

Crop progress (crops planted and/or emerged) is ahead of last year but behind the 5 year average and I am sure golf course work is the same. It has been a challenging year to spray herbicides or any other products between the wind and rain events.

I had many people comment on the deserving story highlighting Monroe Miller's contribution to our industry that ran in the March April issue of The Grass Roots. Gene Haas, retired Executive Director of the Wisconsin State Golf Association and author of the book Caring for the Green sent a nice letter and a caricature drawing of Monroe. Gene expressed that he thought the article missed a commentary from the benefactor of Monroe's work - the golfer.

"My reaction to your article says that the golfer owes a debt of gratitude to Monroe, and all those who are involved in his profession. Too often golfers take things for granted, expecting the norm when much of it is outside the area of control. All in all, course condition throughout Wisconsin is absolutely first class on a day-to-day basis. In most instances, I was the recipient of tournament preparation conditions, which usually involves additional efforts by the maintenance staff. But whenever I had an opportunity to play a course on a business or friendly occasion I found that the courses were usually in identical playing condition. To me, that speaks highly of the concerns and regards that the superintendent has for his constituents, and his profession. Monroe epitomizes this feeling and concern. His legacy

will be passed down to all those who follow in his footsteps - he has helped set the trend for the future of the industry." 🌱



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Assistant's Creating Opportunities

By **Kevin Knoblauch**, Assistant Superintendent, Milwaukee Country Club

In an industry that has become so competitive, Assistant Superintendents are finding it a lot harder to land that first Superintendent position. Most job postings draw over 100 resumés which often include experienced superintendents. How are Assistants supposed to compete with these individuals and convince a future employer to hire them, instead of a candidate that may have five to ten years of Head Superintendent experience?

Being fairly new in this industry I have motivated myself to become

active both locally and nationally. It wasn't long after the GIS in Orlando that I realized how important it was to become involved in the industry in order to be successful. Whether it is attending education seminars, events or serving on a committee, becoming active has helped me prepare to stand out amongst other candidates. This also has helped me build a strong network of professionals within the industry.

Over the past two years, I have had the chance to meet many individuals all over the country. Some of these people have become good

friends and have been a huge support in my efforts of trying to create an Assistants committee/organization in Wisconsin. Creating education seminars geared toward the interests of Assistants will help improve ourselves professionally and prepare us for a future in this growing business. This has led me to take action in our local chapter here in Wisconsin. With GCSAA chapters throughout the country creating events/committees for Assistant Superintendents, seeing their results has showed me how benefi-

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Attendees network during a break.

cial it would be to bring that to my chapter. I then wrote a proposal to present to our chapters board of directors. The proposal included details such as a purpose, goals, benefits and events that would go along with the formation of a class C committee. Once the proposal was reviewed and discussed, the board members decided to provide funding for an inaugural event.

Working with the education committee of our chapter, we orga-

nized the Inaugural Assistants Education Seminar held at Milwaukee Country Club. The event was geared towards introducing my proposal submitted to the WGCSA board of directors along with other presentations from area professionals. The seminar was attended by 35 Assistants from private & public golf courses throughout Wisconsin. My presentation covering the purpose and goals of the class C proposal kicked

off the day. Potential benefits were laid out and hopefully Assistants were motivated to become involved in their profession. Our other presenters stressed the fact that it is up to the individual to become successful, know one else can do it for you. The full-day seminar provided a great opportunity to gain knowledge pertinent to the development of our careers as well as build a local network with peers.

The seminar also included presentations from John Ekstrom, Assistant Superintendent at Hinsdale Golf Club in the Chicago area who talked about the benefits that the Midwest chapter has created for Assistants and stressed the importance of becoming involved in your local and national associations. Colin Seaberg, Superintendent at Ozaukee Country Club in Mequon, talked about career development and what we can do as Assistants to better ourselves in order to be successful in the Turfgrass business. Patrick Sisk, CGCS at Milwaukee Country Club, gave a presentation on interviewing and resumé techniques needed when applying for a desired position. A short video can be seen on the event by going to www.gcsaa.tv and searching Assistants.

Since the February seminar Assistants throughout the state have continued to network and discuss future activities. Looking to better ourselves, as well as our profession, we believe that creating opportunities will benefit everyone. This spring I have worked with a few others in the Milwaukee area in creating an Assistants website. The website launched May 15th and offers many benefits. This site can be visited at www.wiassistantsupers.com. If you are an Assistant that would like to become involved and added to the e-mail list contact me at knoblau5@msu.edu or 414-362-5290. 🌱



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What's Going On in Turfgrass Pathology?

By Dr Jim Kerns, Department of Pathology, University of Wisconsin-Madison

This is the start of my second year here at UW-Madison and I thought it was appropriate to give an update of what is going on in the turfgrass pathology program this summer. We have a multitude of projects this summer that range from very applied research to very basic research. Of course we will still have a fairly large fungicide testing program this year and if you attend the summer field day you can see those results. We will also have additional research focusing on management of dollar spot, snow mold and anthracnose.

Most of the summer research will focus on dollar spot epidemiology and management. Currently, my graduate student Chantel Wilson is working on determining the optimal temperature for growth, survival and infection of the dollar spot pathogen. She is doing this by growing the fungus on native soil and a USGA greens specification sand with and with out grass debris (Figure 1). This particular experiment will give us an idea on how the dollar spot fungus grows and survives in soil or if it even can grow and survive on/in soil. Our preliminary data shows that the dollar spot fungus grows very well when grass debris is present and when temperatures are between 58°F (14°C) and 86°F (30°C) (Figure 2). The fungus does not grow well on bare soil at any temperature or when temperatures are above or below the aforementioned temperature range.

