WISCONSIN turfgrass news

Baraboo's Mary Rountree Evans Field, winner of the national Sports Turf Association Field of the Year award. Photo courtesy of Craig Schlender.

VOLUME XXV, NO. 3 WINTER 2007

Introducing Jim Kerns - Your New Turfgrass Pathologist!

By Paul Koch, Turfgrass Diagnostic Lab, University of Wisconsin-Madison

It has been nearly one and a half years since the Wisconsin turfgrass industry has had a turfgrass pathologist, but the wait is almost over. After a several month application and interview process, the Department of Plant Pathology at the University of Wisconsin offered the position to **Jim Kerns** from North Carolina State University and he accepted their offer. While the pool of applicants was strong considering the small number of turfgrass pathologists nationwide, Jim Kerns was clearly the most qualified applicant for this position. Jim brings a very strong research background to Wisconsin; he is after all the man who shed light on the mysterious Pythium root dysfunction that has been plaguing golf courses across the country. Along with his research he brings a passion for turfgrass management and a natural ability to communicate, both essential characteristics in a position that will focus more on extension than the previous pathologist positions at Wisconsin.

Jim is no stranger to the Midwest being born in Wheaton, IL just outside of Chicago. His father is an engineer and mother was a registered nurse, and those jobs took the family south to Texas before landing in North Carolina just in time for his high school years. For college Jim enrolled at North Carolina State University and majored in Agronomy with the intention of becoming a golf course superintendent or athletic field manager. But working with Dr. Charles Peacock and Dr. Tom Rufty revealed an interest in research and teaching, and as a result he decided to pursue a Master of Science

degree under Dr. Don Vietor and Dr. Richard White at Texas A&M University. Though his work at Texas A&M was primarily in Soil Science, a couple of classes in Plant Pathology showed Jim where his true interests lie, and Jim returned to NC State upon completion of his M.S. degree to pursue a doctorate under renowned turfgrass pathologist Dr. Lane Tredway. Under Dr. Tredway, Jim took on the unenviable task of researching a disease that literally no one knew anything about, Pythium root dysfunction. His research has shed light on the etiology, epidemiology, and management of this frustrating and troublesome disease.

Jim plans to bring the same problem solving skills he used to decipher Pythium root dysfunction to tackle Wisconsin's most pressing disease issues. Understanding more of the basic biology behind diseases such as dollar spot and gray snow mold is critical in achieving effective control while limiting chemical inputs. The overall goal of Jim's program is to minimize fungicide inputs into intensively managed turfgrass without sacrificing turfgrass quality. While Jim won't officially be starting his new job in Madison until July 1st, he will be attending our Wisconsin Turfgrass EXPO in Madison on January 9th and 10th. This is an excellent opportunity to personally meet and share your ideas with the new pathologist.

Credit for Jim's hire needs to be given to the Wisconsin Turfgrass Association, for without their support the filling of this position would be years away. Due to declining state support for the university, all faculty positions that departments request to be filled cannot be done immediately for financial reasons. To speed up this process the WTA offered to fund the first year of salary and benefits for the new position, an incredibly generous offer that totals approximately $100,000! Couple this with the fact that the WTA recently funded Dr. Doug Soldat's first year as a professor in Soil Science and the WTA has certainly turned heads within the university with their relentless support.

I'll finish this article with a couple sentences Jim wrote to me in a recent letter. "On a personal note, my wife and I are very excited about moving to Madison! We have heard nothing but good things about the city and the university. I also look forward to working with the turfgrass managers of Wisconsin!" We look forward to having you, Jim. ■

The Wisconsin Turfgrass News is the official publication of the Wisconsin Turfgrass Association, edited by Tom Schwab. O.J. Noer Turfgrass Research and Educational Facility.

EXPO GOES GREEN

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

The Wisconsin Turfgrass and Greenscape EXPO is going green in 2008. Our industry has always been on the forefront of the environmental movement but often doesn't get credit for it. EXPO will explore how the turf industry performs when it comes to going green. This common theme will be touched on throughout all the presentations, round tables, and panel discussions. The vendors in the trade show will likewise exhibit all the tools you need to make your business more environmentally green.

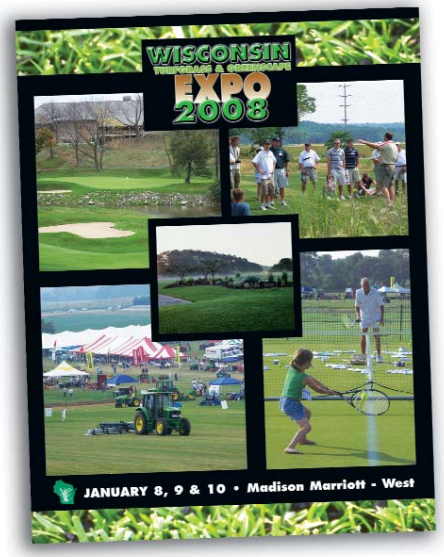
The full program and registration form may be viewed and printed from the WTA website - wisconsinturfgrassassociation.org. New for this year - you may use a charge card to register. Contact Audra if you have any questions at 608-845-6536 or ajander2@wisc.edu.

EXPO is held annually at the Madison Marriott West, and the Marriott has made major renovations to make your visit even more enjoyable this year. The conference will take place on January 8, 9, and 10, 2008. The first day, Tuesday, January 8th, includes two afternoon workshops. One workshop is about developing an NR 151 Nutrient Management Plan, and the other is about troubleshooting electrical and hydraulic equipment problems. The main part of the conference starts on Wednesday, January 9th.

