



## SOMETHING FOR EVERYONE AT SUMMER FIELD DAY 2016 GREAT YEAR TO BRING YOUR STAFF

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

The UW turf professors, research staff, and WTA are excited to bring you a very informative Field Day on Tuesday July 26th at the O.J. Noer Turf Research Facility in Verona. The day will be divided into two educational sessions with the morning being focused more towards lawncare, landscape, sod, and sportsfield, while the afternoon is focused towards golf. The information presented in both sessions will be useful even if it's not your specific profession. So come for the whole day, or if your time is limited, you have the option to pick the session that best meets your needs.

Both basic and cutting-edge subjects will be presented for morning and afternoon. It will be a great year to also bring staff to brush up on the basics or to learn about new techniques. Staff members may register for the low price of \$25 when registering with their supervisor. That price includes morning donuts and coffee, a great lunch at noon, and all the education they can soak in.

The presentations include:

- Low Toxicity Herbicides
- Mitigating Risk to Pollinators
- Exciting New Turfgrass Varieties
- Growth Regulators for Sports Turf Management
- Different Nitrogen Sources Get Different Results
- Using GPS Technology on Boom Sprayers
- Reduced Risk Pesticide Management
- Growth Regulator Use on Fairways
- Precision Tools for Disease Management
- Weed Control Options During Establishment
- pH Impacts on Fungicide Efficacy

There will be other presentations in addition to those listed above. Many research projects will have signs and other information displayed so that you can stop by on your own schedule as a self-guided tour.

In addition to the research and education there is a world class trade show where you can visit with experts to learn about every



Guest speaker Dr. Ed Nangle from Chicago Area Golf District gave a couple informative presentations at Field Day 2015

product, tool, or service to help you on the job. Other perks for attending include coffee and donuts in the morning, a great Wisconsin style lunch at noon, and time to share ideas with others from your profession throughout the day. You can also talk to the presenters over lunch or between talks if you need more in-depth information.

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 [audra.anderson@wisc.edu](mailto:audra.anderson@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.wisconsin-turfgrass-association.org](http://www.wisconsin-turfgrass-association.org). You may also register and pay online from the website. Field Day 2016 is going to be the best ever, and we hope to see you there on July 26th. ■

## PRESIDENT'S MESSAGE

# Appreciations

By Paul Huggett



Summer is here, at least for today. Our morning frost in mid-May was hopefully the last frost till this fall. And now nighttime temperatures are being predicted that make us think about turf disease pressure. My memory is short with all the activities going on this time of year so I am grateful that the WTA established an infrastructure (the Noer Facility) to house the Turfgrass Diagnostic Lab (TDL). I enjoy giving Dr. Paul Koch or Bruce Schweiger a call for

a quick refresher on what works for the upcoming season. What a good fortune it is to have this resource so close to home.

Our beehives are doing well. We are excited that two of our three hives made it through the winter this year. We did mite treatments and feedings all winter to keep them alive. This is not practical on a production basis, but when a new package of bees costs over \$100, you want to try a little harder to preserve what you have. What does this have to do with turf? Well, as the bees start buzzing so do all the not so friendly bugs that affect our turf and ornamentals. We are fortunate to have Dr. Chris Williamson as a source for answers to those questions that are bugging you.

Dr. Doug Soldat is a great resource for all your soil nutrient questions and cultural growing issues. It is amazing how many different soil types there are across the state, not to mention all the amended golf course soils that need attention for drainage, nutrient, and structural issues. We are lucky to have Dr. Soldat study issues and disseminate that information to help us make our growing decisions easier.

The Farm, not the golf course in Cottage Grove, but rather the O.J. Noer Turfgrass Research Farm in Verona is a great source of information. Farm manager Tom Schwab has been the steady hand in guiding the comings and goings of various research projects on

the farm as well as garnering funds from many sources to support items such as the chemical building, irrigation infrastructure, and much more. Tom has indicated that this will be his last year as farm manager, but in Tom's dedicated style he is making sure the transition goes smoothly. Thanks for the decades of work, Tom!

Turfgrass is not the only crop on our sod farm, as we also use that tried and true agronomic practice of crop rotation. We finished planting our corn and switched to beans. In the heat of the spring battle, I failed to notice my bean seed supplier had not yet delivered our seed that I ordered and paid for 2 months earlier. I was frustrated to have the planter hooked up to the tractor and rain clouds looming over a freshly tilled field ready for beans. My point is, it's part my fault for not noticing but I would have appreciated it if the supplier followed through on delivering the order when I made it. I hope your vendors are working well with your orders and giving you the value, service, and great products that you expect.