What does this mean? Well, not a lot until we conduct a pathogenicity assay. Once both studies are complete we will have a better idea of when infection occurs and when survival or saprophytic growth occurs.

Chantel will also be expanding on our early-season dollar spot work. She will look at different early-season treatments targeting dollar spot and following those applications up with 3/4 rates of propiconazole tank-mixed with chlorothalonil or full rates of the same tank mixture applied every 28 days. We will then compare disease severity and costs in our early-season programs to a conventional dollar spot program. This experiment will start in mid-May at the Milwaukee Country Club and at the OJ Noer Turfgrass Research and Education Facility.

To corroborate the project mentioned above, we are also working with Damon Smith at Oklahoma State University to develop a universal forecasting model for



Figure 1. Hyphal growth of the dollar spot fungus on a native silt loam at 68°F. Notice the limited growth emanating from the agar plug in the middle.

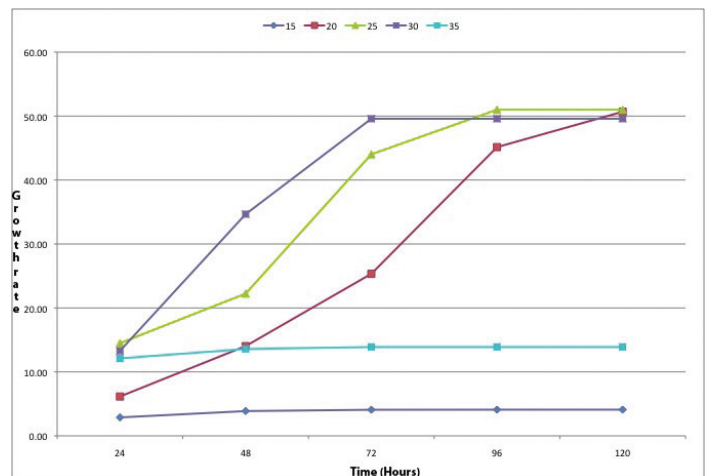


Figure 2. Growth rate of dollar spot isolates from Oklahoma. Growth was averaged across both soil types (native soil and USGA greens grade sand). Note the limited growth when incubated at 15°C (59°F) and 35°C (95°F).



Figure 3. Dollar spot epidemiology experiment conducted at Oklahoma State University this spring. We are conducting this same experiment starting this May in Wisconsin. Notice how the spots of the disease are painted and then the number of spots is correlated back to the environmental parameters to determine the conditions that are favorable for dollar spot development

dollar spot. Forecasting models have been developed for dollar spot, but they either over predict epidemics or significantly under predict epidemics. These models have been unsuccessful because they were only developed using one environmental parameter, such as rainfall and the researchers never used field data. In order to develop a more accurate forecasting model, we have set-up weather stations at two fairway sites at University Ridge Golf Course and one putting green site at the OJ Noer. When dollar spot becomes active, spots will be counted daily and using some pretty complex statistics we will determine what environmental parameters influence dollar spot development (Figure 3).

Preliminary data from Oklahoma suggest that dollar spot development is dependant on relative humidity and air temperature. According to these initial results, dollar spot starts to develop when the average 5-day relative humidity is above 90 % and when 5-day average air temperatures are above 58°F. Then dollar spot activity slows down once 5-day average temperatures rise above 86°F, regardless of the relative humidity. A preliminary forecasting model has been developed and will be tested this year in Oklahoma and Wisconsin. Essentially, Damon will pull weather data from a weather service here in Wisconsin and tell Paul and myself when to make an application. This particular treatment will be fitted into our dollar spot fungicide experiments this summer.

Paul Koch has also started working on his PhD in my program. His research will focus on epidemiology of *Microdochium patch* and the degradation of fungicides under snow cover. The latter is a very interesting experiment. We are using ELISA kits to measure the degradation of iprodione and chlorothalonil with and without snow cover. The ELISA kits have never been

used in a turf system before, so we are the first program to develop a protocol for turf. Paul is also trying to determine the optimal infection temperatures for *Microdochium nivale* (*Microdochium patch*). This will allow us to make better preventative control recommendations for this disease.

To continue the theme of reduced fungicide inputs, part of Paul's project will include a fungicide timing study to try and target dollar spot and snow mold. Basically, we are going to look at a couple of different timings during the fall and spring to see if we can adequately control snow mold and dollar spot. This research is being conducted at fairway height at the OJ Noer and at Sentryworld Golf Course in Stevens Point, WI. The first applications were made last fall and we were pretty successful at controlling snow mold. Stay tuned to learn if we were successful controlling dollar spot.

Finally, we are conducting a fertility trial to determine how nitrogen rate affects anthracnose severity. We are doing this work in collaboration with Tom Harrison at Maple Bluff Country Club. I know many of you are saying that Bruce Clarke has done a lot of this work and you are right. However, Dr. Clarke and other researchers have yet to expand the rates of nitrogen. Typically the studies have essentially been high or low treatments with nothing in the middle. We are planning on looking at four rates either applied granularly in the spring and fall or a total foliar program. We will measure anthracnose severity, ball roll and rooting depth throughout the year.

To summarize, we have an active program this year with a lot of interesting projects. My goal in research is to understand the fundamental biology of turfgrass pathogens and diseases and use that knowledge to refine our current management practices for those diseases. Please feel free to contact us at any time if you have questions about our research or if you have suggestions for research topics. 🌱

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