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WTA Summer Field Day Registration page 15

Founder of U.W. Turf and Grounds Management Program

Dr. James R. Love

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

Dr. James R. Love passed away on February 25, 2014 after a short illness and a long full life. Dr. Love meant so much to hundreds of turf managers in Wisconsin and beyond, having started the turf program at the University of Wisconsin-Madison.

Dr. Love was born on September 20, 1920 on a farm outside of Rugby, North Dakota. He grew up with two brothers and a sister. After high school, he attended Fargo State University where he received a bachelor's degree in chemistry before moving to Chicago to work in the research department of a large meat packing firm. There he discovered that teaching was his real passion. So he returned to North Dakota and attended Minot State University and received his teaching accreditation. He also met his wife of 63 years, Nancy, while attending Minot.

Dr. Love visiting with several former student and friends at Field Day 2010

Upon graduation from Minot, he taught junior high school for two years while Nancy finished her degree. They then taught for a year on the Blackfeet Indian Reservation in Browning, Montana; Jim teaching science and math and Nancy teaching kindergarten and 1st grade. Those jobs didn't pay well but facilitated their next move to Madison so that Jim could attend the University of Wisconsin in 1951. He received his Masters and PhD in Soil Fertility and Plant Nutrition and was appointed to an assistant professorship in the department in 1956.

It was 1959 when Dr. Love and Soils Department Chair Dr. Engelbert had a conversation with world renowned turfgrass agronomist O.J. Noer. They discussed the need for formal training at the collegiate level in the science of turfgrass management at the UW-Madison College of Agricultural and Life Sciences (CALS). UW-Madison happened to also be O.J. Noer's alma mater and he was insistent the turf program occur there because he knew of Madison's rigorous and comprehensive standards.

Dr. Love accepted the challenge to develop a curriculum for turfgrass management, drawing from existing courses and expertise in numerous departments in CALS and elsewhere on campus. The Turf and Grounds Management Program (actually a specialization in Soil Science) became a formal program in 1961. Dr. Love continued to guide the program and advise all the students in the program until his retirement in 1986. During his 25 years guiding the program, Dr. Love advised 105 graduates of the program. He had the distinct pleasure of watching many of them become prominent golf course superintendents and leaders in other turf professions throughout the state and nation.

Upon retirement in 1986, Jim and Nancy travelled the country in their motor home with their trusty cocker spaniel, who Dr. Love says had its own seat belt in the vehicle. They wanted to visit everywhere in this great country and explore where they may want to have a winter retirement home. They eventually decided on the Florida Panhandle, but were always delighted to return home to Madison after winter.

Dr. Love was a man of many interests and friends. Besides his travelling interests, where he and Nancy visited many distant countries and much of the United States, he also was an avid card player, gardener, reader, geologist, and sports enthusiast. You always needed a large block of time when you talked to him because he was such a great conversationalist. He was also so interested in what you were doing.

It was the greatest time when he came to the WTA Summer Field Day last summer and visited with many of his former students. We feel so fortunate that he guided us into our profession and gave us great advice to be successful in life. We are so lucky that he started the Turf Program at UW and left it in great hands for the future. He will be greatly missed by his wife and family, but his turf family also lost their mentor who made such an impact in our lives. ■

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.

PRESIDENT'S MESSAGE

Planning for the Future

By Paul Huggett

I hope everyone's spring went well now that we finally have enough heat to get the grass growing again. It is difficult to keep a clear focus when typing this note as my mind wanders to the irrigation to get going, soybeans to plant, and customer demands to keep.

We try to plan for our future needs. Messages are constantly being bombarded at us about saving for retirement, the kid's college, house, car, etc. It's a function of marketing, sales and planning ahead to hopefully make our lives easier in the future. The WTA board is also looking at making the future of the turfgrass industry in Wisconsin strong. One of the ways to do that is to create a constant source of income. To accomplish that, the WTA is initiating the **Wisconsin Turfgrass Legacy Fund**. This endowment fund will be managed by the UW Foundation, with the earnings from the fund to be used for our mission of turfgrass research and education at the UW-Madison. The reason for starting this fund is our Turfgrass Ambassador, Monroe Miller, and the WTA board have been approached by several people who would like to support the WTA in a long term manner through a monetary contribution. The Wisconsin Turfgrass Legacy Fund would create a depository for those individuals without the trouble of setting up their own fund. Stay tuned for more on this in the future.