Over 30 educational sessions are scheduled on the 9th and 10th, and will be of interest to anyone who manages turf whether it be for lawn care and landscaping, sports turf, sod production, or golf turf management. Leading researchers, business managers, and other experts will inform you about everything you need to go greener in your business. Speakers will explore organic lawn care, human health effects in turf management, new environmentally friendly landscape management techniques, and so much more. Examples of what you will learn are listed here:

- Dr. Mike Hurdzan (Hurdzan/Fry Golf Course Architects) - Environmental Impact of Golf Course Design
- Dr. Jennifer Grant from Cornell University - 1.) The Bethpage Experiment; Reduced Risk Putting Green Management 2.) Lawn Care IPM: Doing It and Marketing It Successfully
- Dr. Bruce Branham from the University of Illinois - 1.) Environmentally Sound Nitrogen Fertilization Programming 2.) Why PGRs Work
- Dr. Marshall Clark from the University of Massachusetts - Pesticide Exposure in Turf Management
- Andy Kurth from Weedman Lawn Care - Dealing With Public Perception

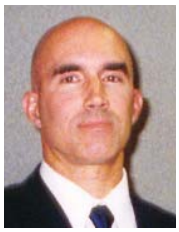
This is only a short description of the education available. Other highlights include research reports from our UW-Madison turfgrass researchers and several roundtable discussions. One panel involves two golf course designers and two superintendents in a discussion of the environmental impacts from renovations and new construction. Another roundtable looks at differing views of what defines a healthy home lawn from the perspective of a traditional and an organic lawn care provider, to a no-pesticide lawn activist, and a university turf researcher. One other main highlight is the table-top trade show which has information on all the latest technologies and innovations to help you go green and make more green. I hope you can attend this year's EXPO to learn more about why our industry is rightfully called the green industry.



PRESIDENT'S MESSAGE

Thanks to All

By Rich Riggs, WTA President



We have just finished another season, and those years seem to go by much faster as I get older. This will be my last president's message as my term is up in January. It has been a fun and exciting ride! The WTA has accomplished many goals over the past years. The Turfgrass Fellowship endowments and assisting the University to hire both a turfgrass plant pathologist and a soil science professor are among the highlights of those goals.

I believe that we have great stability and strength within the organization. Our voice is heard within the University System and throughout the state because of this strength. None of this came easy or without much discussion and action. We need to continue along those lines. I am sure that whoever sits in this chair will do a great job of carrying on.

I would like to thank some people for their help over the past years. First there are the WTA board members without whom none of this would have been possible. Next I'd like to thank the turf team at the UW-Madison and O.J. Noer Facility (they do a great job!). Then there is my boss, Rick Rettler, who allowed me the time to serve as president, and all the WTA members for their trust and support. Last but not least I'd like to thank my wife Amy, for putting up with all my time spent away at meetings and events.

I would like to continue to encourage each of you to look for ways to help with your organization. GET Involved! We need your help to continue. I encourage all of you to attend the upcoming Turfgrass and Greenscape EXPO on January 9th and 10th. The theme for this year's EXPO is 'Go Green', and the line-up of presenters is very impressive. I look forward to seeing and visiting with you in the future. Thanks to all.

MEET THE UW-MADISON TURF PROGRAM GRADUATE STUDENT

Late Season Nitrogen Fertility Timing and Rate

By Dan Lloyd, Department of Soil Science, University of Wisconsin-Madison

It was the golf perks and free time in the afternoons that drew me to my first seasonal position on a golf course grounds crew. Little did I know that my summer job as a fifteen-year-old would develop into a passion and a career path. I spent four summers working and learning from Jerry Kershasky at Westmoor Country Club, who recognized my enthusiasm in the work and suggested that I continue my development by enrolling in the UW-Madison turf program. I am fortunate to have come into the UW soil science department when I did, as I got a chance to work with Dr. Wayne Kussow before he retired as well as welcome Dr. Doug Soldat who took over the reign. During my four years of undergraduate work I also had the privilege to work an internship at Blackhawk Country Club in Madison, followed by summer internships in Durango, Colorado and Galway, Ireland.

I recently began working on my master's degree as Dr. Soldat's first graduate student. My research assistant position is generously funded by the Wayne R. Kussow/ WTA Distinguished Graduate Fellowship in Turfgrass Research, which I am honored to have been awarded. I am very excited to start my graduate school project, which will reevaluate the practice of late-season nitrogen fertility. To start, I will be sending out a survey to superintendents in Wisconsin to get a feel for the trends and variability in late season fertility programs. I hope to publish the results of that survey in an upcoming issue of "*The Grass Roots*." The research project will then be conducted both in a field setting at the O.J. Noer Turfgrass Research Facility, and in a climate-controlled growth chamber on campus. We will use ^{15}N, a traceable isotope of nitrogen, in our fertility treatments which will allow us to determine exactly how much nitrogen is being taken up by the plant. We will apply different rates of nitrogen to several common turfgrass species at temperatures corresponding to average mean daily air temperatures of September 15th, October 15th, and November 15th.

