


sampled their clothes, which were similar to tyvec suits, for pesticide residues (2). Basically the researchers discovered that playing golf early in the morning wearing shorts immediately after a pesticide application was when golfers are most susceptible to pesticide exposure (2). However, most of the samples they collected did not show significant pesticide residue on the testable clothes. This work indicates that golfer exposure is limited and may only occur under certain circumstances.

Finally, under the current pesticide labeling system it takes 10 years to bring a new pesticide to the marketplace. During these 10 years, the manufacturer has to determine the active ingredient is efficacious against the targeted pest. The manufacturer also undergoes exhaustive experimentation to determine the toxicology of the active ingredient, the rainfastness, and the activity on and within the plant and soil. Patent of the active ingredient occurs somewhere during this process, which only allows the manufacturer 7 to 17 years to make up their initial investment to bring the chemical to market. Currently chemical manufacturers spend about 270 million dollars to bring a new pesticide to the market! One of the arguments against agricultural chemical companies is they are not required to examine human health concerns in detail. How many multi-billion dollar businesses would attempt to bring a chemical to market if it was a known carcinogen?

Yes some of the older chemicals are likely carcinogens, but are we overly exposed to these chemicals from turf. I think this is the most important question. The papers I highlighted in this article demonstrate that pesticide exposure is likely minimal or not greater than other known carcinogens. The take home message is pesticides are risky, but if used properly the risk can be minimal.

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Play A Round 4 Research

By **Jake Schneider**, Assistant Golf Course Superintendent, Blackhawk Country Club

Truth be told, I would never have gone to graduate school if it weren't for the funding that was generously provided by the Terry and Kathleen Kurth Distinguished Graduate Fellowship. And, while you may not give two hoots about my rain garden project, the point is that it takes graduate students and a significant chunk of change (not to mention world-class professors) for successful research projects that have shown us how to better manage turf and have thrown a dagger in the concept that turf is an environmental nuisance.

There is no doubt that Wisconsin is fortunate to have one of the strongest turf education and research programs in the nation. With the O.J. Noer Center and a collection of young, talented professors, UW-Madison has a great thing going. At this year's Golf Industry Show in San Diego, I spoke with Dr. Zac Reicher, formerly of Purdue, who had nothing but the highest praises for our state's program. In an era when most university turf research programs have declined, it's safe to say that Wisconsin's is as strong as ever, and much of the credit for this has to go to the funding and support provided by the Wisconsin Turfgrass Association (WTA) and the WGCSA. With the continued push toward environmentally-friendly practices and the tightening of golf course budgets, never has the practical research that comes from the UW each and every year been more important. Last year alone, results were released that will help superintendents more effectively time their dollar spot fungicide, late-fall nitrogen, and growth regulator applications. This is the type of cutting-edge research that allows superintendents to be friendly to their budgets and to the environment at the same time.

Recognizing the challenges that Drs. Kerns, Soldat, Stier, and Williamson have in obtaining funding for their research projects, the WGCSA has launched the PAR4Research initiative to help sustain our land-grant university's proud turf research program. As you probably know, PAR4Research will be an online auction of golf rounds, merchandise, and a host of other golf-related items that will run from May 2-9. All proceeds from the auction will be donated to the WTA. The WTA will then disperse the monies for appropriate research



projects. By now, you should have already received the PAR4Research literature with the March/April edition of *The Grass Roots*, and we hope that you have, or are trying to, secure a donation from your employer for the auction. Considering the savings that your club will incur via ongoing and future turf research, you can just about guarantee a positive return on your investment.