While we are planning for the future, I would also like to comment on the present. I was passing our sign today at the entrance of our driveway and can't help but notice the beautiful Donald Wyman Crab that Dr. Ed Hasselkus, my college advisor, recommended planting. The graceful branches that are loaded with white blossoms makes me think of all my bees working. People will plant a flowering ornamental for that one week of beauty. Now the tree looks great the rest of the growing season also, but not as showy. What does this have to do with turf? Wouldn't it be cool if people flocked to the golf course or park to see grass going to seed? While not that exciting, my point is, as turf managers we are expected to keep things looking good for the whole growing season. I think that if expectations were on a shorter basis, everybody's life and the environment would have an easier time. "Wow! Remember when that putting green looked great this spring? I know it's off now, but what a cool look we had this spring." We always seem to remember that flowering ornamental and its fleeting beauty of a week or less, but turf should look good all growing season. Have a great summer.

Gary R. Gaard 1941 - 2014

By Drs. Paul Koch and Douglas Maxwell, Department of Plant Pathology

Gary Gaard was born and raised in Eau Claire, WI and attended the University of Wisconsin-River Falls, where he majored in agriculture. After his graduation in 1963, he joined the Department of Plant Pathology in the College of Agricultural and Life Sciences at the University of Wisconsin. During his early career he provided technical support to the virologists in the Department and skillfully managed the electron microscope facility for many years. The electron microscope was a new tool that allowed scientists to observe plant viruses, the minute details of fungal cells, and the physical relationship between pathogens and their hosts. Gary also provided training and support for many Ph.D. students. One of these students wrote, "I have many good memories of Gary. He was a bit crusty and didn't take any nonsense,

Gary Gaard discussing bluebird management to interested onlookers at the O.J. Noer Turfgrass Research Facility.

but did a lot of instruction and trouble-shooting without any fanfare." Eventually descriptive research was superseded by molecular approaches, and the electron microscope facility was closed. Gary then provided administrative assistance to the Departmental Chair until 1995 when he joined the turfgrass program to assist Dr. Douglas Maxwell who was assigned to take over this program after the sudden departure of the turfgrass pathologist. Gary was a key member of the new TDDL (Turfgrass Disease Diagnostic Lab) along with Steve Millett. Gary handled all the homeowner samples and participated in the rating and management of the snow mold plots. Dr. Maxwell still remembers the spring of 1995 when the crew (Gary, Steve and Doug) went to Gateway Lodge at Land 0' Lakes and saw for the first time the destructive nature of the

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snow molds. Gary provided assistance to others who have come and gone: Jeff Gregos, Steve Abler, and Dr. Geunhwa Jung.

During the latter years of his career at UW, Gary developed a strong interest in assisting golf course superintendents with the knowledge and means to obtain Audubon Certification. His love of wildlife eventually turned to bluebird management. Gary retired in 2004 but continued providing management of bluebird trails on several golf courses. His article in The Grass Roots in the Nov/Dec 2010 issue is a handy reference for those who might want to consider starting or maintaining a bluebird trail. During Gary's retirement he worked part-time as a naturalist at University Ridge Golf Course, where he interacted often with superintendents Jerry Kershasky. Jerry provided the following account of Gary's activities at University Ridge: "Gary Gaard was much more to us at University Ridge than a bluebird expert. He was our resident ecological restoration adviser, a go-to person to restore the natural systems of native prairie, wetland and oak savanna on the University Ridge property. Gary had a thorough understanding of the property at University Ridge from research into what this part of southern Wisconsin had been prior to European settlement. He had a vision of restoring the open front 9 of University Ridge into a prairie and wetland, and the back 9 into an oak savanna. Gary had taken native and invasive plant inventories and had started to control the invasive species by mechanical cutting and herbicide applications. Last year he mentored an intern from the UW Ecology Department, Dallas Lewallen, the UW football team starting center, on restoring the overall property to its original habitats. This was an interesting duo to watch, Gary at 5' 8" and 155 lbs and Dallas at 6' 4" and 325 lbs, with Gary coaching and pointing out how to go about what at times seemed to be an insurmountable task of restoration."