Through my experiences working and speaking with superintendents, there seems to be a great deal of uncertainty and variability in sources, rates, and timing with late season nitrogen applications. We are expecting this research to assist in formulating a temperature model relating different grasses and their abilities to take up different rates of nitrogen. We will also be looking at how the nitrogen rate applied late in the season affects rooting, carbohydrate reserves, and spring green-up. Hopefully this project will help us gain a better understanding of nitrogen uptake in cool temperatures to maximize the economic and agronomic benefit from late season applications. Also, there are some environmental questions being raised about the impact of nitrate leaching and groundwater contamination with late season applications. With regulatory pressure increasing, it may prove beneficial to have reliable data concerning this issue so any future regulations enacted can be based on sound research.

*any comments or questions can be sent to me at dtlloyd@wisc.edu

Baraboo's 'Field of Dreams' Honored

By Ben Bromley, Baraboo News Republic

Editors note: This article appeared in the November 23th, 2007 edition of the Baraboo News Republic. It is reprinted here with permission of the author, Ben Bromley. The WTA would like to congratulate Tim O'Keefe and Randy Seymour from Baraboo Parks Department and Craig Schlender as consultant and volunteer coordinator for their accomplishment in receiving the "Field of the Year" award from the national Sports Turf Managers Association.

Mary Rountree Evans Field has been named the national baseball field of the year by the national Sports Turf Managers Association. This honor comes six years after the field was named the best in Wisconsin.

Nestled between Second Avenue and the Baraboo River, the field is home to the local American Legion team and Baraboo High School's varsity squad. It's part of a park that's maintained by the city but has been improved through private fundraising. The 84-year-old field frequently hosts tournaments, youth leagues and skills clinics.

The diamond was named the best baseball field among the nation's school and park facilities. It was judged for the playability and appearance of its playing surface, as well as its maintenance program.

In 1992, STMA established the Field of the Year Awards to recognize the outstanding fields and commitment to excellence of STMA members. Members submit their fields and STMA Awards Committee members select the winners, according to the STMA Web site, www.stma.org.

"It's pretty unbelievable that a city our size can win such an award on a national level," longtime American Legion baseball booster Dan Lewison said, noting that winners in other categories came from larger cities with more temperate climates.

Tim O'Keefe, director of the city Parks and Recreation Department, said it took a community effort to buff the diamond to a high sheen. Private fundraising efforts orchestrated by the American Legion baseball program brought new restrooms, lighting and a scoreboard. "That's a fantastic honor for a community," O'Keefe said. "Baraboo's lucky to have such a fine facility, and it's because of the work of so many people."

Lewison and O'Keefe credited Craig Schlender with bringing the field up to professional standards. A former Parks Department employee, Schlender spearheaded efforts to install a watering system. The Milwaukee Brewers' groundskeeping staff taught him how to maintain grass, and he has invested thousands of volunteer hours keeping the infield and outfield lush. He credited Parks Department staff for helping with fertilization, aeration and irrigation.

"It's a lot of hours spent learning how to do all these detail things that a lot of people skip, and that makes the difference," Schlender said.

Modern facilities have helped the field attract many baseball tournaments. But another key player is the field's riverbed setting. The view behind the outfield fence features the bubbling river and towering pine trees. "Whoever designed the complex down there was ahead of their time," Schlender said. "You couldn't ask to ever have a better backdrop."

The field has long earned raves from visiting players. Some years, the Legion team plays few road games because opponents insist on playing at Mary Rountree. Brewers players who have come to Baraboo to teach clinics have left saying Mary Rountree compares favorably to the professional fields they played on in the minor leagues.

Schlender will accept the award in Phoenix in January. Meanwhile, efforts to improve the field continue. A pair of batting practice cages are being built adjacent to the field and should be ready by baseball season.

Such efforts have been paid for in large part by the Purple Monkey Open, a golf outing organized by American Legion boosters and Monk's Bar & Grill. "There may be a couple people leading the charge, but there's a bunch of people behind the program," Lewison said.

Mary Rountree Evans Field.

Bluegrass Billbug: A New and Overlooked Turf Pest

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

Billbugs are one of the most misdiagnosed pests of turfgrass, turfgrass managers often confuse billbug damage with symptoms of drought stress, disease, or other insect damage such as chinch bugs and white grubs (FIGURE 1). There are four species of billbugs that are considered major insect pests within their range, the bluegrass billbug is the most predominant species in the Midwest. Kentucky bluegrass is the preferred host of the bluegrass billbug, but it will also feed and cause damage to perennial ryegrass and occasionally fine-fescue and tall fescue.

The bluegrass billbug overwinters as an adult (FIGURE 2), and in the spring (April - May) they become active and can be seen crawling over sidewalks, curbs and driveways. Once the females mate and become fertilized, they begin laying eggs into turfgrass plants just above plant crowns. After about a week, the eggs hatch and the billbug larvae (FIGURE 3) begin feeding and tunneling within the plant destroying vital conductive plant tissues (i.e., plumbing). Infested turfgrass plants are hollowed out and packed with a powdery frass, consequently; plant death often results. As bluegrass billbug larvae become too large (i.e., second or third instar) to feed within the turfgrass leaf sheath, they chew their way out (burrow) and move into the soil to feed externally on the crowns and roots. An accurate indicator of bluegrass billbug activity is the presence of fine, whitish, sawdust-like material (frass) near the feeding site. Bluegrass billbug damage is typically worst from late June to early August, especially when turf is undergoing heat and drought stress. A fairly simple diagnostic tool is to conduct the "tug test." Simply, grab hold of a tuft of turf near the crown where the turf appears to be damaged or stressed; if bluegrass billbug is the culprit, the turf plants will merely break-off (FIGURE 4). For further confirmation, carefully dissect the turf plant, and using a 10X hand lens, look for legless bluegrass billbug larvae.

