

THE MOWER THEY DON'T WANT YOU TO SEE.



The competition doesn't want you to see the Jacobsen ECLIPSE® 322 riding greens mower. They can't match its **ZERO leak points**. They can't provide **individual reel control** to vary cut patterns. They can't offer **programmable frequency-of-clip** from an LED screen. And they can't get anywhere near the **true hybrid fuel savings** or **legendary quality-of-cut**. When it comes to the ECLIPSE® 322, the competition can't do *anything* except hope you don't see it. I guess we just ruined that for them, too.



Phone: 800-279-2341
Fax: 920-849-9576

www.horstdistributing.com
HORST DISTRIBUTING, INC.
CHILTON, WI

JACOBSEN®

1.888.922.TURF | www.jacobsen.com

TABLE OF CONTENTS

THE PRESIDENTS MESSAGE
The Calendar Flips 4

CHAPTER CONVERSATION
The WGCSA Fall Business Meeting - A Recap! 6

WISCONSIN PATHOLOGY REPORT
The Winter Environment..... 8

WISCONSIN ENTOMOLOGY REPORT
Annual Bluegrass Weevil: Is There Need For Concern .. 12

TURFGRASS DIAGNOSTIC LAB
Budget Dollars For 2014 14

WISCONSIN SOILS REPORT
A New Way of Looking At An Old Problem 16

WGCSA
Danny Quast Receives Distinguished Service Award. ... 20

WGCSA
48th Annual Wisconsin Golf Turf Symposium:
Extreme Turf Managment. 24

BADGER STATE TURF CLIPPINGS
News and Notes From WGCSA Members..... 34

USGA GREEN SECTION
Greens Keepers Poem 35

NOTES FROM THE NOER FACILITY
Nothing Is Certain, Except Death, Taxes, And
Snowstorms For The WTA Winter Conference..... 36

EDITORS NOTEBOOK
A January Thaw?..... 40

COVER STORY
Congratulations Dr. Koch 43

EVENT SCHEDULE 42

ABOUT THE COVER

Dr. Paul Koch, The New Plant Pathology Professor at the University of Wisconsin - Madison.

If we had no winter, the spring would not be so pleasant; if we did not sometimes taste of adversity, prosperity would not be so welcome.

By American Colonist Poet Anne Bradstreet, 1612-1672

This quote by Bradstreet reminds us spring is winters reward and prosperity is the reward of our challenges and adversity.

Visit our Website at
www.wgcsa.com

THE GRASS ROOTS

is the bi-monthly publication of the Wisconsin Golf Course Superintendents Association. No part of the THE GRASS ROOTS may be used without the expressed written permission of the editor.

EDITOR

David A Brandenburg, CGCS
Rolling Meadows Golf Course
PO 314 Theresa, WI 53091
grassroots@wgcsa.com



2014 WGCSA OFFICERS AND DIRECTORS

Front Row: Chad Harrington, Jim Van Herwynen, Jon Canavan, Josh Lepine. Back Row: Jeff Millies, Brett Grams, Jeff Barlow, Kevin Knudtson, Mike Bremmer, Joe Sell. (Not pictured Steve Wasser and Scott Bushman.)

PRESIDENT

Chad Harrington
Autumn Ridge GC
335 Berge Street
Valders, WI 54245
autumnridgegc@gmail.com

DIRECTORS

Scott Bushman
Fox Valley GC
PO Box 38
Kaukauna, WI 54130
scott@foxvalleygolfclub.com

VICE PRESIDENT

Jim Van Herwynen, CGCS
South Hills Golf & CC
1175 Fond du Lac Ave.
Fond du Lac, WI 54935
jimv@southhillsfdl.com

Mike Bremmer
Wisconsin Club
5835 N Shoreland Ave
Whitefish Bay, WI 53217
mikebremmer@hotmail.com

TREASURER

Jon Canavan
Milwaukee County Parks
9480 Watertown Plank Rd
Wauwatosa, WI 53226
jon.canavan@milwcnty.com

Kevin Knudtson
Geneva National GC
2200 Petrie Rd.
Lake Geneva, WI 53121
kknudtson@gnresort.com

SECRETARY

Josh Lepine, CGCS
Maple Bluff CC
500 Kensington Drive
Madison, WI 53147
josh@mbcc1899.com

Jeff Barlow CGCS
Waupaca CC
1330 Ware St.
Waupaca, WI 54981
jjbarlow@solarus.net

VENDOR LIAISON

Steve Wasser
John deere Golf
1700 Peters Road
Kaukauna, WI 54130
swasser@johndeeregolf.com