Jerry continued, saying "Gary introduced me to Dane County Naturalist, Wayne Pauly, who toured the property with us and pointed out that what Gary was doing and planning was the right course to take to restore the property. Wayne and Gary also suggested controlled burns for the prairie, wetland and the oak savanna. At this time I did not know you could burn an oak savanna and have them survive and thrive. Gary connected with Jim Elleson of Quercus Land Stewardship who conducted our first burn on the oak areas we had thinned out surrounding the back 9 greens. Gary was devoted to the task of restoring the University Ridge property, educating us on what was here before Europeans arrived and why it would be ecologically helpful to return it as nearly as possible to that state. I think you could say Gary was Land Grant Extension work at its best. All of us at University Ridge will miss his friendship, naturalist knowledge and can-do attitude!"

The University Ridge Golf Course is not only a demonstration of what can be done to enhance the natural beauty of a course, but also is a lasting legacy to Gary Gaard who so loved nature.

New Technologies in the Turfgrass Diagnostic Lab

By Bruce Schweiger, Turfgrass Diagnostic Lab Manager, University of Wisconsin-Madison

It's spring in Wisconsin and there have been many changes in the department of Plant Pathology at the UW-Madison. The first huge change was the official hiring of Dr. Paul Koch as Assistant Professor. Congratulations, Dr. Paul! Dr. Koch's hiring is going to bring many new ideas to the turfgrass industry. One of his big changes is to embrace technology to improve communication and information delivery to all of you. Many of you have already found Paul and me on Twitter. Neither of us are prolific on Twitter but are on it enough to keep you posted on the happenings around the TDL.

Dr. Koch has discussed with me that our tdl.wisc.edu website is outdated and difficult to use both internally and externally. A major project this winter was to create a much more user friendly website. With the help of Dixie Lang from the UW College of Ag, the website was taken down and re-constructed. The old website did not allow for changes to be made unless you were at the department office in Russell Lab and connected to the secure server. When I started we were in full swing at O.J. Noer and not on campus that much to make the changes. The new website now allows us to connect from any computer with a VPN connection so we can make changes and post updates faster.

All of the research will continue to be posted on the website, which will not change. With the more user friendly website, Dr. Koch will continue to improve the site. I feel one of the biggest upgrades is that all the sample submission forms are available online. You can now open the forms from a computer, tablet, or your smart phone to fill them out. Once filled out they will be automatically sent to me. This alerts me that a sample is coming to the lab. My request is when you fill out the form please fill them out completely so when the samples arrive I can match the proper form to the proper sample. If you have pictures, you may send them to me at bschweiger@wisc.edu or text them to me at 608-445-5490. The new system allows me to know ahead of time when samples are arriving. Then if the rare time happens that I am not available, I can let you know, and contact the reserve personnel (Dr. Koch) to make sure your sample gets processed right away. Dr. Koch has other great ideas on how we can utilize the website to enhance our service to both homeowners and growers alike. Stay tuned for more on these ideas as he rolls them out.

Another technology project that we are working on is an app for disease identification and control. When this app goes live you will be able pull it up on your tablet or smart phone, click on a few boxes to answers questions, and then it will option for which disease it could be. The plan is to be able to scroll down through the menus to a page that will connect to a rating for chemical controls. The chemicals will be rated as to how they have performed for us in our research.