All the benefits of the WTA don't happen without members like you! We are grateful for your continued support and look forward to seeing you at the Summer Field Day on July 26th at the Noer Facility, as well as the Golf Outing Fundraiser at Butte des Morts Country Club on October 3rd. See you soon. ■

Phil Spitz  
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Year behind board member name, is the expiration of their current term. January is the month the term is up.

# Meet the New Plant Pathology Turfgrass Research Specialist

By Kurt Hockemeyer, Department of Plant Pathology, University of Wisconsin-Madison

As the Antigo silt loam and other soils of Wisconsin start to feel the heat of the spring sun, we here at the O.J. Noer Turfgrass Research and Education Facility have started to feel the heat and pressure of another growing season as well. Along with the pressure of getting the greens up to speed, cutting that first batch of sod, or applying that first round of fertilizer on homeowner's lawns comes the annual sense of renewal that follows the inevitable winters of Wisconsin. Most of you reading this article have chosen a profession that puts you out into the green world that surrounds us, or one that supports that green world. And because you have chosen that profession, there is something



very special about seeing the trees leaf out, the grass greening up, the garden plants poking through the soil. Just as we all are feeling the excitement and hope for a new growing season, so too are my wife and I enjoying a new beginning here in Madison, Wisconsin.

Both my wife, Jennifer, and I were born and raised in northeast Indiana near the city of Fort Wayne. I grew up on a dairy farm milking anywhere between 30-50 cows and farming about 200 acres. Nothing spectacular but this was definitely the catalyst for choosing my current profession. My father and grandfather also ran a small tree nursery business. I was constantly surrounded by plants and agriculture. I certainly remember hating to do all of the work that needed to get done, and when my siblings and I would slack off, my parents and grandparents would let us hear about it. But the farm work eventually paid off and when I hit high school I was a tall, well-built kid. Growing up in the Hoosier State and being 6'5" you might think that I played basketball, or being an avid football fan you might think I tackled the gridiron or some other physical sport. But alas my calling was to be in the marching band and on the golf team. During high school I had some success with these two activities, but eventually I graduated and had to decide what to do next with my life.

I started out studying at the Purdue satellite campus in Fort Wayne as an engineer, following in the footsteps of my dad who had a B.S. in chemical engineering (who then became a farmer). But I just didn't

feel like that was for me. So I then became a music major, and was planning on playing my alto saxophone as a career. But again, I just didn't feel like that was who I was. I eventually learned of the Agronomy program at Purdue University in West Lafayette. As soon as I learned that I could get a degree towards managing a golf course, I immediately called my then girlfriend Jennifer and told her I knew what I wanted to do. I can still remember the excitement I had when talking to her. So I eventually transferred to Purdue's main campus and started working on my B.S. in Turfgrass Science. I took on a couple of golf course internships to learn the trade. My first internship was at Chevy Chase Club in Chevy Chase, MD. A very hot and humid summer trying to grow bentgrass definitely taught me much. Then I was in Richmond Hill, GA at the Ford Plantation. Again a very hot and humid summer, but this time growing Bermudagrass, which is just a different beast altogether. I had some very good mentors during those internships, and they helped me realize that I wanted to pursue a career in turfgrass research.

In the fall of 2011 I started working on my M.S. in Turf Pathology under Dr. Rick Latin, who taught me the tenets of being a good scientist. A few years later I had another degree and was looking for a job. I found one working for Dr. Angela Orshinsky at the University of Minnesota and spent a year helping to get their turf pathology research program off the ground. Dr. Orshinsky also had some graduate students studying hops and tomatoes as well, so I learned much about those crops. Eventually the opportunity to work for Dr. Paul Koch at UW-Madison came around and I felt that would be a good place for me. My main role here is to spearhead a new initiative geared towards reducing environmental impacts in turfgrass management. You will hear more about this initiative in the coming months. As we all get into the swing of the new growing season, I look forward to meeting and working with the Wisconsin turf industry, hopefully catching some fish, and enjoying the summer. ■

*Save the Date*

**WTA Golf Fundraiser**

**Monday, October 3, 2016**

**Butte Des Morts Country Club, Appleton, WI**

***Golf, Food, Fun, with Friends***

# Are You in Compliance with NR-151?

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

It's been over eight years since NR-151 took effect. This WDNR rule was implemented to protect water quality in Wisconsin to meet the criteria of the EPA's Clean Water Act. While NR-151 mainly deals with agricultural production (by far the largest contributor of non-point source phosphorus to water in the state) it requires that fertilized turfgrass areas greater than five acres have a site specific nutrient management plan based on appropriate soil tests.