PAST PRESIDENT

Jeff Millies, CGCS
Edgeweod GC
W238 S9560 Kuzendorf Ct
Big Bend, WI 53103
jmillies@wi.rr.com

Class C Representative

Joe Sell
Whistling Straits GC
N8569 County Road LS
Haven, WI, 53015
jws227@gmail.com

CHAPTER MANAGER

Brett Grams
N9122 Virginia Dr.
Waupaca, WI 54981
bgrams@wgcsa.com

The Calendar Flips

By Chad Harrington, Golf Course Superintendent, Autumn Ridge Golf Course

It is hard to believe that 2013 has come and gone, but the fresh start of a New Year is always a positive and exciting time. As I look at my own childhood I can't help but remember all of the milestones that came with every New Year and how some of them seem to be coming around for my Sons. I think back to what an astronomical event it was to become a teenager and how grown up I felt to finally be thirteen and not just one of those twelve year old tweeners. I now am going through the anxiety of watching my oldest son do just that. He realized that as the calendar changed the page; this was the year...the big teenaged year. I would like to be able to flip that calendar back a page or two, at home at least. It all moves way too fast.

As the WGCSA Calendar flips forward, I have a much different view. I like to look ahead at what our association has planned, what opportunities we can offer, and what we as an association can do to remain a viable cog in the golf industry. I have been doing a lot of thinking and asking questions to our members over the past couple of years about product and services that our association offers to the membership in hopes to be able to help expand the offerings that are the most popular.

I have also had similar conversations with other groups within the industry in an attempt to create new and exciting offerings that we do not already entertain as a benefit to our organization to give our members everything we can in a responsible manner. What I have found, I do not think would shock any of us. Overwhelming most of our membership said that they truly love getting *The Grass Roots* magazine and still like getting it in hard copy. It made them feel connected to what is going on. *The Grass Roots* has been a staple of our association for a long time and an example that other associations chase to compete with. Thank you to everyone that has contributed to this great periodical over the years. Your hard work is definitely appreciated by the

membership and is noticed by others outside of the association as well.

Obviously as great as *The Grass Roots* is, it was not the only thing that you as members have mentioned gave value in our association, but I will say some of them surprised me how often I heard them. The educational opportunities was something that was mentioned by near-


It may seem a bit cliché, by you can only get out of something what you put in, and our goal is to try to get more of the membership to put in just a little more of themselves every year.

ly everyone that I spoke with, but again what I think surprised me was the how many of you truly cherish the social time that goes with each of the educational opportunity. Networking seems to be something among every cross section of the WGCSA our members felt was a valuable benefit we offer. The ability to just have candid, non-commercial conversation with others that share the same interests and passions was a topic I heard over and over again. A goal and struggle as a board has been, how can we do more of what the membership requests, and get better, more diverse participation from the membership. We have many different offerings, different times of the year, and even in different areas of the state, but what seems to happen is that many of the same members attend most of the events.

Of course, we don't want to have those who have seen the benefits of attending such events not come, but we struggle to find a way to entice others who do not regularly attend realize the value they are missing out on by not attending, come to more of them. It may seem a bit cliché, but you can only get out of something

what you put in, and our goal is to try to get more of the membership to put in just a little more of themselves every year. We would love to see each member attend just one meeting every year.

Other topics of what our association does for us and the profession that some you felt was important was that we support turfgrass research. The WGCSA has a long tradition of supporting turfgrass research in Wisconsin, and with the inception of Par 4 Research, we have a long term, sustainable source of donated revenue to help fund research projects that pertinent to the turf industry in our state. We will again be donating over \$30,000 to Scholarships and Research in our State. I have also heard that some of you appreciated that branding effort we introduced in 2013. Many of the allied associations in Wisconsin have had logoed merchandise for some time and it was good to hear that some of you found the value of being able to wear WGCSA logoed apparel to your Board/Owner meetings like others associations do was a benefit to you. Thank you for the feedback. We also started an on time renewal system in 2013 that I heard numerous positive comment about and that is a two way street. I very happy that many of you enjoyed the new program, but I would also like to Thank You for utilizing it as we approach that time of year again.

There are many benefits some of you mentioned that I don't even think of as extras on a daily basis. Items like our Scholarship Program, Employment Services for companies looking to hire, as well as, individuals looking for positions, and something as simple as an easy to use directory. All of these things take time and effort, and it was nice to hear all of the positive comments from so many of you. Thank You for your membership in the WGCSA and we look forward to seeing and hearing from you in 2014. Good luck in the upcoming golf season, and enjoy the remainder of the off season. 