Last year you all heard about the rust project that Dr. Koch is conducting and that many of you have submitted rust samples to. This year we are again conducting this project and are again looking for you and others to send rust samples from all across the Midwest and beyond. Here is what to do:

As part of the rust species identification project, we are looking for rust samples from your turfgrass. It doesn't matter what species of grass, and it doesn't matter what type of turf (sod production, sports turf, golf turf, home lawn, etc). If you see rust on your turf, please submit it to the Turfgrass Diagnostic Lab for identification using the following simple steps:

- Pick or cut 5 to 10 turfgrass plants affected by rust from the base of the plant near the soil, including both leaves and stem. Roots do not need to be included.
- Wrap all plants together in aluminum foil. Do NOT wrap in moist newspaper or paper towel.
- Place wrapped plants in a standard business envelope (4.125 X 9.5 inches), include completed Rust ID Submission Form, affix postage, and promptly mail to the Turfgrass Diagnostic Lab at 2502 Highway M, Verona, WI 53593.

Please remember to complete and include the Rust ID Submission Form when submitting the sample. This form can be found on the tdl.wisc.edu website and click on the Seeing Rust Tab on the right side of the page.

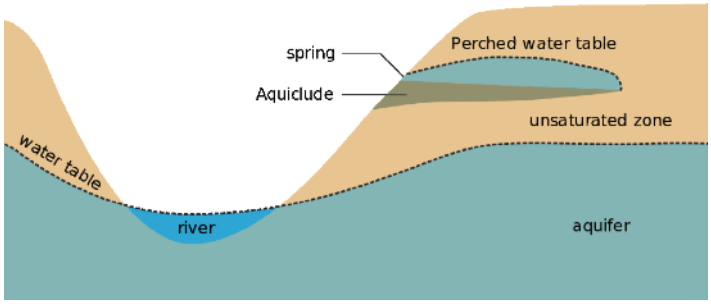
Using the Web Soil Survey to Evaluate Internal Drainage Potential

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

There are few things more important to growing healthy grass than good drainage. One of my favorite quotes is: "You need two things to grow good grass, common sense and drainage. If you are short on the former you going to need more of the latter." Drainage is important because most grasses perform poorly in wet soils. Also, wet soils are more susceptible to compaction and most diseases and insects prefer wet environments.

There are two main types of drainage: surface and internal. Good surface drainage is hugely important, but I won't spend much time talking about it here. It is relatively easy to see if surface drainage is adequate or not with a glance or a few easy measurements. Internal drainage, however, is much harder to visualize. Poor internal drainage can be created by two very different situations: low water infiltration rate and a shallow depth to the water table. If you have poor internal drainage, knowing the underlying cause of the problem is important for deciding how to correct it.

Let's start with the depth to the water table. The water table is the level where the soil is saturated with ground water (see image below). If the water table is near the surface, the internal drainage is expected to be poor and growing healthy grass will be a constant challenge. The best solution for lowering the water table is to install drain tile. The depth of the drain tile will determine the new water table level. So if the drain tile is installed at 18 inches, the water table will be at that same level. Poor internal drainage because of a shallow water table can cause problems in any soil type including sandy soils. The proper spacing of the drain tile will be determined by the soil texture.



The second situation that causes poor internal drainage is a low saturated hydraulic conductivity. This problem is most common in soils with high clay content, and therefore these soils are also most susceptible to compaction. In this situation, installing drain tile and backfilling with the original soil material will not solve the problem because the water near the surface simply can't move fast enough through the soil to get to the drains. In this case, a better solution would be to install slit drainage or slit trenches, where drain tile is installed but then backfilled with a sandy soil that can quickly carry water to the drain tile. Good surface drainage is also a very important factor for these impermeable soils.

The Web Soil Survey (http://websoilsurvey.nrcs.usda.gov) is a useful web application that provides information about the drainage potential at a site. Let's take a look at an example. Below is a screen shot of an athletic field from the Web Soil Survey. The two colors represent the drainage class of the two soil types found on the site. From the legend we see that the North end is "somewhat poorly drained" while the South end is "poorly drained". The first thing we should note is that it will be challenging to grow healthy grass on both of these sites unless something is done about the drainage. Good surface drainage is always important for athletic fields. We now want to figure out if this poor drainage is being caused by a shallow water table or by an impermeable soil.