While NR-151 itself is silent on the definition of "site-specific" and "appropriate", it formed a committee of regulators, educators, consultants, and practitioners who worked together to establish guidelines that more clearly define what a nutrient management plan should look like.

The UW-Madison Turfgrass program hosted several NR-151 training programs back in 2007 and 2008 across Wisconsin. Recently, a handful of people have asked if new NR-151 training sessions were in the works. There have been many advances in technology in the last eight years. Instead of hosting physical sessions again, I decided to compile some resources and create a few videos to assist in either checking, updating, or creating a nutrient management plan that complies with NR-151. The three videos are about 30 minutes long. One discusses the big picture aspects of NR-151, another shows you how to collect the maps you'll need to comply, and the last video goes over an example of how to put a nutrient management plan together.

In addition to the videos, the University of Wisconsin-Extension has a 20-page publication that walks you through the process of creating a nutrient management plan. It also has a template document that you can use to get started, and fact sheets that were designed to convey the main restrictions of nutrient applications.

You can find all this information at the UW-Madison Turfgrass Web Page at [www.turf.wisc.edu](http://www.turf.wisc.edu). I hope to add another video or document on frequently asked questions. However, I actually need your questions before I can decide which ones are frequently asked! Please do not hesitate to reach out with any questions when working on your plan. I can be reached at 608-263-3631 or [djsoldat@wisc.edu](mailto:djsoldat@wisc.edu). ■

## CHINCH BUGS

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

Chinch bugs are native to North America and have caused serious damage to numerous agricultural crops for well over a century. Chinch bugs feed exclusively on plants in the family Gramineae, and they are important insect pests of small grains including wheat and barley, corn and sorghum, forage grasses and turfgrass!

The chinch bug complex consists of several closely related species, including the common chinch bug, *Blissus leucopterus leucopterus*; the hairy chinch bug, *B. leucopterus hirtus*; the southern chinch bug, *B. insularis*; and the western chinch bug, *B. occiduus*. The two important chinch bug species in Wisconsin and the Great Lakes Region are the common chinch bug and the hairy chinch bug.

Overwintered chinch bug adults lay very small eggs that are elongate, whitish and average about 1.0 mm in length. As the embryo develops, the egg takes on an orange-red color; the developing nymph can be readily seen inside the egg before hatching. Once the eggs hatch, first instar nymphs emerge, they are bright red insects approximately 1.0 mm long with a distinctive white band across the abdomen. As they grow and develop and mature, the color of



Different development stages of chinch bug

the nymph gradually changes to orange-brown and finally to dark brown. Chinch bugs have five nymphal stages or instars, all of which feed and cause damage. Adults are black with reddish-yellow legs, and are 2.5 – 5.0 mm in length. Female chinch bugs are typically larger and more robust than the males. Chinch bugs (nymphs and adults) are gregarious animals that aggregate and feed on turfgrass plants. They typically have two generations per year. Overwintered adults lay eggs in the spring and the first generation matures in approximately 4 - 6 weeks, usually by mid-July. Second-generation adults begin laying eggs from mid-July through late August completing development and maturing sometime in September or early-October.



Chinch bug damage in homelawn

Continued on page 5


Chinch bug nymphs and adults have piercing-sucking mouthparts. They feed on plants by withdrawing plant juices from the crowns, leaf sheaths, and stems of host plants. During the feeding process, a salivary toxin is commonly injected into the plant that disrupts the translocation of water and nutrients, resulting in wilt and discoloration of plant tissues. Chinch bugs feed on most cool-season turfgrasses including creeping bentgrass, Kentucky bluegrass, perennial ryegrass and fine-leaf fescues. Chinch bugs prefer open, sunny areas of turf that have heavy thatch accumulations, and infestations usually occur in aggregations rather than being uniformly distributed throughout the turf stand. Feeding damage intensifies and damaged patches of turf begin to coalesce into large areas of dead or dying turf that does not recover regardless of irrigation or rainfall. Damage is typically most prevalent during hot, dry periods in mid to late summer when the turf is often experiencing drought stress.

The most practical way to detect and sample chinch bugs is to remove both ends from a 2-pound metal coffee can, press it firmly into the ground in an area with a suspected chinch bug infestation and fill the can with water. Chinch bugs (nymphs and adults) will merely float to the surface. Another method for sampling chinch bugs involves removing a small clump or section of grass and vigorously shaking it over a sheet of white paper or into a white porcelain pan. Dislodged chinch bugs can be quickly identified and counted.

Effective management of chinch bugs requires an integrated approach that includes the use of effective cultural practices to keep turfgrass stands in optimum condition, planting chinch bug resistant cultivars, and when necessary, the judicious use of chemical controls.