As for control of the bluegrass billbug, there are two primary management approaches: 1) Preventative and 2) Curative. The preventative approach requires the application of a systemic insecticide prior to a larval infestation and subsequent feeding damage. The curative (corrective) approach is a reactionary response whereby an insecticide is applied to a larval infestation and observable damage. Comparatively, billbugs are notoriously difficult to target and manage using curative (corrective) treatment applications, preventative treatments typically perform better. However, with the development of new insecticides such as Arena, (clothianidin), Meridian (thiamethoxam), Acelepryn (chlorantraniliprole), and Safari (dinotefuran), curative control of bluegrass billbug larvae is a viable option. However, the preventative approach tends to provide slightly better results using products including Arena (clothianidin), Acelepryn (chlorantraniliprole), Merit (imidacloprid), Meridian (thiamethoxam), and Safari (dinotefuran). Preventative bluegrass billbug treatments should be applied in early May prior to egg hatch and larval feeding.

Figure 1

Figure 2

Figure 4

Figure 3

Bearable at Blackwolf

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

We were nervous driving out to the 2007 WTA "Golf Fundraiser for the Fellowship" at Blackwolf Run. The reason - the weather had just made a drastic change from unseasonable warm and beautiful to much cooler with a chance of rain. We passed through some cold showers on our drive to the course on October 11th, but it stopped for the day once we pulled into the parking lot. The temperatures stayed in the 40's, after being in the 80's the week before, and the wind persisted throughout the round of golf. But the enjoyment of this masterpiece of a golf course made the chilly temps bearable.

Blackwolf is such a tremendous design with the best conditioning. The WTA is forever grateful to Mike Lee, who was so generous to host the event for his fourth time, twice at the Irish Course and twice at Blackwolf. The 88 golfers were likewise pleased to play this wonderful venue. Not only was the golf fun but every participant went home with a bonus door prize, some worth way more than the registration price. The donors of the door prizes, can't be thanked enough. Listed along side are the tee sign sponsors who also contributed to the success of the fundraiser. The event raised over $9,100 which will go to support the Distinguished Graduate Fellowship in Turfgrass Research program at the University of Wisconsin-Madison.

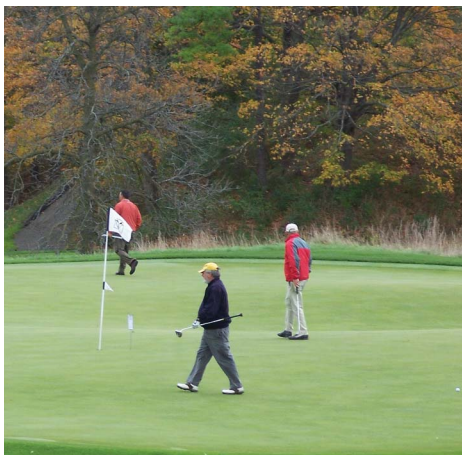
Several studies that have been funded by the turfgrass fellowships include a comparison between turfgrass and rain gardens to manage urban runoff, assessment of different inorganic amendments to improve putting green construction mixtures, and soil test selection and calibration for turf in Wisconsin. These three studies are the first in a lifetime of learning for turfgrass managers. The turf research fellowships will indefinitely provide funding for important questions to help us do our jobs better.

I wish they'd help us golf better too. That job was left to an insider group from Blackwolf, including Ed Sheets, Dave Richter, Bill Schwantes, and Chris Deckard, who won the 4 person best ball event. We congratulate them for their 3 under par score, and their hard work in preparing the course for the WTA golf fundraiser.

Beauty and challenge greeted us on hole #18.

The day was a great success for the WTA and all participants. Blackwolf rewarded us once again with an outstanding round of golf even though we had to bear the cool day. ■

Dan Quast is always a big supporter of the WTA Fundraiser pictured here enjoying his round of golf.



Foreground to back, enjoying the golf and fall colors, are participants Charlie Schwab, Ken Roberts, and David Brandenburg.

WTA Golf Fundraiser Tee Sign Sponsors

Agrotain International

Aquatrols

Arthur Clesen Inc, Dennis Hamilton

BASF Corporation

Bayer ES Supports WTA

DHD Tree Products

Floratine of Wisconsin, LLC

Lohmann Golf Designs LLC

Maple Bluff Country Club

Midwest Turf Products

North Shore Country Club, Mequon

Sue Kershasky

Syngenta

UAP Distributing, Shawn Hilliard

Wausau Country Club

Westmoor Country Club Green Committee

UW Turf Graduate Students Win National Recognition

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

Two University of Wisconsin-Madison graduate students in the turf program won national honors at the Agronomy-Crop Science-Soil Science Society of America national conference in New Orleans this November.

