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

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

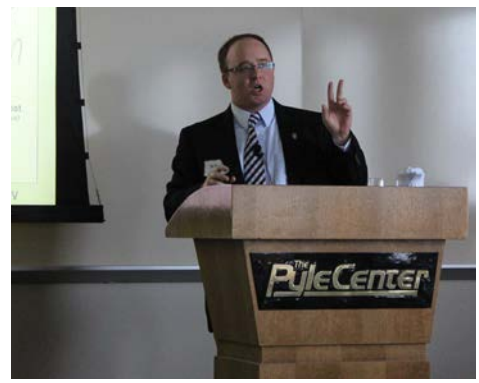
The snow caught us once again for the annual WTA Winter Conference, now called Turfgrass Research Day / Conference and Webinar. We've tried moving the conference to earlier and later dates but we always seem to anger the snow Gods with our messages of better turf for the summer season. However, the 3 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.

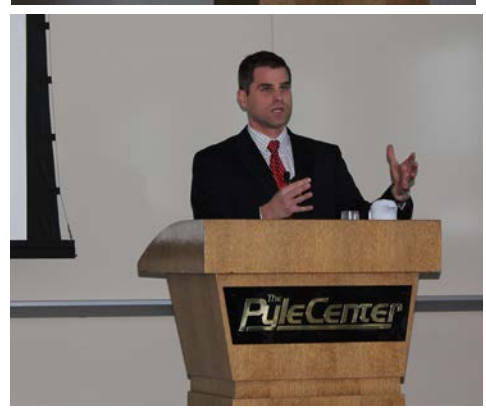
Dr. Doug Soldat started the conference with presentations of the annual turf scholarships. Adam Wepfer received the Egon Herrmann Scholarship, presented by National Seed. Ben Luedtke received the WTA / James Huggett Memorial Scholarship. Luke McGhee received the WGCSA / J.R. Love Scholarship. Tyler Gerritts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

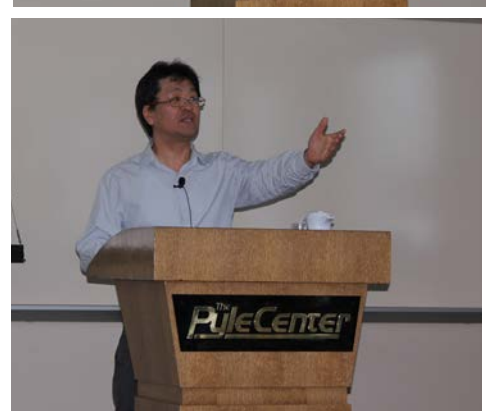
The first speaker of the conference was Dr. Paul Koch, UW-Madison's newest turf science professor, who officially started the job 14 days earlier. Dr. Koch is no stranger to Wisconsin, having studied at the UW-Madison for all three of his scholastic degrees starting in 2001 and being manager of the TDL 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.

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 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.







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

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

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

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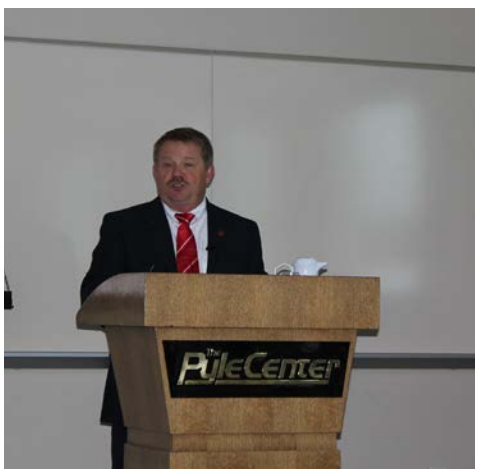
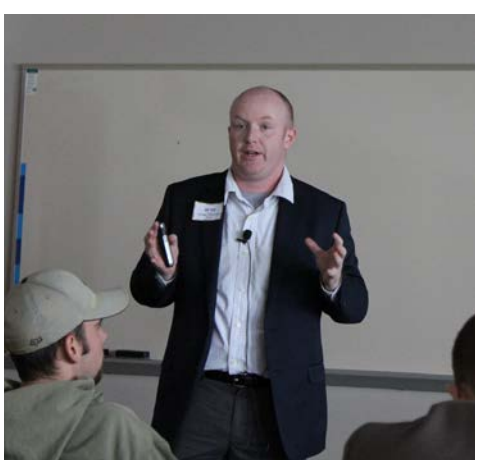




Top: Dr. Chris Williamson talks about insecticide management options for emerald ash borer

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

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

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.