Some Kentucky bluegrass cultivars have been identified as having chinch bug resistance, however they are not among the most preferred cultivars as they lack certain appealing characteristics. Also, certain endophyte-enhanced turfgrasses exhibit high levels of resistance to chinch bugs, but they are limited to perennial ryegrass, tall fescue, and fine fescue.

Insecticides are an effective management tactic to control chinch bugs and are often the most practical method for mitigating chinch bug damage. Unfortunately, few definitive action (treatment) thresholds have been established for chinch bugs infesting turfgrass. However, insecticides may be warranted when chinch bugs are present and before extensive damage occurs. Best results can be attained when contact insecticides are directed against young (1st -3rd instar nymphs). Numerous contact insecticides that are effective against chinch bugs include synthetic pyrethroids (bifenthrin, cyfluthrin, deltamethrin, lambda-cyhalothrin, etc.), chlorpyrifos (golf courses and sod farms only, not registered for lawn and landscape!), carbaryl (Sevin) and acephate (Orthene). Regular chinch bug sampling and monitoring can help pinpoint the optimal time for a treatment application. In areas where a history of chinch bug activity has been reported, the application of systemic insecticides may provide a more reliable and effective management approach. Systemic insecticides include clothianidin, dinotefuran, imidacloprid and thiamethoxam. These products are absorbed by the plant roots and translocated to the mesophyll tissue in the plant where the chinch bug nymphs and adults feed. ■



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# ASK NOT WHAT YOU CAN DO FOR YOUR LAWN – ASK WHAT YOUR LAWN CAN DO FOR YOU AN ASSESSMENT OF THE BENEFITS OF TURFGRASS

By Chantel Wilson, Department of Plant Pathology, University of Wisconsin-Madison

*Editor's Note – This article is reprinted from an earlier WTA Newsletter. It was written by a graduate student studying turfgrass plant pathology at UW-Madison and I thought it would be nice to revisit her enlightening commentary about the many benefits that real turf brings to our lives. I hope you enjoy it.*

“Ask not what you can do for your lawn – Ask what your lawn can do for you.” At first glance, this statement seems counterintuitive... partly because it is a play on a JFK quote. Are we not more concerned with what we can do for our lawn to keep it healthy and looking great? Coming from someone who studies turf pathology, my colleagues and I are always asking what we can do for turf and how we can help the public manage turf. Truth is, we know a lot! There is abundance of information on proper establishment, fertility management, mowing height recommendations, water requirements, fungicide applications, disease control guidelines, and much more to properly maintain grass. Perhaps the lesser addressed question is: what does turf do for us? We all know that everyone who manages their own lawn has grumbled at least once about needing to sacrifice the luxuries of air conditioning and television to go out in the sweltering heat and mow. Why do we torture ourselves, to keep our little patch of green? Turns out, there are many benefits to keeping and maintaining turfgrass!

When asked what the benefits of turfgrass might be, several things jump to mind. Grass is aesthetically pleasing, and looks much better than a field of dirt (you don't send a postcard of a dirt field to grandma). Sports players would much rather fall on plush, soft turf than bone-shattering pavement. Golf just wouldn't be golf if we had to drive from a bed of cacti or weeds. Joking aside, I actually became very interested in the less-intuitive benefits of turf when I was checking my email one morning and saw an article, “Why mowing the lawn relieves stress and boosts your memory<sup>1</sup>.” Being someone who is scientifically trained, my first thought was: This has got to be a conglomeration of the material which comes out of the last part of the bull that hops over the fence. Ok, that isn't *exactly* what I thought. Upon reading the article, actual scientific research has proven that a chemical (cis-3-hexen-1-ol) released by turf when it is cut, has been found to relieve the effects of stress. Researcher Dr. Nick Lavidis from Australia has shown that this chemical and a few other plant-derived compounds have a relaxing effect on the cardiovascular system by upregulation of neurotransmitter activity of the brain<sup>4</sup>. The brain then releases signals into the sympathetic nervous system, and relaxes the constriction of blood vessels caused by stress. The chemical reaction's overall reduction in stress contributes to improvement in mood and stimulates memory by directly working on the brain's amygdala and hippocampus<sup>1</sup>. Essentially, the body unwinds from tension. I was very surprised by this! If that amazing fact wasn't enough to impress you, take solace in knowing that there are several more benefits to growing turfgrasses.