Jake Schneider

Eric Koeritz

Jake Schneider won 1st place in the oral presentations of the Turfgrass Division for his presentation on Rain Gardens, Lawns, and Urban Water Infiltration. Jake talked about his M.S. degree project which was designed to determine if rain garden vegetation (i.e., prairie plants), or the berms which are part of rain gardens, or both are critical to rain garden functions. He compared rain gardens that were built to Wisconsin Department of Natural Resources specifications, to turfgrass that was maintained with and without the same berms. His findings show that in general, an unbermed, well-managed turf prevents nearly as much runoff as a rain garden vegetated with either prairie plants or turfgrass on silt loam soil. In the instances when precipitation rates exceed the infiltration capacity of the lawn, a berm built in the lawn to slow down and/or contain the water does as good of a job as the more expensive prairie plants.

Eric Koeritz won 2nd place in the poster session for his work on Determining Seeding Dates for Construction of Football Fields. Eric's work showed that autumn, dormant, and spring seedings of perennial ryegrass are all capable of providing a playable football fields by August, though potential winterkill still makes today's improved ryegrasses unsuitable for football fields without mixing with Kentucky bluegrass. Kentucky bluegrass-perennial ryegrass mixtures really do need to be seeded the preceding summer for best results. While this information has sometimes been used for contracts in Wisconsin, this is the first time such research will be published. The data are due to be published in the peer-reviewed journal HortScience in January 2008.

Jake is a graduate student in the Horticulture Department advised by Dr. John Stier with co-advising provided by Dr. Doug Soldat (Soil Science Department). Eric is completing his M.S. degree under Dr. John Stier and will be going on for his Ph.D. at another university in the near future. We congratulate them both and wish them the best for a bright future.

The U.S. Open for Sod Production

By Tom Schwab, OJ Noer Turfgrass Research and Education Facility, University of Wisconsin-Madison

Summer Field Day 2007 was to the sod industry what the PGA Championship or U.S. Open means to professional golf. Field Day 2007 was the conclusion of a week long conference of seminars, meetings, clinics and tours for sod producers from around the world. Participants came from 13 different countries, including USA, New Zealand, Canada, Australia, England, Northern Ireland, Russia, Korea, Sweden, Netherlands, Austria, Ukraine, and South Africa, to attend the Turf Producers International Summer Conference and Field Day held in Madison from July 21 to 26. The final day of the conference was the field day at the O.J. Noer Facility which combined forces between Turfgrass Producers International, the Midwest Sod Council, and the Wisconsin Turfgrass Association, to display 15 acres of trade show, turfgrass research tours, and much more.

There were 1,130 attendees who visited the Noer Facility on July 25 and 26 for Field Day 2007. The evening of July 25 was Family Night, which was enjoyed by guests who came from as far away as Russia and Australia. In addition to a preview of the trade show, Family Night included games, fireworks, prizes, dinner, a turf court tennis demonstration by John Powless (Senior Tennis Player of the Millennium), and an ultralight plane fly-over.

Thursday, July 26, was the actual field day which included the WTA trade show, a hearty Wisconsin breakfast and lunch, great

Noer Facility grounds is marked out awaiting 1,100 plus attendees to visit this year's field day trade show and research tour.

research tour, tent city of turfgrass products, and demonstrations of mowers, harvesters, tillers, forklifts and everything else related to sod production. The field day included 113 different exhibitors who offered so much to see. As well as the trade show, an all inclusive research tour was conducted by the UW-

Continued on page 8

Madison turf team that presented new research data for everyone who manages turfgrass.

The field day was the culmination of over two years of preparation which started with an idea from local sod producer and Vice President of Turfgrass Producers International, George Brandt. The field day had always been held on sod farms but George and others on the TPI board thought about the unique opportunity of conducting the field day at a university turf research site to combine the trade show with cutting edge research education.

The professors and I thought this would be a great idea to place UW-Madison turf research in front of the world, but we only had six acres of unused turf to perform a field day that traditionally is held on 30 to 40 acres. We looked around and saw four adjacent fields of corn that we asked to take out of production for three years and were granted permission to do so from the UW Athletic Department. Then the work began. Rusty Stachlewitz from the Midwest Sod Council, Kelly Butler from Turfgrass Producers International, Tom Wright from the West Madison Ag Research Station, every member of the Wisconsin Sod Producers Association, past and future hosts of TPI Field Day on the logistics committee, and so many industry sponsors all stepped forward to make the combined TPI-MSC-WTA Field Day a reality.

Then Mother Nature had to do her part. She helped with good weather to grow in and initially maintain the new 20 acres of turf. The weather in early 2007 was great for developing good deep roots to enter the summer stress season. But then the drought began. Our Kifco water reel irrigation gun, donated by Robert's Irrigation, ran for 16 hours a day for the five weeks before field day when we only received one small rain storm of less than a half inch. But come field day, I was

Continued on page 9

Texas A&M turfgrass professor and UW alumni Dr. Kurt Steinke giving one of the research tour presentations.

Everything used to manage turfgrass was on display in the trade show.

Aerial view of the 15 acre trade show.

The U.S. Open for Sod Production - continued

happy with drought conditions and firm grounds when I saw sixty semi trailers delivering equipment to our trade show. It finally rained the night of field day but by then 95% of the trade show was disassembled and taken away. Some of the remaining ten or so semi trucks that came for equipment the next day had to be pulled out of the mud with a Caterpillar scraper that was working next door on University Ridge Golf Course. The resulting mess was not important because those fields will be planted back to corn next year. However, if that rain came before field day, I don't want to think about what a disaster it would have caused!

