Grass Roots* from 1984 through 2007, and retired from BCC at the end of 2008 at the age of 62. Monroe received the WGCSA Distinguished Service Award in the late 1980s. He was involved in the startup of the Wisconsin Turfgrass Association and was the long time secretary.

Monroe served as president of the Wisconsin Agricultural and Life Sciences Alumni Association for two years in the late 1980s also, and received the CALS Honorary Recognition Award in 1988. Monroe spent three years on the CALS Board of Visitors, and served on a number of GCSAA committees over the course of his career. Monroe is a long time member of the USGA Green Section Committee and currently serves on the Green Section Award Committee as well. He was deeply honored to receive the 2004 USGA Green Section Award, and was elected to the Wisconsin Golf Hall of Fame in 2005. In 2008, he received the Col. John Morley Award from the GCSAA. Monroe currently is the part-time ambassador and executive director of the Wisconsin Turfgrass Association.

The Monroe S. Miller Literary Scholarship will be awarded annually to the top student written article, (graduate or undergraduate). The article has to be published in *The Grass Roots* in the calendar year to be eligible. The panel selecting the award recipient will be the current vice president of the WGCSA, Dr. John Stier, UW – Madison Department of Horticulture, and Monroe Miller. The article will be judged on innovativeness, creativity, impact, quantity and quality. The annual award in the amount of \$ 1000.00 will be presented at the WGCSA spring business meeting.

Coming Events

2010

- January 26Assistant Golf Course Superintendents Seminar, Whispering Springs Golf Course, Fond du Lac
- February 8-12GCSAA Educational Conference and Golf Industry Show, San Diego, CA
- February 10Wisconsin Hospitality Room in San Diego, CA
- March 1Spring Business Meeting, Fond du Lac
- April 19Abbey Springs GC Fontana, Host - David E Smith
- May 10Wild Rock GC, Wisconsin Dells, Host - Mike Blazich
- June 8WI Super/Pro Morningstar GC Waukesha (WI PGA Event) Host - Travis Krauklis
- July 12Watertown CC, Watertown, Host - Michael Upthegrove
- July 27Summer Field Day at OJ Noer Research Facility, Verona
- August 9Oneida Golf and CC, Green Bay, Host - Mark Storbj
- September 20Wee One Fundraiser Pine Hills C.C. Sheboygan, Host - Rod Johnson
- October 8 & 9Couples Weekend, Saddle Ridge GC, Portage, Host - Seth Brogen
- October (TBA)WTA Fundraiser for the Fellowship
- Nov 16-17Wisconsin Golf Turf Symposium, Kohler, (tentative date)
- December 8WTA Winter EXPO, Boerner Botanical Gardens



Tweets, Texts and Social Media!

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

As turf managers we are skilled and educated in the latest technology regarding agronomic practices, mowing equipment and plant protectants. Considering our busy jobs as managers of people and properties along with family and recreational activities we can sometimes lose touch with other industries when they do not directly affect our jobs or personal lives.

By now most of us can surf the web, read our e-mails and put together a professional looking budget spreadsheet in excel. Many of us are able to use our desktops and handheld PDA's to operate our irrigation systems and inventory programs. While we can do many things some of us are falling behind in the electronic age and the growing popularity of texting and social media.

The technology of communication is changing rapidly as the power of a desktop computer can now

be found on cell phones and instant communication is becoming the desire of all age groups. As turf managers we may be able to avoid these changes for the short term but most of us will need to adapt to the new ways to communicate with our families, employees and customers.

Texting, Facebook, MySpace and Twitter have replaced letters, telephone calls and even e-mails as the preferred way to communicate. E-mails are out? Believe it or not for people 25 and under e-mails are the old way and rarely used. Shorter bursts of information from cell phone texts or tweets and FaceBook posts that can show up on in-boxes or cell phones are the new way young adults want and expect their information to come. We can fight the change if we want, but we will give up communicating to a large segment

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of the population if we do. 96% of the Y Generation (generally born between 1977 and 1990) use social networks as their main method of communication.