Other scientists have been extremely interested in the benefits of turf, and several publications have been made. A quick overview of the paper “The Role of Turfgrasses in Environmental Protection and Their

Benefits to Humans” from James Beard and Robert Green, lists many functional, recreational and aesthetic components. Listed functional benefits included but were not limited to soil erosion control, enhanced biodegradation of synthetic organic compounds, noise/glare reduction, dust stabilization, reduction in fire hazards, improved recharge/quality protection of groundwater, and even “increased security of sensitive installations provided by high-visibility zones”. I bet you didn't know your grass is a crime-fighter! Furthermore, this paper emphasizes the research of behavioral scientist Roger Ulrich, who has done a considerable amount of research of the psychological impact of grass, trees, open space, and other natural areas on humans. The authors write that Ulrich's work suggests that an outdoor view has contributed to recovery speed for hospital patients, quality of life within urban areas, reduction in “perceived job stress”, and improvements in health<sup>5</sup>. Wow... ditch the apple a day!

Still not impressed? In other research, it has also been found that turf can be suitable to replace asphalt for parking. Provided, of course, that there is light usage, adequate irrigation, and a grass tolerant to “mechanical impedance” used. Benefits cited here are that turf provides natural cooling, and allows for adequate infiltration of precipitation into the groundwater system, which is not provided by impermeable surfaces such as asphalt<sup>3</sup>. What about golf courses? What benefit could they possibly have to the non-golfer? Golf courses, which rely on turf, provide not only aesthetics, but also a benefit that is indirectly linked to turf. If you like animals and native plant conservation, you might be happy to know that over 350 golf courses in the United States are Certified Audubon Cooperative Sanctuaries. Establishing Audubon Sanctuaries provides trees, wildflowers, nesting areas for birds, habitat for local wildlife, natural areas, and a great volunteer experience for locals<sup>2</sup>. Homeowners can also get their backyards Audubon certified, although turfed landscapes and golf courses typically are suitable habitats for wildlife. Benefits don't extend just to you, but to the environment, songbirds, foxes, birds of prey, honeybees, deer, rabbits, and turtles as well!

So, the next time you begrudgingly haul out the lawnmower, and you're asking what your lawn has done for you, take note that you might have only remembered to mow your grass because the chemicals released the last time you mowed helped you to do so. Keep your chin up, knowing that that turf helps the environment, saves animals, protects you from falls, and keeps your neighbors happy. If anything, upon completion of your arduous task, the same chemical release will make you feel better when you're done.

*Information provided from “Why mowing the lawn relieves stress and boosts your memory<sup>1</sup>” by Daily Mail Reporter, Aug. 31 2009; “Wild Things<sup>2</sup>” by Katherine Woodford of Grounds Maintenance; “Vehicular Turf<sup>3</sup>” by Philip Busey, 1990, University of Florida; “Attenuation of the stress induced upregulation of sympathetic neurotransmission by plant derived odours<sup>4</sup>” by Nick Lavidis, 2007 Society of Neuroscience; and “The Role of Turfgrasses in Environmental Protection and Their Benefits to Humans<sup>5</sup>” by James Beard and Robert L. Green, 1994, Journal of Environmental Quality. ■*

# Disease Profile: Red Thread

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

**Fungal name:** *Laetisaria fuciformis*

**Turfgrass hosts:** Primarily fine fescues, but perennial ryegrass is also susceptible

**Optimum conditions:** Mild temperatures (60-75°F) with prolonged periods of wet and/or humid weather.

## Diagnosing the disease:

Red thread is arguably the easiest turfgrass disease to diagnose, mostly due to the prominent red 'thread-like' fungal tendrils that emanate out from the infected leaf blades (Figure 1). These tendrils are easily visible with the naked eye. Symptoms include roughly circular patches of tan or bleached turf varying in size from 2 to 3 inches on shorter cut turf (Figure 2) up to almost a foot on higher cut turf (Figure 3). The affected patches can have a reddish or pinkish hue as a result of the fungal tendrils emanating from infected leaf blades. At first glance the disease can be mistaken for dollar spot, especially on shorter cut turf. But the presence of the red tendrils is always a clear indicator that red thread is present.

## Cultural control recommendations:

Red thread is dependent on extended periods of mild temperatures and leaf wetness. This oftentimes occurs in late May or early June in Wisconsin, and red thread is a very common disease of fine fescue during these periods. However, irrigating too frequently in the spring and/or fall or under fertilizing the turf can exacerbate the disease. Therefore, keep turf properly fertilized and promote leaf drying through proper irrigation and removal of tree limbs and shrubs that can reduce air movement. In addition, Kentucky bluegrass, tall fescue, and creeping bentgrass aren't susceptible to this disease so a transition in species away from fine fescue may be warranted if the problem persists.

## Chemical control recommendations:

Fungicide applications are not normally recommended for red thread because the disease is usually only present for 1 to 2 weeks and the turf recovers once warmer and drier conditions prevail. However, in the event that fungicides are required, most products from the QoI (Heritage, Insignia, etc) and DMI (Banner MAXX, Trinity, etc) fungicide classes are highly effective.