National Golf Graphics



Terry Velour Cotton Towels

11x18 \$2.25 each
16x26 \$3.25 each



Sprinkler Head Yardage Caps

Toro, Rain Bird, Hunter



Staff Clothing

Polos, Hats, Sweats, Outerwear,
Workwear and T-Shirts



Cart Directional Signs

Hazard and Rope Stakes

Rinowood and Recycled Plastic



Flags

Embroidered, Screened
and Digitally Printed



Tee Signs

Bronze, Aluminum
Redwood, Plastic
and Granite



The WGCSA Fall Business Meeting - A Recap!

By Brett Grams, Chapter Manager, Wisconsin Golf Course Superintendents Association

The WGCSA conducts two Association Business Meetings annually. Our Spring Business Meeting is typically held in early March and our Fall Business Meeting is conducted prior to the Wisconsin Golf Turf Symposium.

I would like to thank those members that attended this year's Fall Business meeting in person and for those of you not attending a brief synopsis of what took place.

The Fall Business Meeting is important for the general membership as the Board of Directors communicate recent association activities and efforts of the current year and also presents the budget, meetings sites, and plans for the upcoming year.

2013 Reports and Reviews

President Chad Harrington conducted the meeting and provided a brief report on the new initiatives and offerings that took place in 2013. The creation of WGCSA apparel was started with some success. For 2014 the WGCSA will again offer all members the opportunity to purchase clothing with the WGCSA Logo at a very affordable price. This opportunity is viewed as good for the members as well as good for the association and it is hoped that more members will consider participating in 2014. President Harrington also announced that the WGCSA Board will be conducting a Strategic Planning Meeting in early 2014 to make sure that the board is best serving our membership going forward.

As Chapter Manager, I reported on multiple topics. The membership renewal process in 2013 went quite smoothly with much improved numbers of members renewing on time. It is very helpful to have members meet the deadlines. The improved renewal response could be attributed to the gift incentive as all members meeting deadline received a complimentary Nike Baseball Cap with the WGCSA A Logo in 2013.

The 2013 PAR 4 Research effort was a success with us collecting our 2nd highest gross in our four year history. Due to improved efficiency and controlling our

costs we provided our highest Net Donation ever the WTA received our check for \$10,960.95. Thanks to members and courses that have participated we have now raised over \$40,000.00 for Turfgrass Research at the UW.

The WGCSA members are utilizing our website for renewals and monthly meeting registrations more and more each year. This year we received approximately 50% of our membership renewals online and over 65% of our monthly meeting registrations via our website. Links to the Job Opportunities page are very active parts of the website. All chapter documents including an online database are available to all active members as well.

We had good participation at our monthly meetings again in 2014 even if the weather was not as cooperative as in the past few years. Our April meeting was snowy and wet, and the rainy late spring and early summer caused us to switch a venue but things improved for the rest of the year.

The most active committee and efforts in 2013 was the Class C or Assistants Committee. Thanks to Jake Schneider who started the year as Class C Chairman who stepped down after he took a new job. Also, thanks to Joe Sell who took over the committee chair and was instrumental in completing a very large service project at Monona GC in Madison, WI where the WGCSA Assistant Superintendents built a USGA style practice green for the First Tee of Madison. This could not have been done without members volunteering their time and the generous Affiliate companies that donated materials for the project. The WGCSA Class C members have received media attention and also recognition from GCSAA for their efforts.

Membership Levels in 2013 were consistent and actually stayed the same as in 2012 at 401 confirmed members at the end of the year. Some shifting of members classes occurred but the overall number of members stayed the same.

The Golf and Arrangements Commit-

tee presented the 2014 Meeting Sites and Dates. The focus is always to provide meeting sites that allow for education, networking, and golf. Thanks to the members and facilities willing to take a turn and host a meeting. (See our meeting Calendar)

Treasurer and Chapter delegate Jon Canavan reported on what he learned at the Chapter Delegates Meeting. (See his report in the Nov/Dec 2013 Issue of *The Grass Roots*.)

Budget Approvals

2013 Treasurers Report was presented with the Association taking in a projected \$161,111.00 and spending \$153,111.00. That leaves projected revenue over expense of \$8,100 for the year.