Businesses are also adapting to the new communication methods and are joining the social media world. 80% of companies have used a site called LinkedIn to find or research potential employees. If you not there you may be left behind. Advertising in the new world of social media is changing as 70% of 18 to 35 year olds have watched TV on the internet, and 33% of all age groups TIVO or DVR shows to avoid the commercials. Businesses need to find new ways to reach their customers as traditional TV, radio and newspaper ads are becoming ineffective.

These new items can be overwhelming and seem unnecessary but if we want to communicate with our family and professional contacts we will need to learn the new lingo and methods. It is not easy to teach old dogs new tricks, however most social media products are easy to learn, which helps to explain their popularity. Of course having kids or grandkids to show you the way and force you to participate makes it easier to learn.

Cell phone texting is an easy way to communicate with a cell phone keyboard by typing short messages you can send around the world silently and quickly. Just a few years ago we did not allow our grounds employees to use their cell phones at work because of the interruption to players and productivity. In the past year texting has become our prime mode of communication after the crew has left the morning meeting. The crew will text managers to ask questions about their current or next job and to report unusual activities. The managers text the employees to convey changes in duties or to alert them of special instructions. It saves the time of shutting down noisy equipment to talk on walkie talkies or the time to drive in from across the 270 acre golf course to get an answer. For our maintenance operation, allowing cell phone texting while working has increased crew efficiency and accuracy.

Depending on your provider and cell phone plan, texting can be cost effective. For example I pay \$5 per month for an unlimited number of texts. As a warning to your checkbook; without an unlimited plan kids and adults can quickly run up a expensive texting bill when they lose track of the number of texts they send per month at .10 or .15 per text.

The language of text can be a challenge for adults as we try to learn the text abbreviations to communicate without typing in entire words. Most of the abbreviations are common sense but I am sure William Webster is rolling over in his grave as spelling and grammar have gone out the window in the name of efficiency.

The business world is embracing the low cost text technology and users or customers can sign up to receive text news alerts (local and national), sports scores, product information and even tee time specials. I receive

a text after every Brewer and Cubs baseball game along with breaking area news alerts and industry news.

Facebook is the fastest growing social media today with 300 million active users who share 2 billion photos and 14 million videos each month. Facebook is not just for kids as the fastest growing group of users is women 55 to 65 years old. Facebook is a communication tool and a way to announce to your friends, family or clients what is going on in your world. I would explain it as your own little website with the ability to post your history, beliefs, activities and photos. Over 285 million pieces of information are shared on Facebook every day.

Users are able to post the latest "news" or activity in their life in short statements that can include tags to pictures or websites. For an individual a typical post would include what they are doing that day, or what they have done, while a business would post news, new products or specials in order to attract business. A golf course main-



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tenance operation would be able to have a free Facebook page where members could access or be sent updates on course conditions and projects. The ability to post pictures quickly allows turf managers to show and tell the members what is going on.

On Facebook, individuals have friends that require mutual agreement to participate in information sharing while businesses and celebrities have fans that do not require mutual agreement in order to participate. If I post a message on my page it shows up on all my friends homepages and they can comment on it and vice-versa. Fans on the other hand receive posts from the business or individual they are a fan of and although they can post a comment back there is usually less interaction.

For our golf course we have pictures and basic information on our Facebook home page while we will send out periodic event announcements, sale information or just a reminder of great fall weather to our "fans".

Twitter is another communication tool for individuals or businesses to let others what is going on. On my twitter account I may "tweet" "I am going to the beach with the family today." Anyone can sign up to follow my account and receive my message on their cell phone as a text, in e-mail format or on their twitter account or all three venues. Facebook friends have to be approved by each party while Twitter accounts can be followed by anyone. Facebook allows interactive comments back and forth while Twitter is more of a single statement with no replies.

Our golf course uses Twitter to announce news, sales, or tee time specials to our fans.