DRAINAGE CLASS MAP:

The permeability of the soil can be judged in the Web Soil Survey by looking at the "Saturated Hydraulic Conductivity (standard classes)". The saturated hydraulic conductivity is a measurement of how quickly water can move through the soil. Here is a map of the saturated hydraulic conductivity of the fields:

HYDRAULIC CONDUCTIVITY MAP:

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From the map, we can see that the saturated hydraulic conductivity is the same for the North and South ends, and listed as "Moderately High". This suggests that our internal drainage issue is likely being caused by a shallow water table, and is not related to the soil's hydraulic conductivity. The Web Soil Survey can estimate the depth to the water table at any site in the U.S. Shown below, we see that the North end has a higher depth to water table - 50-100 cm which is about 20-40 inches and pretty reasonable for most uses. The South end has a depth to water table of 0-25 cm, or about 0-12 inches, this suggests that internal drainage to lower the water table would be useful. Because the soil has a moderately high saturated hydraulic conductivity, slit drainage may not be necessary.

DEPTH TO WATER TABLE MAP:

The Web Soil Survey is a powerful tool that has many applications for site assessment and planning. These are just three maps of scores of different soil properties that you can view. Additionally, using these maps can be a powerful communication tool to explain to your golfers, parents, customers, board members, or supervisors about the challenges of growing turf on your site. There are many YouTube tutorials that explain how to use the Web Soil Survey and create maps like the ones shown above. I encourage you to explore and see what you can learn about your site.

State of the Art Research and the Basics for Field Day 2014

GREAT YEAR TO BRING YOUR STAFF

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

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

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

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

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

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

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

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

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

Wisconsin Turfgrass Association
2014 Golf Fundraiser

Benefitting the
Wisconsin Turfgrass Research Sustainability Fund

University Ridge Golf Course – October 7

Where: University Ridge Golf Course
9002 County Road PD
Madison, WI 53593
(608) 845-7700
Go to universityridge.com for directions

Cost: $125 per person

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

When: Tuesday, October 7, 2014

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 90/94: exit the beltline (Hwy 12/18) heading west, then turn south on Exit 258-Verona Rd (US 18/151), drive 2 miles to Cty PD (McKee Rd), turn right going west 3.6 miles to course on right

University Ridge Golf Course

University Ridge derives its name from the landscape features left by the retreating glacier. The course sits on the terminal moraine, where the Wisconsin glacier stopped, forming the ridge that separates the land into groups of rolling hills and valleys. The course is the official home to University of Wisconsin men's and women's golf teams. Robert Trent Jones Jr. designed the course which opened in 1991. The putting greens were resurfaced in the fall of 2012 and are playing their very best for current guests.

You are invited to play where the Badgers play. Course superintendent Phil Davidson and all the golf course staff from University Ridge welcome you 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 for today and the future.

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 Monday, September 29, 2014
- You may register by yourself or as a foursome

Nothing is Certain, Except Death, Taxes, and Snowstorms for WTA Winter Conference

2014 WTA TURFGRASS RESEARCH DAY / CONFERENCE AND WEBINAR

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

The snow caught us once again for the annual WTA Winter Conference, now called Turfgrass Research Day / Conference and Webinar. We've tried moving the conference to earlier and later dates but we always seem to anger the snow Gods with our messages of better turf for the summer season. However, the 3 inches of fresh snow that fell on conference day didn't dampen attendance. There were still 65 registrants and 18 students/staff/researchers that ventured to the UW-Madison campus to attend the live conference. An online webinar was added as an option last year for those that preferred to attend from the comfort of their home or work computers. This year, webinar participation added 34 participants.