**WGCSA President
Chad Harrington**

CHAPTER CONVERSATION

The 2014 Budget was also presented and approved. The budget for the upcoming year shows \$167,100 in income and \$162,700 in expenses with projected net revenue of approximately \$4,400.00

The Scholarship and Research Budget for 2014 also was approved. The 2014 Budget shows a slight increase over 2013 budgeted amount. In 2013 we budgeted \$28,875.00 and for 2014 we project \$29,875.00. Reviewing past amounts of Scholarship and Research efforts the WGCSA has provided over \$323,000 in the past 11 years which equates to an average of \$29,400.00 annually.

By-Law Change

The membership approved one small By-Law change regarding the listing of our Tax Status in regards to the IRS. We now list properly that we are a 501(c)6. Our by-laws listed us incorrectly as a 501(c)3 previously.

Election Results

The election of the 2014 Officers was the last item of business. After calling for nominations from the floor and receiving none, Past President Jeff Millies presented the 2014 Ballot as presented and the 2014 Board of Directors were elected.



WGCSA Class C Chairman Joe Sell discusses the green project for the First Tee of Madison at Monona GC

2014 Officers and Directors Election Results

President - Chad Harrington
Vice President - Jim Van Herwynen
Treasurer - John Canavan
Secretary - Josh Lepine
Director - Jeff Barlow
Director - Mike Bremmer

Members with one year left:

Past President - Jeff Millies
Director - Kevin Knudtson
Director - Scott Bushman
Class C - Joe Sell
Vendor Liason - Steve Wasser



When you use the best, it shows.

With a portfolio of products unmatched in the industry, Syngenta is a necessity for every great business. From herbicides to fungicides to growth regulators, we have everything you need to maintain healthy turf.

Contact Phil Spitz to learn more about Syngenta products.
Cell: 414-429-2015 philip.spitz@syngenta.com



GOLF COURSE SUPERINTENDENTS ASSOCIATION OF AMERICA

syngenta.

www.greencastonline.com

©2011 Syngenta Crop Protection, LLC, 410 Being Road, Greensboro, NC 27409. Important: Always read and follow label instructions before buying or using Syngenta products. The label contains important conditions of sale, including limitations of remedy and warranty. Meridian®, Renew®, and Tensity® are not currently registered for use in all states. Please check with your state or local extension service prior to buying or using these products. Solistar® GC is a Restricted Use Pesticide. Avaris®, Boner MAX®, Barricade®, Conquer®, Dacroni ULTRAD®, Dacroni Weather Block®, Dacroni Zn®, Decature®, Fuzitad®, Hadesy®, Heritage®, Insectar®, Medallion®, Meridian®, Monument®, Penant MAGNUM®, Prime MAX®, Renew® Liquid, Renew®, Renew®, Solistar® GC, Subdue MAX®, Tensity®, Trimec®, and the Syngenta logo are trademarks of a Syngenta Group Company.

The Winter Environment

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

The first snows of early winter are usually a happy time for golf course superintendents in Wisconsin. It means a definitive end to the management of turf for the year, deer hunting is here or just around the corner, and the holidays and a short respite from the shop are just a few weeks beyond that. However, worries about turf often begin once everyone returns to the shop early in the new year. If there is too little snow then the worry is about desiccation or an early start to the golfing season. Too much snow leads to concerns about snow mold, and wild winter weather with rain and extreme temperature swings raise the hairs on Poa managers necks as thoughts of widespread crown hydration or ice damage race through their head.

But what is the winter environment really like for the turf? We recently concluded a research project investigating the impact of snow cover on the persistence of iprodione and chlorothalonil. As part of this project, PJ Liesch, Sam Soper, and myself were tasked with keeping half of the research plot clear of snow the entire winter and half the plot covered with snow the entire winter to determine differences in fungicide degradation. Every time it snowed throughout the four years of the study, we would head out to the research plot at the OJ Noer center and shovel the snow from the inner 'non-snow' portion of the plot and place it on the outer 'snow-covered' portion of the plot (Figure 1). Following snowmelt each spring, the differing appearance between the two portions of the plots was striking. Those plots that had been covered with snow for the duration of the winter were green and almost looked ready for play. Those plots that had been kept free of snow were sand brown and took weeks to green up (though they always did eventually green up). Clearly, the environmental conditions under snow and in the absence of snow have a marked effect on the plants throughout the winter months, which in turn has an impact on their appearance for much of the spring.