So much planning and some luck all fell into place to really show off the Noer Facility. I'd like to thank everyone involved including those who came as attendees or exhibitors. The list of WTA exhibitors is listed on right. The 79 exhibitors that displayed for TPI and MSC are also appreciated.

This was such a huge event and I hope you were able to attend. You could have collected at least 10 new golf caps without even trying. More importantly, you would have witnessed an event that brought people from half way around the globe to learn more about turfgrass management. The field day and TPI conference may not be quite as splashy as a U.S. Open Championship, but for so many people to come from as far away as they did, it had just as much importance.

WTA Summer Field Day '07 Exhibitors

Arthur Clesen
BASF Corp
Bayer Environmental Science
Champion Greens Sales
Contree Sprayer & Equipment
Deer Creek Seed
DHD Tree Products
Dow AgroSciences
DryJect of Wisconsin
Earth & Road Corp / Agrecol
Ero-Tex
Floratine of Wisconsin
Frontier FS
Green Image LLC
Horst Distributing
Lesco
Midwest Turf Products
Miller & Associates - Sauk Prairie
Monsanto
Pendelton Turf Supply
ProSource One
R & J Partnership
Reinders
Seed Solutions
Sports Turf Specialists
Syngenta
TDL
The Anderson's
UAP
UW - Madison Farm Industry
Waupaca Sand and Solutions
WDATCP
Wisconsin Turf Equipment
Wisconsin Turfgrass Association
Wolosek Landscaping & Golf Course Materials

Step-by-step Instructions for Getting Maps and Soil Information for NR 151

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

One of the largest obstacles to developing a nutrient management plan (NMP) is gathering the required site maps showing the relevant properties such as soil type, hydrologic soil ratings, topography, and information about the depth to bedrock and water table. This is a lot of information to assemble, but the good news is it can all be found at one place on the World Wide Web. Below are step-by-step instructions that will get you the site-specific information that you need to write an NMP. As long as you have the right tools (listed below), you should be able to obtain the maps in less than an hour. If you don't have access to the required tools, or cannot get the maps for whatever reason, the Badger Turf & Grounds Club is willing to find and print the maps for $30.00. However, if you choose to use the club, please allow several weeks for turnaround. Interested parties can contact me at 608-263-3631, or djsoldat@wisc.edu.

What you'll need:

1. A computer with a fast connection to the internet (a dial-up connection will be too slow).
2. Internet Explorer 6 or 7 (some other web browsers will work too) with pop-up blockers disabled. This is very important, because if pop-ups are blocked you won't be able to generate maps.
3. Adobe Acrobat Reader
4. A color printer

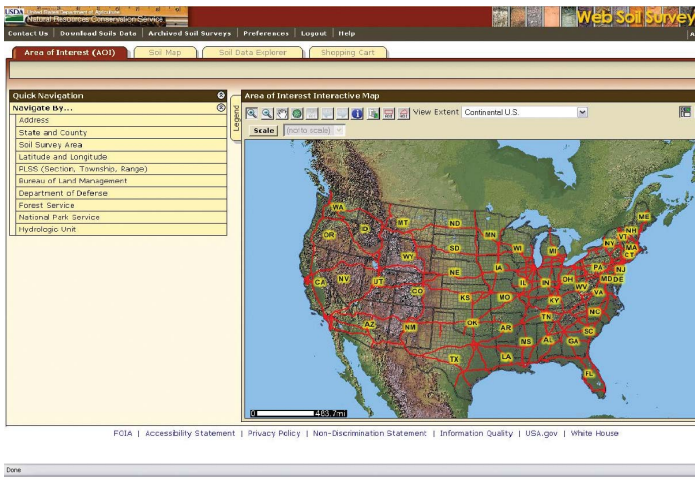
Step 1: Visit the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/)

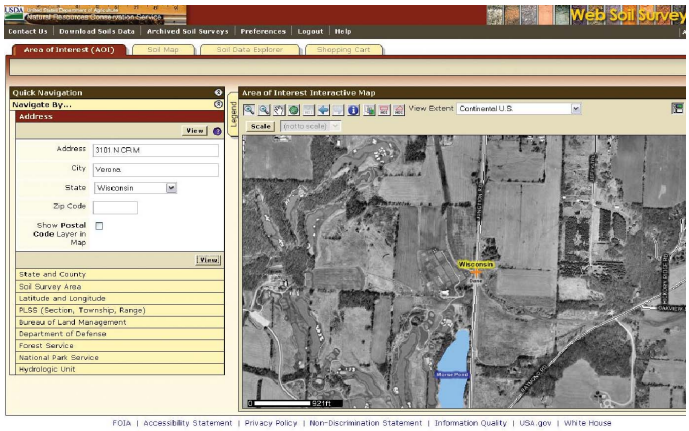
Find this site by typing the address above into your web browser, or by typing "web soil survey" into Google. Once you've arrived at the web soil survey site, click on the big green button near the top of the page that reads "Start WSS".

Continued on page 10

Step 2: Zoom in on Your Property

Find your property by entering in the address in the "Navigate By..." section or by zooming in on the map with the zoom tool, a magnifying glass with a plus sign.