While the quality and value of your donations will ultimately drive the success of the auction, all of our efforts will be wasted if the golfing public doesn't know about this fantastic opportunity. Whether you were able to contribute to the auction or not, please take the time to tell your friends, family, and golfing clientele about PAR4Research. If you haven't already, consider hanging the PAR4Research poster that was mailed to you in your pro shop or clubhouse. When the auction begins on May 2, send an email blast to your club's members or season pass holders. Through your efforts in obtaining donations and in spreading the word about the inaugural PAR4Research auction, my fellow committee members and I are certain that we will be doing our part to keep Wisconsin green for years to come. Finally, thank you for your time and efforts to make this a success. 🌱



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Valuable Lessons

By **Glen Obear**, Senior Student in Soil Science and Agronomy, University of Wisconsin -Madison

As the snow melts and spring approaches turf students have lined-up their summer internships and are certainly looking forward to getting out of the classroom and onto a golf maintenance crew. I will be working for the second year as an intern with Aron Hogden at University Ridge Golf Course. In preparation for this coming summer, I have been reflecting on a few valuable lessons that I learned last summer.

The Importance of Course Setup

I had the chance to do just about every job on the golf course over the summer. I learned a valuable lesson in the ways of one particular job: course setup.

Course setup, at first glance, seems like a mindless and simple job. However, the duties that are encompassed by this job are vital to the aesthetics and playability of the golf course. The course setup job includes emptying the garbage cans on each hole, cleaning and then refilling the water jugs on the course, moving tee block markers, cleaning cart paths with a turbine blower, and a handful of other detailed tasks such as trimming the turf around yardage markers. None of these tasks are especially difficult, but each one is quite important. If the water jugs are improperly sterilized, customers could be exposed to harmful germs and bacteria. If the tee block markers are not moved daily, the underlying turf will die due to lack of sunlight. These details are what make the difference between a good golf course and an excellent one.

Throughout most of the summer, we had the same person work on course setup. The man who was given this responsibility was given full control and ownership over the task, which inspired him to be proud of his work and really manage himself. The best thing about this situation was that nobody ever had to worry about the course setup duties throughout the summer. Being able to forget about this simple but crucial handful of tasks was very helpful to the superintendent, and it allowed him to focus on more pressing agronomic and managerial issues.

Leadership

In my opinion, the most valuable aspect of my summer learning experience was developing leadership skills. Interestingly, I learned how to lead myself first. I began to be conscious of the decisions I was making and how they impacted the way others think about me as a worker. When other people see that you are a hard worker, they will be more apt to follow your



Sod work can challenge a supervisor to keep his team motivated.

lead and take your advice. When people have positive interactions with you, they walk away feeling good about themselves. Learning to manage myself was the first step to developing leadership skills this summer.

After I had established myself as a hard worker, I was given the opportunity to lead others. I ran a four-man crew and was given eight hours to aerify, fertilize, and topdress six greens in our practice facility. I learned, first of all, that it is more challenging than it looks to lead others through a long, hard project. More importantly, I learned that I can do it.

Midway through the summer, I started making "practice schedules." I would write up daily schedules including all 25 crewmembers and their morning task, and then compare it with the assistant's schedule. He would give me advice and explanations for our different ideas, and I would get to ask questions about his choices. Towards the end of the summer, I was given the opportunity to write real morning schedules on the board. It was very rewarding, watching my plan go into action successfully on those mornings that I scheduled. Writing these schedules is challenging for two reasons; you need to have a strong grasp on all of the daily maintenance needs of the golf course, but you also have to know the skill set and abilities of each and every crewmember in order to effectively assign tasks.



The entrance to
University Ridge

The most valuable leadership concept that I took away from the summer comes from a book titled, "The One Minute Manager." In the book, a simple but powerful quote reads, "Happy people produce good results."

Final Perspectives

Despite this being my fourth season in golf course maintenance, I feel like I learned more than I have in any past summer. I feel much more confident about my skills and decision-making abilities, and I feel much more pre-

pared to apply for a leadership position at a golf facility.