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.

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.

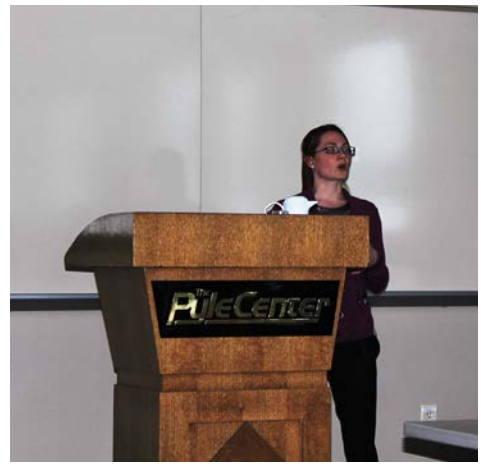
Nearing the end of the conference, Dr. Jim Brosnan from the University of Tennessee was broadcast in via the internet. He gave his talk from his office in Knoxville. Amazing the technology! He talked about new herbicides and strategies for weed control. Several of the products he talked about were PoaCure, 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.

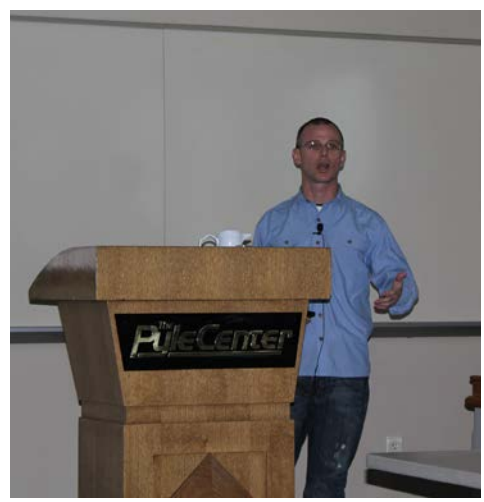
NOTES FROM THE NOER

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. He 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.

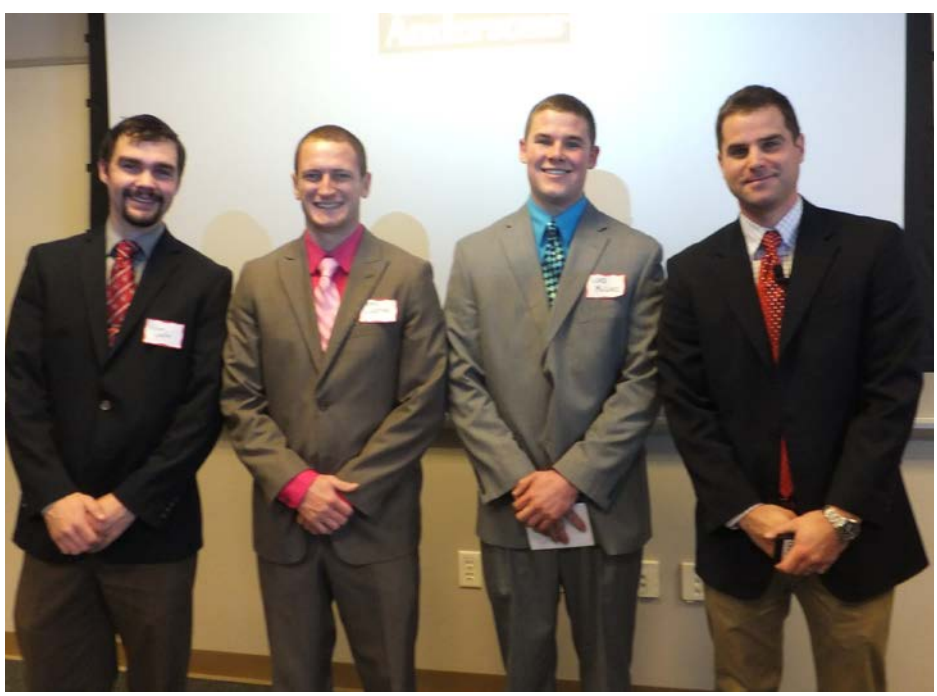
WTA Turfgrass Research Day was another success despite the weather. The planning committee of Drs. Soldat and Koch, and Bruce Schweiger, Audra Anderson and Monroe Miller should be commended. The generous sponsors that helped bring you Turfgrass Research Day 2014 should also be thanked. Please show these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





Top: 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

Middle: Dr. Mark Garrison, Nelson Institute for Environmental Studies spoke on the carbon footprint of turf maintenance



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

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