Dr. Doug Soldat started the conference with presentations of the annual turf scholarships. Adam Wepfer received the Egon Herrmann Scholarship, presented by National Seed. Ben Luedtke received the WTA / James Huggett Memorial Scholarship. Luke McGhee received the WGCSA / J.R. Love Scholarship. Tyler Gerritts received the Charles O. Newlin Scholarship.

The first speaker of the conference was Dr. Paul Koch, UW-Madison's newest turf science professor, who officially started the job 14 days earlier. Dr. Koch is no stranger to Wisconsin, having studied at the UW-Madison for all three of his scholastic degrees starting in 2001 and being manager of the TDL since 2006. Dr. Koch's subject was control and management of rust disease. He introduced us to the history and complexity of three separate rust species, namely stem, crown, and stripped rust. He also informed us about the documented increase in rust severity over the last 10 to 15 years. His research is helping identify which rust specie is more likely to attack which turfgrass specie or even cultivar. His research will continue into next year and he's asking for your help. All turf managers from throughout the country can help him next summer by send rusting samples to the TDL whenever they find it. More information can be found at www.tdl.wisc.edu.

Scholarship recipients Adam Wepfer (Egon Herrmann Scholarship), Ben Luedtke (WTA/James Huggett Memorial Scholarship), Luke McGhee (WGCSA/J.R. Love Scholarship), pictured with major professor Dr. Doug Soldat

Dr. Soldat was the next to present. He talked about the rapidly expanding research into microbiology of turfgrass soils. He countered claims that are often found on the internet about how inorganic fertilizers and pesticides can

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sterilize soil. Research has found inorganic fertilizers actually increased microbiologic numbers. Fungicides did the same, as it was found they had little non-target activity on other microbes. Next, Dr. Soldat presented facts about biologic soil additives and whether they can improve soil microbiology and growing environments. It's all about the numbers. There are about 50 billion native microbes in a tablespoon of soil. Commercial soil additives like compost teas, humates, mycorrhiza, hormones, bacterial additives, etc. claim to increase biologic activity in soils. The net result is you may be adding 1 compost tea microbe per 250 million native microbes per application. He mentioned if you still want to use these products, do the plywood test to observe differences in turf color or quality between a sprayed and non sprayed area. That is, lay down a sheet of plywood when you are spraying your product. The area under the plywood will not receive any product and can serve as a comparison against the sprayed area.

Dr. Geunhwa Jung from the University of Massachusetts and formerly UW-Madison was next to take the podium. His subject was fungicide resistance. He talked about the cause of resistance and how to prevent it. The best way to prevent resistance is to rotate between different fungicide families. Tank mixing different fungicide chemistries can also improve efficacy and the time it takes to develop resistance to a given fungicide. He said once resistance occurs it may take many years before that fungicide can ever be used effectively on your property again.

Dr. Chris Williamson came next and his subject was insecticide management options for Emerald Ash Borer (EAB). Basically he said ash trees can be saved with chemical treatments. Several insecticide treatments are out there. Their residual activity length is reflected in different product cost. One product has been observed to work up to five years. The best time to apply treatments is spring rather than fall. That allows time for uptake of pesticide into the tree and before insects start to feed. His opinion was that removing all ash trees, which many communities have elected to do, is uncalled for. It's neither a good economical or environmental solution to the problem. One attendee asked, "Will the polar vortex or extremely cold winter of 2013/14 kill EAB larvae? Chris's answer, "No".

Next came a wonderful lunch and time to catch up with fellow participants. Starting right after lunch, TDL manager Bruce Schweiger gave a recap of the program's activities in 2013 and shared some plans for the future. He and Dr. Koch plan to greatly improve information transmittal through Twitter, Facebook, and a new TDL Website. There were lots of new electronic interactions in 2013 from the TDL but the future stands to grow exponentially. Bruce also mentioned that you can vastly improve your value within your company or to your customers by developing your electronic communications. He said that although most of you don't often acknowledge it, you know more about turf management than almost everyone. Many of your customers or club members would love to hear your opinion about when to fertilize, what to do after a drought, whether or not to aerate, or how to grow grass better in the shade. They also would love to see progress on how a certain reconstruction project is going. This could be done by starting your own website, twitter account, or blog.

