



41st ANNUAL WISCONSIN GOLF TURF SYMPOSIUM

By David Swift, Straits Course Superintendent, Whistling Straits

The Wisconsin Golf Course Superintendents Association and the Milorganite Division of MMSD presented the 41st Annual Wisconsin Golf Turf Symposium on November 28th and 29th, 2006 at The American Club in Kohler. The title of this year's Symposium was *Getting Down to the Roots*.

This year's Symposium brought us a wide variety of presentations regarding the different factors that can influence turf root systems. Dr. Bingru Huang from Rutgers University, Dr. Karl Danneberger from Ohio State, Dr. Doug Soldat from University of Wisconsin - Madison, Dr. Doug Karcher from University of Arkansas, and Dr. Brian Horgan from the University of Minnesota each gave us some research data involving different ways to deal with managing roots. Scott Robinson from Arborcom gave us insight on how to deal with shade issues. Paul Koch from the O.J. Noer Facility reviewed root diseases that can affect roots in Wisconsin. Finally, superintendents Dave Smith from Abbey Springs, Steve Cook from Oakland Hills and Jon Jennings from Chicago Golf Club spoke about their situations and how they deal with root growth.

The 2006 Symposium started out with Dustin Riley awarding three \$500 Legacy Awards to recognize outstanding students and offer educational aid. These awards were awarded to children, stepchildren or grandchildren of members of the WGCSA. The awards were given to Andy Shaw, son of Pat Shaw from The Bull at Pinehurst Farms, Jessica Handrich, daughter of Mike Handrich at Racine Country Club and Stephanie Hogden, daughter of Gene Hogden at Ettrick Country Club. Congratulations to all of them.

Dr. Bingru Huang from Rutgers University gave this year's first presentation by giving us a brief understanding on the basics of root growth. Dr. Huang gave a great explanation regarding root systems as they are out of sight and typically out of mind. During the presentation she showed us slides stating how root length is more important than root mass. Dr. Huang went on to talk about research showing that abscisic acid (ABA) applied prior to drought stress delayed wilting during drought. She also explained how foliar spraying of ABA before summer stress could promote better turf quality. She summed up her talk by stating how the basics of root growth are important for managing roots to promote healthy turfgrass.

Dr. Karl Danneberger from Ohio State University then gave us his presentation of "Roots Affected by



President Lyons welcomed everyone to the American Club, Kohler, and Wisconsin.



Mike Handrich accepted a Legacy Award for his daughter Jessica.



Dustin Riley made the Legacy Award presentation.



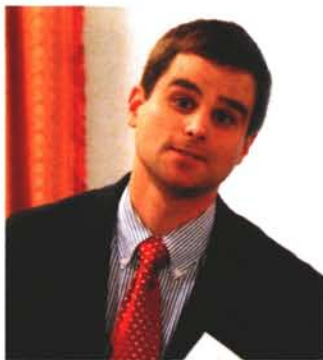
Dr. Bingru Huang travelled a long distance to speak to the Symposium audience.



Few people know that Dr. Karl Danneberger was Professor Chris Williamson's undergraduate advisor.

Temperature." Dr. Danneberger provided us with some amusing opinions on *Poa annua* and bentgrass aerification methods. It was humorous to hear how he believed that the only time to effectively interseed bentgrass into *Poa* greens is in mid-summer. However, after 30 years in the business and several hundred thousand dollars of research he has never seen it work.

Dr. Doug Soldat from University of Wisconsin - Madison then gave us his presentation titled "Soils and Roots." He went on to explain how the soil is a ventila-



Dr. Doug Soldat made his first appearance as a UW-Madison professor.



Dr. Doug Karcher added to impressive roster of speakers.



Paul Koch spoke from his position as the Wisconsin TDL diagnostician.



Minnesota's Dr. Brian Horgan was a first time Symposium speaker.

Scott Robinson discussed trees and turf.



tion system and the importance of oxygen in the root zone. Later, he stated what Dr. Huang mentioned earlier that "it's not the mass of roots, it's the depth that is important." Lastly, he stated how frequent greens aerification is important for oxygen exchange. He went on to explain how soil based greens need aerification to reduce compaction and improve gas exchange and sand greens need the organic matter reduction to improve the gas exchange.