I also learned a really valuable lesson last summer, and that is that it does not matter what specific job you are doing at any given moment. As Robert Duvall says in the movie *Lonesome Dove*, "If you want only one thing too much, it's likely to turn out a disappointment. The only healthy way to live, as I see it, is to learn to like all the little everyday things." 🌱

Welcome New Members

John Anderson, D, Arthur Clesen

Ian Baier, Student, Bluemound Golf and Country Club

Jim Dawson, E, Lannon Stone Products

Johnathan Dippel, C, New Berlin Hills Golf Course

Timothy Dyczko, D

Andrew Gruse, E, Spring Valley

Craig Haltam, SM, Nakoma Golf Club

Chip Houmes, E, Precision Laboratories

Bill MacDonald, E, Yamaha Golf and Utility, Inc

Adam Neate, E, DuPont Professional Products

Robert Rafferty, A, Bruce Company

Gary Rhea, SM, Riverdale Country Club

Danny Sander, D Floratine Central Turf Products

Marc Schwarting, D, The Bridges Golf Club

Brent Smith, E, Floratine Central Turf Products

Stacy Solberg, C, Oshkosh Country Club

John Turner, E, Bayer Environmental Science

Scott Verdum, SM, Kenosha County Club

Kevin West, E Rain Bird

Matt Zehms, SM, Whistling Straights - Irish Course

Paul Zuehl, E, Yamaha Golf & Baroness Turf



Spring Business Meeting

By **David Brandenburg**, Golf Course Manager, Rolling Meadows Golf Course

The spring business and education meeting of the Wisconsin Golf Course Superintendents Association is a sure sign of spring. This annual event held on the first Monday of March not only brings optimism of a new season but valuable education and friendly camaraderie.

The educational program started with James Nagle, Design Associate with Forse Design of Hopewood, PA discussing The Benefits of Developing a Long Range Improvement Plan for Golf Courses.

Nagle began his presentation by covering the preliminary process to prepare a long range plan. Any plan needs to start with a goal statement and an existing conditions report so all parties know what the course currently provides its players and what it wants to provide. The conditions report not only shows the courses challenges and problems but includes the courses identity or what type of course you have as perceived by the industry. The courses identity is crucial in determining what type of improvements should take place so the course does not alienate current players.

Once the designer knows the current conditions and the clubs goals he can begin the design phase with drawings, narratives and cost estimates. For the members or customers the designer also creates a scorecard showing the new and old yardages, and a graphic representation of the course. This valuable drawing has become much easier to create with computer technology and gives the decision makers a clear visual idea of the end result of their investment.

For existing clubs looking to retain and attract customers a master plan can: reveal defects, improve maintenance, preserve the original design, undo past mistakes, enhance overall aesthetics, improve the relevance of the club in the community and allow the club to stay current in the market while providing a consistent blueprint for the future.

The golf course superintendent is a key individual not only in the construction phase, but also in the hiring of an architect and in the planning phase with input on the existing course and its challenges and deficiencies.

The superintendent is also the best person to lead the communication to the club members on construction updates, acting as the club representative with the architect and contractors.

Jim went on to highlight the construction process and tips to improve cooperation between the architect, contractors and course members.



Steve Ablar presents WGCSA President Brian Zimmerman with a check for \$2,285 from Reinders Daconil and Heritage sales program.



Monroe Miller tells the group why Bill Kreuser (right) received the inaugural Monroe Miller Literary Scholarship while President Zimmerman looks on.

Next on the agenda Dr. Doug Soldat gave a quick update on the statewide phosphorus ban and how it may or may not override NR151 rules. He also highlighted how he along with Colin Seaberg of Ozaukee Country Club will be attending DNR meetings on new administrative rules that could restrict irrigation and well water withdrawals in the Great Lakes Water Basin. More on this topic can be found in Doug's Wisconsin Soils Report in this issue of *The Grass Roots*.

Doug quickly turned the microphone over to Bill Kreuser, Graduate Student at UW Madison, who will begin his Doctorate Degree at Cornell University under the guidance of Dr. Frank Rossi this summer. Bill high-

lighted his research with Primo Max with a talk titled Effect of Primo Max on Putting Green Fertility Requirements.