## Recovery recommendations:

Once you have red thread, the best practice is usually to just be patient and let the turf naturally recover once conditions dry out. Light applications of fast-release nitrogen can be applied to further encourage recovery. On golf course fairways or other high-value areas, a DMI fungicide can be applied along with the fertilizer to speed up recovery if disease activity is especially severe. Avoid tracking or mowing through infected areas during times of high moisture to limit the mechanical spread of the fungus to uninfected plants. ■



Figure 1: The red tendril produced by the red thread fungus is a clear and obvious tool for rapid identification.

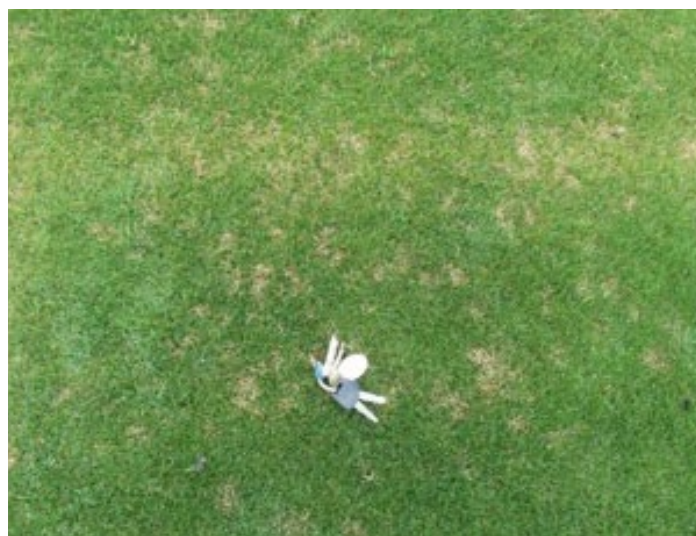


Figure 2: Red thread is typically much smaller in size (2 to 3 inches) on shorter cut turf like fine fescue fairways. In this situation, red thread can sometimes be confused with dollar spot.



Figure 3: On higher cut turf like fine fescue lawns, symptoms can be significantly larger and grow to nearly a foot in diameter.

# Observations from the TDL

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

The spring season is always interesting in Wisconsin. Every winter, conversations revolve around when the snow will melt or when spring will come. While I was at the Golf Industry Show in San Diego, I tried to keep track of how many of my conversations contained some mention of snow melting and spring. After about three days I quit my recordkeeping since it was near 65%. Over the winter months, at various meetings and gatherings, the discussion invariably turned to, "How bad do you think we are going to get slammed with snow mold?"

Many of you heard my prediction that it could be a long spring. I was right, it has been a long spring but not because of snow mold issues. I was worried that December might have degraded our snow mold treatments and left us with very little residual of snow mold control. Dr. Koch had expanded his winter snow mold control degradation studies from his Ph.D. thesis. These trials apply snow mold control product in November. One set of trials is snow covered (when it snows) and on the other set I shovel the snow off after every snow fall (OK, Kurt helps). Two weeks after application, we harvest two plugs from each plot and repeat that same harvest every two weeks all winter long. We place one plug in a growth chamber to see how many weeks it takes for the control product to be degraded enough for *Microdochium* patch to be detected on the plugs. The other plug is frozen until a later date then there is an assay done to detect the amount of remaining product in the tissue. After one such sampling of the plugs in the growth chamber, I saw all the ones from early

January were covered in *Microdochium nivale*. This made me worry about what was happening in the field and thus my hypothesis.

So what I did learn here, not just that Bruce is a poor prognosticator, but in the field, there are many factors effecting disease development. This is the disease triangle. You need a proper host, pathogen, and environment for disease development. If one is missing then disease does not develop. Looking back at the past winter, and the lack of *Microdochium nivale*, I assume that the varied temperatures this winter and spring hastened the pathogen development. The temperatures must have been cold enough at the proper time to give some natural control of the fungus.

The other learning experience is that conclusions based on one year's data may not be accurate. You need to repeat these trials for a few years to formulate a reliable pattern. As I write this, I am haunted by almost every Summer/Fall snow mold article written by Dr. Koch as he refers to his mountains of snow mold data but always cautions you to look at many years' of data before drawing any conclusion. This winter was only one year's worth of data with a fall that was as unpredictable as ever.