LinkedIn is an online networking site for professionals to meet others with similar interests or business needs. I describe it as an online networking tool with similar


results to walking the GCSAA show floor and handing out business cards. Users post their work and education history and "link up" with other professionals. Others find you by your industry; place of education or employment and by your name. Similar to facebook everyone can see some of your information while users approve each other for full disclosure of information.

Although LinkedIn can be thought of as a job finding media it is also a connections media allowing you to find others in your industry and others to find you. It is truly an online rolodex of professional contacts.

A simple Google search of social media will provide you with a multitude of options for getting your information out there to share with family, friends, colleagues, employers and customers. Everything from YouTube for posting videos to Flickr for posting pictures is available to us and the list grows every day.

Where you start really depends on your goals and who you want to communicate with. Just remember any comment or picture that hits the internet cannot be recalled. Once you hit send or post that item is on the world wide web forever and could come back to haunt you if the wrong person finds it.

As professionals I would suggest keeping your personal accounts separate from your professional accounts. Two Facebook pages, one for your family and friends and the other for your maintenance department would allow you to have a life and a career.

Take some time this winter to see what is out there, or better yet ask your kids and grandkids. You may think you don't need to adapt to the new communication methods, but the rest of the world is changing so if you want to keep up your better get on the tidal wave and enjoy the ride! 



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What's New in Soil and Water Research for Golf Turf?

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

Each fall, a group of over 300 turfgrass science researchers comes together to share and discuss our latest and research projects. This year the meeting was held Nov. 1-5 in Pittsburg, PA and began with a Sunday tour of Heinz Field and Oakmont Country Club, hosted by Dr. Pete Landschoot of Penn State University. After the fun, the business began on Monday and did not relent until mid-day Thursday. Professors, graduate students, and industry representatives shared results in either 15-minute oral presentations (~100 total) or large four by three foot posters (~100 also) that were displayed on the conference trade show floor.

Although the talks are definitely geared toward scientists (this is our big chance to use phrases like electro-spray ionization mass spectrometry, and morphological development comparisons at adjusted osmotic potentials); the vast majority of the science presented was conducted to solve practical problems in turf management. I think many golf course superintendents would actually really enjoy attending the conference at least once just to see all the innovative work that is happening all over the US (and sometimes world). Tod Blankenship, formerly the superintendent of Big Fish Golf Club in Hayward and now a graduate student at Oregon State University, concurred with this assessment.

Below, I will summarize a just a handful of the talks presented in the area of fertility, soils, and water management. The summaries are mine, and I apologize to the authors of the studies in advance if I have over-simplified their findings.

FERTILITY

Foliar absorption of nitrogen by creeping bentgrass putting green turf utilizing ^{15}N labeled inorganic and organic sources (Chris Stiegler, Mike Richardson, Doug Karcher, and Aaron Patton, University of Arkansas)

Collectively, golf course superintendents spend a lot of money on products that are marketed to give maximum foliar absorption. For some reason, foliar absorption is perceived as being more beneficial than root uptake - this has never resonated with me. The primary functions of roots are to absorb water and nutrients. The primary functions of leaves are to absorb sunlight, carbon dioxide, and prevent desiccation. There is no

shortage of theories on why foliar uptake might be desirable, many of which deal with a compromised root system or energy efficiencies; but the logistics of foliar absorption is the 800 pound gorilla in the room.


This research project from the University of Arkansas evaluated the potential for foliar absorption of ^{15}N -labeled inorganic sources (urea, ammonium sulfate, potassium nitrate) and organic sources (three amino acids). They found about that only about 40-50% of N applied at 0.1 lbs N/M of a liquid application was foliarly absorbed 8 hours after application. All sources were similar except the potassium nitrate which had low foliar uptake. In summary, if you apply 0.1 lbs N/M, only 0.05 lbs N/M will be absorbed. If you spoon feed every other week for the entire season, a maximum of 0.4 lbs N will be absorbed through the





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