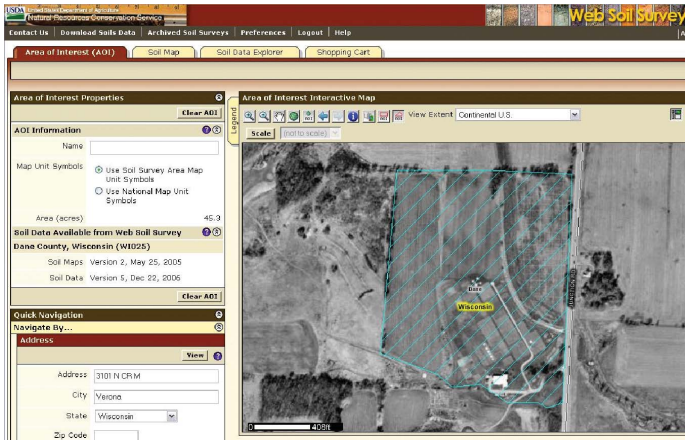




Step 3: Select the "Area of Interest" or AOI

You'll need to use one of two virtual tools to do this. They can be found in the toolbar above the map. They both have the letters AOI and a red rectangle or polygon. To use the AOI rectangle, click and hold the cursor on the upper left hand corner of your property and drag the cursor down to the lower right hand corner and release the mouse button.

I find the polygon tool to be the more useful, as most properties are not perfectly rectangular. However, it may take a little longer to learn how the polygon tool works. Click once on any part of the property border; drag the mouse along the border until you reach a corner. Then click the mouse once and drag in a new direction. After you have encircled your property with the polygon tool, double click the mouse to finalize the selection. If you are unhappy with the area you selected, just click the "clear AOI" button located to the left of the map.



Step 4: Find and Print Maps

1. Soil Map and Topography Map

   a. Click on the tab near the top of the page that reads "Soil Map"

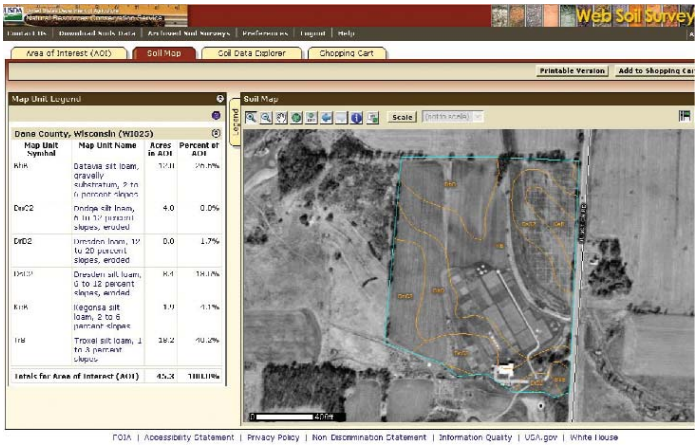
   b. Click "Printable Version" in the upper right hand corner of the screen and click "view" when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.

   c. Close the print version and return to the web version of the soil map and click on the "Legend" tab on the upper left side of the map

   d. Scroll down to the bottom of the legend and click on "Topographic Map". This will be the second to last item on the legend. Click on the "X" in the upper right hand corner of the legend, and the soils map should be shown with a topographic map.

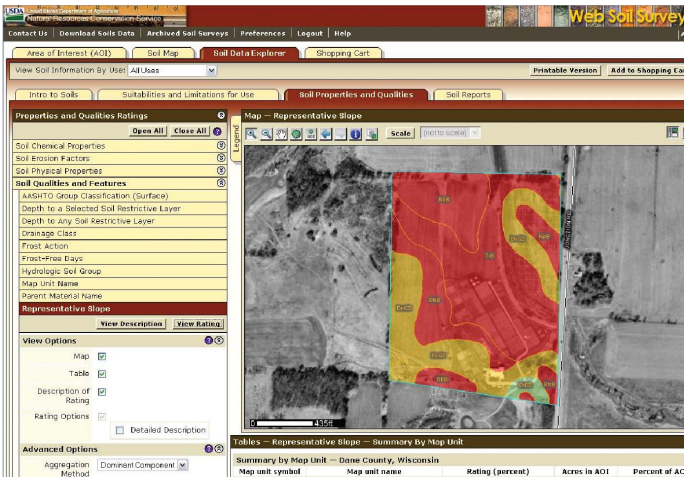
   e. Click "Printable Version" in the upper right hand corner of the screen and click "view" when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.

   f. Click on the legend tab again and select the "Aerial Photograph" option near the bottom of the legend. This will remove the topographic map and replace it with the aerial photograph.



Continued on page 11

2. Soil Slope Map
   a. Click on the tab that reads “Soil Data Explorer”
   b. Click on the tab that reads below and to the right of “Soil Data Explorer” that reads “Soil Properties and Qualities”
   c. To the left of the map, click on the yellow bar that reads “Soil Qualities and Features”
   d. Then click on the yellow bar that reads “Representative Slope”
   e. Then click “View Rating”
   f. Click “Printable Version” in the upper right hand corner of the screen and click “view” when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.



3. Hydrologic Soil Group
   a. Click on the yellow bar that reads “Hydrologic Soil Group”
   b. Then click “View Rating”
   c. Click “Printable Version” in the upper right hand corner of the screen and click “view” when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.

4. Depth to Bedrock Map
   a. Click on the yellow bar that reads “Depth to a selected soil restrictive layer”. If this is not available click on the yellow bar below that reads “Depth to any soil restrictive layer”
   b. Then click “View Rating”
   c. Click “Printable Version” in the upper right hand corner of the screen and click “view” when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.