Dr. Bingru Huang finished Tuesday's session with another talk titled "Rooting Physiology." Dr. Huang showed us some of the effects on mowing heights and root growth. She then explained how high soil temperature is more detrimental than high air temps. She left us with an interesting slide of an *Agrostis scabra* plant she found near the geysers at Yellowstone National Park that can survive at soil temperatures of 50 degrees C!

To begin Wednesday morning's session we were fortunate to hear a talk titled "Shade and Roots" from Scott Robinson with Arborcom. Scott taught us some valuable tips to communicate to decision makers about how to decide between keeping trees and having quality turf. Scott explained many different ways to deal with shade issues by properly trimming trees. It was great to hear several of his recommendations, including concentrating on layers when giving recommendations and how crown reduction is great for light penetration.

Dr. Doug Karcher followed by presenting research involving wetting agents and roots. The research included the use of sensor based irrigation and the effects of irrigation at different moisture levels in the root zone. The take home message concluded that with the use of surfactants, water requirements for bentgrass were greatly reduced. In his study, wetting agents helped in maintaining high quality turf with less water. He proved how sensor based irrigation was actually effective at irrigating based on soil moisture. Hopefully, more research will be done regarding sensor based irrigation so that superintendents can benefit from its use in their future programs.

Dr. Brian Horgan then gave an interesting talk titled "Fertilization and Roots." Dr. Horgan focused on how nitrogen fertility can influence *Poa annua* roots in the upper Midwest. It was great to see him get everyone involved by humorously putting us all on the spot regarding our different fertility programs. He showed us his research on positive responses when using ammonium based nitrogen sources in the summer compared to nitrate forms of nitrogen. The research also proved that while not efficient, foliar fertilization had the best turf results while plants were under stress. We were left with a better understanding of how different forms of nitrogen can affect turf roots.

Paul Koch from the O.J. Noer Turfgrass Facility presented "Disease Affecting Roots." Paul gave us a good review of how we typically treat our foliar and root diseases. During his talk, Paul reviewed how many of the diseases we deal with can be difficult to identify through



Veteran Wisconsin superintendent Dave Smith was part of the panel.



Steve Cook in addition to managing American golf course, also spent time in Europe as a greenkeeper in France.



Jon Jennings spoke about his experience in Chicago and the northeast.

slides. Based on evidence that the Noer Facility has received, the four typical turf root diseases we see in Wisconsin are take all patch, necrotic ring spot, summer patch and a new disease that has been showing up over the last several years, Pythium root dysfunction. While there is much more to learn about this new form of Pythium, it seems to be most common in our area during the establishment of Velvet bentgrass greens.

Wednesday's afternoon session was wrapped up with a panel of superintendents giving their perspective on how they manage roots. Dave Smith from Abbey Springs Golf Club, Steve Cook from Oakland Hills Country Club and Jon Jennings from Chicago Golf Club each gave us a wealth of information regarding how they maintain championship conditions and root systems on their greens. While each of the three had different programs, it was common among the three to maximize any use of frequent or infrequent aerification equipment to aid in root growth. As it's always great to learn how veteran superintendents manage turf, it's a relief knowing how each program's successes can indirectly be related to each other.

Finally this year's Symposium was ended with Bob Vavrek from the USGA Green Section giving his annual Symposium Roundup. It's always great and very educational to listen to Bob share his thoughts at

the end of the Symposium. We are fortunate to be kept up to date on the latest trends in the area as Bob visits over 100 courses annually.

To conclude, this year's Symposium was another success.

In today's world, we too often get caught up in the daily grind. With whatever the pressures are that we face each day, we must not forget that what is out of sight must not be out of mind. 🌱



"NAW. WARM WEATHER IN JANUARY DOESN'T WORRY ME. IN FACT, I HOPE IT MEANS WE'LL GET SOME SNOW IN JULY!"