Kreuser started with how Primo Max (active ingredient Trinexpacetyl) works by blocking the production of gibberellic acid which in turn limits cell elongation. He has conducted two years of work looking at the suppression of growth and the related rebound of growth by studying clipping yields and turf fertility ratings.

Bill pointed out, high quality turf under suppression from Primo has better quality but less traffic tolerance.

Kreuser presented that the metabolism of primo is a direct function of temperatures. In result during warmer temperatures re-application of Primo has to be made at 200 local growing degree



Bill Kreuser gives his presentation on Primos effect on fertilizer requirements.

days to avoid the surge of growth as suppression ends. During the average May, Primo may last 21 days, July suppression may last 15 days but during a heat wave it may only last 7 days before a surge of growth is seen.

Given Bill was using 1/8 ounce per thousand application rates in his presentation an attendee asked if a higher rate would offer a longer suppression period? The answer was no. Even a double rate provides no greater reduction in growth primarily because Primo metabolizes so fast its half life is short.

Kreuser showed us a spreadsheet he offered to share to track primo applications while adding local growing degree days based on high and low temperature inputs to show exactly when the next application should be made for consis-

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tent growth, quality and green speeds.

Primo has the ability to reduce fertilizer needs and costs. Bill's work showed that since Primo enhances quality and color reductions in nitrogen applications can be made to provide the same or improved turf quality as turf without primo and higher fertilizer rates. Kreuser presented turf managers can reduce N inputs 25% and keep quality while reducing clipping yield.

More information on Primo Max research can be found in Bill's article published in the September October 2009 issue of *The Grass Roots*.

After a great lunch and more camaraderie attention turned to the WGCSA business meeting. Chapter Manager Brett Grams started with highlighting his recent work with the new website, online calendar, online payment, and the database improvements allowing a quick printing of the chapter directory. He also highlighted his work with the industry partners plan allowing vendors to easily support the association.

President Zimmerman thanked the committee working on the Par 4 Research Campaign to raise funds for turf research, and Colin Seaburg who will be serving on the DNR's Water Quality group with Dr. Soldat expressing the interests and benefits of the turf industry. He also announced the approval of the Assistant Superintendents to be a bigger part of the WGCSA as a whole with a position on the board of directors in the future.

Vice President Millies finished his term as treasurer with his final financial report. The association is in good financial condition and Jon Canavan who led the audit committee presented the books and receipts of the association were in order.

Membership chair Colin Seaburg announced with Brett's work and


the online payments renewals are ahead of most years and the directory will be printed earlier than normal. He presented the 25 year members of Steve Allen of Songbird Hills, Mike Berwick of Lawsonia Links, Steve Dobish of Oshkosh Municipal, Jim Hasz CGCS of Lake Breeze, John Sytx of South Hills (Franksville), Bob Lohmann of Lohman Design and Chris Wendorf of Olds Seeds.

Golf and Arrangements Chair Scott Bushman thanked the 2009 meeting hosts and vendor supporters and presented the 2010 schedule which can be found in this issue.

Jeff Millies, Chair of the Scholarship and Research Committee presented the Monroe Miller Literary Scholarship to Bill Kreuser, Graduate Student at University of Wisconsin Madison. This new scholarship given in honor of Monroe Miller's longtime

contribution to the WGCSA as Editor of *The Grass Roots* is awarded to the best written student submitted article to the publication.

The committee comprised of Millies, Monroe Miller and Dr. John Stier chose Bill for his article titled "Making Sense of Primo Maxx Research at UW" found in the September/October 2009 issue of *The Grass Roots*.

Under new business Brian again thanked the committee working on the Par 4 Research fundraiser and hoped the membership would be forthcoming with donations of rounds or foursomes of golf at their facilities. The key is to get the word out to members and customers that the auction is taking place. WGCSA members were sent posters and flyers to use at their clubs to announce the auction along with word of mouth and mentions in club newsletters. 

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