Which brings me to today. The snow melted in March and we were off to an early spring. The weather has been a true roller coaster ride, warm, cold, wet, dry, dry, dry. In the disease world occurrences were very slow until about three weeks ago. Then we actually saw late spring *Microdochium* patch, followed by *Drechslera* leafspot and recently a few cases of *Septoria* leaf spot. The lab

has been very busy with other issues like grassy weeds. With the slow spring and the turfgrass starting and stopping due to weather, many invasive grassy weeds are arriving in my lab. The issues may be that they are better suited for spring and are more visible now than during the growing season. The questions are what is it, where did it come from, and how do I control it? How many have been submitted? Forty six percent of all the samples in the lab in 2016 are turfgrass identification requests. This does not include those done by email or text. It has been a very busy spring.

Summer is right around the corner and I fear what is to come! Hopefully, I am wrong on this prediction too. At the lab I like it busy. When I am busy I feel I am fulfilling the mission of the TDL by supporting the turfgrass industry. Let me know how I can assist you. The TDL is one of the few labs left that is dedicated exclusively to solving turfgrass issues. The TDL is also self-funded so your support of the TDL with samples and contract member support can keep the TDL here for your future turfgrass needs. Consider being a contract member and enjoy the bi-weekly updates about what we are seeing in the Lab.

Email me at [bschweiger@wisc.edu](mailto:bschweiger@wisc.edu) with any questions on your turfgrass diseases or about becoming a contract member.

As a final note, the WTA Summer Field Day has great slate of speakers and topics that you will not want to miss. Mark your calendar and join us on July 26th at the OJ Noer Research Facility in Verona. ■



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# EVERYTHING UNDER THE SUN 2016 WTA TURFGRASS RESEARCH DAY / CONFERENCE AND WEBINAR

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

The best way to describe this year's WTA Research Day Conference and Webinar is that it had 'Everything Under The Sun.' The conference included traditional subjects of weed control, turf diseases, and insect management, as well as unique topics such as long range weather forecasting, managing risk and liability, and turf care at Miller Park.

The conference was held at the Pyle Center on the UW-Madison campus on January 5th to an appreciative audience of onsite attendees and webinar participants. There were 88 registrants that ventured to Madison for the live conference. An additional 20 registrants participated through the online webinar option that was added three years ago for those who preferred to listen off-site.

The first speaker was Sam Bauer from the Horticulture Department at the University of Minnesota. Mr. Bauer spoke about weed control programs for sports turf fields, although everything he talked about could be applied to any turf area. He stated that a successful weed control program is begun by setting goals and priorities for different turf areas. He emphasized that to

fix weed problems, you must first correct any underlying problem such as compaction or poor drainage. He shared information about products and practices to control or prevent most every weed problem you can face. Lastly, he recommended a great resource for learning more about turf herbicide and growth regulators, a guidebook from Purdue University called 'Turfgrass Weed Control for Professionals' by Aaron Patton.

The next presentation was by Dr. Chris Williamson who talked about strategies for managing earthworm castings in turf. He started out with earthworm biology, there being 200 species in North America, but only three that we have to deal with in turf. He spoke about their beneficial attributes and also why they've become much more of a problem in certain areas in recent years. This is due to long-lived toxic old chemistries that were used as pesticides 25 to 50 years ago are just now wearing out. There are no current pesticides labelled for earthworm control. Yet some other products have shown success in reducing activity because they prove to be an irritant towards earthworms. Those products are Black Jack and Amber Jack from the coal and paper

industry respectively. Another product is Early Bird, an organic 3-0-1 fertilizer. The bottom line according to Dr. Williamson is that there is no specific management strategy that will totally eliminate earthworm castings but various strategies can reduce castings to a tolerable level.

Next, Dr. Doug Soldat spoke about several of his 2015 research projects and findings. Those included Plant Growth Regulator GDD Tracker, Kentucky bluegrass NTEP results, weed management in un-mowed areas, polymer coated urea performance, potassium soil test calibration, and biological product evaluations. So much good information was presented, but one finding that caught my attention was potassium levels. His research found that as tissue potassium increases, so does grey snowmold incidence on creeping bentgrass. Thus the old practice of applying high K late season fertilizer should be reconsidered if still being practiced on bentgrass.

The last talk before lunch was about trending meteorological topics by Jeremy Nelson from WISN in Milwaukee. Specifically he talked about El Nino, winter, and the

*Continued on page 10*



2016 Turfgrass Research Day attendees

long range forecast. The El Nino we are experiencing this winter is one of the six strongest of the last 65 years. But there are other factors other than a strong El Nino that go into long range forecasting. Mr. Nelson

looks at weather out in the Bering Sea off Alaska to predict weather that will be hitting us two weeks later. Seasonal long range forecasting predicts weather even further out when more factors are included in the equation. To see if he is correct, I'll share some of his spring 2016 predictions that he made on January 5, 2016. Southern

Wisconsin's spring should have above average precipitation with May potentially the wettest. Spring should also have near average temperature until June, which will be above average. If his predictions come true, you may want to subscribe to his twitter account for further updates, @jnelsonweather.