5. Water Table Map
   a. Click on the yellow bar that reads “Water Features”
   b. Then click on the yellow bar that reads “Depth to Water Table”
   c. In the advanced options, set the beginning and ending months to coincide with when you typically begin and end applying fertilizer. For example, at the O.J. Noer Facility the first fertilization is typically occurs in May and ends in October.
   d. Then click “View Rating”
   e. Click “Printable Version” in the upper right hand corner of the screen and click “view” when the popup screen appears. After a minute or so, another window will open with a map that you can print. If you have a browser with a pop-up blocker, this window will not appear unless you disable the pop-up blocker.

Potential Problems and Solutions

Problem 1: Technical issues like the web soil survey doesn’t run properly on my computer, the maps won’t print, or I can’t disable the pop-up blocker. There are an infinite amount of potential technical problems that can occur. These can be extremely frustrating. A good solution is to visit the local library, which will likely have computers which are very capable of running the web soil survey and generating printable maps. Also, computer savvy staff members at these locations are fairly good at finding fast solutions to these common technical problems.

Problem 2: Golf course was built after aerial photographs were taken. Unfortunately, there is no easy solution to this issue. For now, you’ll need to approximate the property borders and possibly draw in by hand the locations of the golf holes and other fertilized areas. Hopefully, the aerial photographs will be updated in the near future. Many County Land Information Offices will be able to provide more recent photographs along with the soil properties you need for a small fee, although some counties will not have the resources to help. You can locate your CLIO at: http://www.doa.state.wi.us/dir/lio_officers.asp

Problem 3: Site grading and soil modification has changed soil properties, so the maps are not accurate. The solution to this problem is to document the scope of the changes and indicate the new properties. For example, the web soil survey indicates a steep slope in an area that was graded to be nearly flat for our research plots. The NMP for the O.J. Noer center will include a note that the slopes shown in the map no longer exist due to grading. Alternatively, it is possible that new slopes were built on a previously flat area. These areas should also be identified.

This article only addressed how to collect the maps and soil information you’ll need for a NMP. The next step in the process is interpreting the information on the maps in order to identify areas which fertilization restrictions exist. We will help you interpret the maps at our NR 151 Workshops so you can develop a fertilization program for your golf course that conforms to the new regulation. Workshops will be offered around the state until demand drops off. The latest registration forms are available online at www.turf.wisc.edu.

CALENDAR OF EVENTS

Jan 9,10	**WI Turfgrass and Greenscape EXPO**	**Marriott Madison West**
Jan 9-11	Minnesota Green Expo	Minneapolis Convention Center
Jan 15-19	STMA Conference	Phoenix, AZ
Jan 16-18	Mid-Am	Chicago, IL
January 17	WGIF Annual Convention	Hyatt Regency, Chicago
Jan 31-Feb 2	Golf Industry Show	Orlando, FL
Feb 4-8	TPI Midwinter Conference	Orlando, FL
Feb 6	WNA Winter Workshop	Country Springs Hotel, Waukesha
Feb 8	Pesticide Applicator Training	Carroll College, Waukesha
Feb 11-15	School of Turfgrass Management	University of Minnesota, St. Paul
Feb 26,27	NGLGCSA Symposium	Wausau
Mar 5	Pesticide Applicator Training	Eau Claire Expo Center, Eau Claire
Mar 6	Pesticide Applicator Training	Holiday Inn Centre, Green Bay
Mar 12	Pesticide Applicator Training	UW Ag Research Station, Arlington
Mar 14	WLCA Landscape Awards Banquet	Lambeau Field, Green Bay
Mar 18	Reinders Turf and Irrigation Service School	Olympia Resort, Oconomowoc
Mar 19	Pesticide Applicator Training	Carroll College, Waukesha
Mar 25-28	Reinders/Toro NSN SitePro Training Classes	TBD
Apr 3	Pesticide Applicator Training	Carroll College, Waukesha

WTA Members — If you have an important date you'd like to share with other members, call 608-845-6895, fax 608-845-8162, or email tgschwab@wisc.edu to include it in the next calendar.

Contact Telephone Numbers

GIC	Green Industry Conference	www.landcarenetwork.org
GIS	Golf Industry Show	800-472-7878
Green Expo	Minnesota Green Expo	888-886-6652
Mid Am	Mid Am Trade Show	www.midam.org
NGLGCSA	Northern Great Lakes Golf Course Superintendents Assoc.	715-542-2373
PAT	Pesticide Applicator Training, Turf and Landscape 3.0	608-262-7588
Reinders	Reinders Turf and Irrigation Service School	800-782-3300
Reinder/Toro	Reinders/Toro NSN SitePro Training Classes	800-782-3300
STMA	Sports Turf Managers Association Conference	800-323-3875
TPI	Turf Producers International Field Day	800-405-8873
Turf School	School of Turfgrass Management	612-624-0782
Wee One	Wee One Foundation Golf Outing	920-386-9006
WGCSA	Wisconsin Golf Course Superintendents Association	414-786-4303
WGIF	Wisconsin Green Industry Federation Annual Convention	414-529-4705
WLCA	Wisconsin Landscape Contractors Association	262-782-9522
WNA	Wisconsin Nursery Association Winter Workshop	414-529-4705
WSTMA	Wisconsin Sports Turf Manager Association	608-845-6895
WTA	**Wisconsin Turfgrass Association**	**608-845-6536**