Bruce Schweiger gives a year in review and the road ahead update about the UW-Madison Turfgrass Diagnostic Lab

Dr. Chris Williamson talks about insecticide management options for emerald ash borer

Dr. Doug Soldat informs the audience about microbiology of turfgrass soils

Hopefully you attended Research Day this year because you could have increased your knowledge of many fascinating subjects, including that of our next speaker Dr. Ed Nangle of the Chicago District Golf Association. His subject was Shade: Causes, Impacts and Fixes. His message was light drives growth. Light itself has a range of properties. Different wavelengths are better for photosynthesis. Unfortunately for turf, trees gather the more valuable wavelengths and leave poor quality wavelength for the underlying turf. Thinning the tree canopy or removing trees can improve light. Altering nutrient levels and nitrogen source can improve turf when forced to grow grass in the shade. Other techniques to improve turf quality when growing grass in the shade are to root prune trees or improve air movement with fans. An audience member asked if morning light is better than afternoon light. Dr. Nangle said morning light is better because it brings about earlier drying.

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Another new PhD recipient from the UW-Madison Department of Plant Pathology, Dr. Renee Rioux spoke at conference. Dr. Rioux's subject was 'What's up with Dollar Spot? New Insights on an Old Foe.' First off, she said plant pathologists will soon be renaming the dollar spot organism because it's been recently found to not belong to the sclerotinia family. More pertinent though, she addressed where dollar spot comes from. She found there can be somewhere between 10 and 30% winter survival of the previous year's dollar spot. She also found that dollar spot doesn't survive well in soil and its survival rate changes annually. A larger finding was that dollar spot is likely coming in on new seed. Future research should definitely be aimed at reducing new seed contamination.

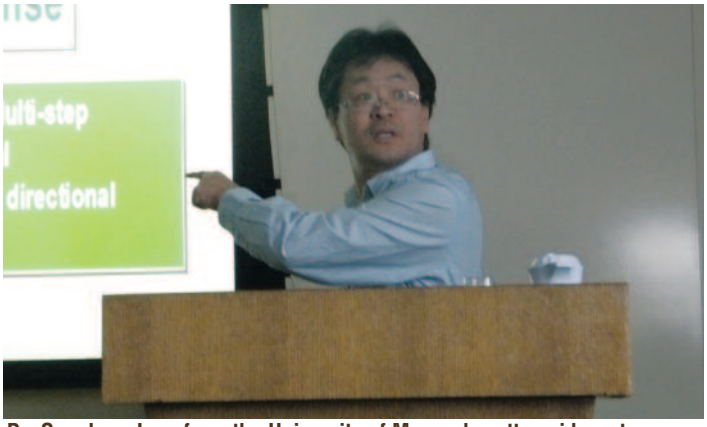
Nearing the end of the conference, Dr. Jim Brosnan from the University of Tennessee was broadcast in via the internet. He gave his talk from his office in Knoxville. Amazing the technology! He talked about new herbicides and strategies for weed control. Several of the products he talked about were PoaCure, Pylex, Tenacity, Xonerate, Defendor and others. He talked about timing, rates, repeat applications, tank mixing, target weeds, and sensitive species and varieties. There was too much information to report in this article. Always remember, a pesticide label is your guide to using pesticides safely and effectively, so read the label. One question came from the audience about PoaCure, "Because it works so well, do you think resistance will occur?" Dr. Brosnan's answer was yes.