Dr. Chris Williamson, UW-Madison, Entomology



Dr. Doug Soldat, UW-Madison, Soil Science Department

Next came a delicious lunch and time to catch up with fellow participants. Our first speaker after lunch was Michael Boettcher, director of grounds with the Milwaukee Brewers. He explained that Miller Park has been a turf research project from the beginning. The lack of sunlight and using the field for many alternative events like soccer games and music concerts have taken their toll on turf health. But progress is being made through use of more shade tolerant cultivars, renovating with sand-based rootzone sod, using portable grow lights, and other techniques. These improvements resulted in replacing only 1,000 square feet of sod for the 2015 season as compared to replacing up to 200,000 square feet in some past years.

Following Mr. Boettcher, another interesting talk was given by Dr. Glen Stanosz, Professor of Tree and Forest Health from the UW-Madison. He gave a talk about managing tree risk and liability on your golf course. Dr. Stanosz told us that we are all good at growing grass which has our heads looking down most the time. Sometimes we need to look up and see if a tree has become a potential hazard from disease or storm damage. If we don't feel qualified, we could hire a tree risk assessor. Dr. Stanosz said we could be held responsible if a tree limb fell and injured one of our patrons or employees because as site managers, we have the legal duty to ensure that our properties are safe.

*Continued on page 11*



Dr. Glenn Stanosz, UW-Madison, Forestry



Jeremy Nelson, WISN Milwaukee, Meteorologist



Michael Boettcher, Miller Park, Director of Grounds



Dr. Paul Koch, UW-Madison, Department of Plant Pathology



Sam Bauer, University of Minnesota, Assistant Extension Professor

To finish the day's array of spectacular education, Dr. Paul Koch gave a talk about 'The Danger Lurking Below; How Patch Diseases Can Ruin Your Summer,' This was a great refresher on three root infecting diseases, Take-all Patch, Necrotic Ring Spot, and Summer Patch, that can devastate turfgrass in the summer and into the fall. Dr. Koch described the disease triangle of factors that promote infections, how to identify these three diseases, and presented strategies for preventing severe outbreaks and reducing the level of damage should one occur.

WTA Turfgrass Research Day 2016 covered a large range of subjects that were very relevant to attendees. The planning committee of Drs. Soldat and Koch, Aaron Goninen, Audra Anderson, and Bruce Schweiger should be commended. The generous sponsors that helped bring you Turfgrass Research Day 2016 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 sharing your knowledge with us. ■

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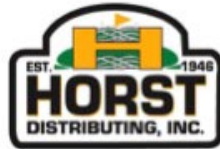
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# CALENDAR OF EVENTS

July 26	<b>WTA Summer Field Day</b> .....	<b>O.J. Noer Facility, Verona</b>
Aug 15	WGCSA/ NGLGCSA Joint Meeting .....	Thornberry Creek GC, Oneida
Sept 19	Wee One Foundation Golf Fundraiser .....	Pine Hills CC, Sheboygan
<b>Oct 3</b>	<b>WTA Golf Fundraiser</b> .....	<b>Butte des Morts, Appleton</b>
Nov 5	WGCSA Couples Dinner .....	Wisconsin Club – City Club, Milwaukee
Nov 30, Dec 1	WGCSA Turfgrass 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](mailto:tgschwab@wisc.edu) to include it in the next calendar.**

## Contact Telephone Numbers

GCSAA/GIS	GCSAA Educational Conference and Golf Industry Show .....	800-472-7878
Great Lakes	Great Lakes School of Turfgrass Science Online.....	763-767-3518 or <a href="http://z.umn.edu/2016glts">http://z.umn.edu/2016glts</a>
NGLGCSA	Northern Great Lakes Golf Course Superintendents Assoc.....	<a href="http://www.nglturf.org">www.nglturf.org</a>
Northern	Northern Green Expo .....	651-633-4987
iLandscape	the Illinois + Wisconsin Landscape Show .....	630-472-2851
PAT	Pesticide Applicator Training (Turf and Landscape 3.0).....	608-262-7588
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
WPT	WPT Garden Expo .....	<a href="http://www.wigardenexpo.com">www.wigardenexpo.com</a>
WSPA	Wisconsin Sod Producers Association .....	262-895-6820
WSTMA	Wisconsin Sports Turf Managers Association .....	920-643-4494
<b>WTA</b>	<b>Wisconsin Turfgrass Association</b> .....	<b>608-845-6536</b>