Another new PhD from the UW-Madison's Nelson Institute for Environmental Studies was the last speaker at Turfgrass Research Day. Dr. Mark Garrison spoke about the carbon footprint of turf maintenance. His research analyzed different practices used in lawn care, namely mowing, fertilization, and irrigation. He looked at nitrogen sources and the carbon footprint they left. For instance, urea has a high carbon output because when it breaks down, lots of C is emitted. But then compare that to organic fertilizer which has a low carbon output. And when you compare, consider the C output in transporting the fertilizer. The transportation carbon output to ship 1,000 lbs of nitrogen in the form of organic fertilizer is massively larger than shipping 1,000 lbs of nitrogen in the form of urea. 1,000 lbs of nitrogen as urea weighs 2,167 lbs compared to 1,000 lbs of nitrogen as organic fertilizer weighs 20,000 lbs. That's almost 10 truckloads to 1 truckload to transport the same amount of nitrogen. Dr. Garrison presented other interesting data comparing C output between electric and gas mowers and also showed why irrigating lawns can be one of the larger C output practices in lawn care. Some of his conclusions in analyzing the data about lawn care were:

- Lawncare's C output is similar to other household items like running a computer or refrigerator.
- Electric and gasoline engines have comparable emissions when considering C output to produce the energy. This is largely variable throughout the country.
- There are more emissions from transporting fertilizer than in producing it.

WTA Turfgrass Research Day was another success despite the weather. The planning committee of Drs. Soldat and Koch, and Bruce Schweiger, Audra Anderson and Monroe Miller should be commended. The generous sponsors that helped bring you Turfgrass Research Day 2014 should also be thanked. Please show these sponsors, listed here, your gratitude for supporting quality education. And thank you speakers, both near and far, for all your efforts. ■

Dr. Ed Nangle from the Chicago District Golf Association presents on shade: causes, impacts, and fixes



Dr. Geunhwa Jung from the University of Massachusetts paid a return visit to talk about fungicide resistance in turfgrass

New UW-Madison turfgrass science professor Dr. Paul Koch presented on control and management of rust disease

Another recent PhD recipient from the Department of Plant Pathology at the UW-Madison Dr. Renee Rioux talked about her new research findings in the management of dollar spot

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CALENDAR OF EVENTS

June 23	WGCSA Monthly Meeting, Tournament	Brown Deer GC, Milwaukee
Jul 29	**WTA Summer Field Day**	**O.J. Noer Facility, Verona**
Jul 29-Aug 1	TPI Summer Convention and Field Days	Philadelphia, PA
Aug 11	WGCSA/NGLGCSA Joint Meeting	Brown County GC, Green Bay
Sept 15	Wee One Fundraiser	Pine Hills CC, Sheboygan
Oct 4	WGCSA Couples Outing/Party	Wild Rock GC, WI Dells
Oct ?	NGLGCSA Crew Outing	Riverside GC, Menomonee, MI
Oct 7	**WTA Golf Fundraiser**	**University Ridge GC, Verona**
Oct 22-24	PLANET Green Industry Conference	Louisville, KY
Dec 3,4	Wisconsin Golf Turf Symposium	American Club, Kohler

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

NGLGCSA	Northern Great Lakes Golf Course Superintendents Assoc.	www.nglturf.org
PLANET	Professional Landcare Network Green Industry Conference	www.landcarenetwork.org
STMA	Sports Turf Managers association Conference	800-323-3875
TPI	Turf Producers International	800-405-8873
Wee One	Wee One Foundation Golf Outing	630-457-7276
WGCSA	Wisconsin Golf Course Superintendents Association	920-643-4888
WGIF	Wisconsin Green Industry Federation	414-529-4705
WSPA	Wisconsin Sod Producers Association	262-895-6820
WTA	**Wisconsin Turfgrass Association**	**608-845-6536**

Wisconsin Turfgrass Summer Field Day

Tuesday, July 29th 2014

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 29th to learn all the latest turf management innovations coming out of the UW Madison. Morning talks will focus on lawn-care, sports, & general turf tips, and afternoon will focus on golf turf management solutions.

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

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

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

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

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

Field Day Schedule

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

Registration Includes

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

Lawn Care / General Turf 9:30 – 11:00

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

Afternoon Golf Turf 1:30 – 3:00

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

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

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

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cut here and return with payment

Registration

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

Name of all employees_____

_____

Company_____email_____

Mailing address_____

City/State/Zip Code_____phone _____

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