As part of this same study we measured several different environmental conditions both under snow and in the absence of snow. Among the conditions measured were soil temperature at a 2-inch depth (Figure 2), surface temperature (Figure 3), relative humidity 3 inches above ground (Figure 4), and sunlight 3 inches above ground (Figure 5). Please note that the values presented here are the daily average of 24 hourly readings, and that actual daily highs or lows were often significantly higher or lower. Data presented in the figures was collected from the winter of 2010-2011, though data was collected each winter from 2009-2010 to 2012-2013.

Looking first at the 2-inch soil temperature it should be immediately obvious that snow is a great insulator. While soil

temperatures dropped as low as 18°F in the absence of snow, they stayed nearly constant between 30 and 33°F for most of the winter. The only exceptions were in early January, when they dropped below 30°F for a few days, and in March when they climbed above 33°F for the remainder of the winter. Looking at the other figures, especially the sunlight penetration in Figure 5, it seems clear these temperature alterations in early January and March were the result of either short term (January) breaks in snow cover or longer term (March) snowmelt signaling the onset of spring.



Figure 1. The inner portion of the winter degradation research plot was kept free of snow by shoveling the snow onto the outside of the plot following every snowfall. Several weather stations can be seen on the non-snow covered plots.

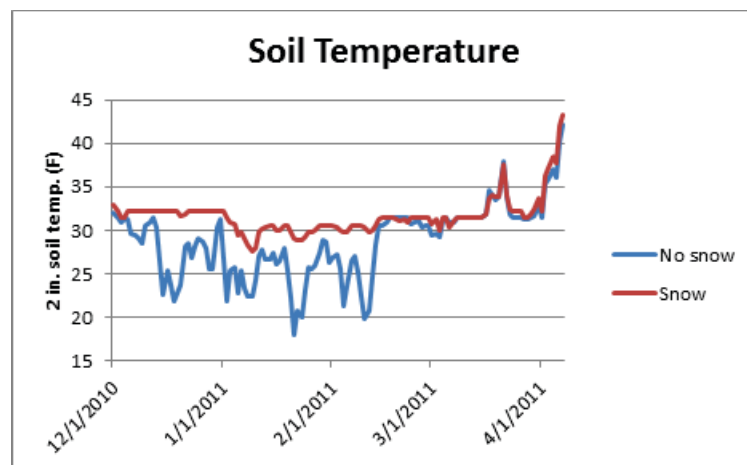


Figure 2. Soil temperature at a 2-inch depth from both snow and non-snow covered turfgrass throughout the winter of 2010-2011 in Madison, WI.

Make a Big Impression

Without
Leaving One



The new Toro® Reelmaster® 3550-D floats effortlessly over contours in fairways and green surrounds. Featuring a productive 82" cutting width, turf friendly tires, a Tier 4 compliant engine, the superior traction of a Series/Parallel 3-wheel drive system, and a weight of less than 2,000 pounds*, the Reelmaster® 3550-D is the new lightweight fairway champion.

*Gross vehicle weight for standard configuration, including five 18 inch cutting units with no optional accessories.

Reinders

Solutions & Supplies for the Green Industry

W227 N6225 Sussex Road | Sussex, WI
800.782.3300 | www.reinders.com

TORO

Count on it.

www.toro.com

COMMERCIAL EQUIPMENT SALES

Derek Kastenschmidt 414.313.5260 | Mark Robel 414.313.5296


Scott Neary 608.220.6593 | Scott Thompson 715.573.3602 | Andy Brownlow 715.892.2027

So the presence of a snow cover depth of at least 4 inches kept soil temperatures nearly constant around 32°F no matter how cold or warm it got outside. In addition, soil temperature under snow cover actually increased following the arrival of more snow in mid-January. This signals that not only does snow cover prevent soil temperatures from falling significantly but can also act to warm up soils that have fallen well below 32°F. Think of snow cover like a blanket, which acts to trap the heat produced by microbial activity in the soil and allow the entire system to warm up.

If snow is an excellent insulator for soil temperature, it should also be an excellent insulator for surface temperature, and figure 3 shows exactly that. The surface temperature sensor was placed on the turf surface on top of fairway height bentgrass, and despite rapid swings in surface temperature in the absence of snow the surface temperature under the snow rarely went below 28-30°F (except during the short break in snow cover in early January). The most glaring example of the insulatory effects of snow came in mid-February when the non-snow sensor daily average was -5°F and the snow-covered daily average was 28°F, that's a 33 degree difference!

Snow cover also had a significant impact on relative humidity and sunlight. In the absence of snow, relative humidity fluctuated between 50 and 100%. However, when significant snow cover was present (at least 4 inches), then relative humidity stayed constant near 100% regardless of the temperature. Not surprisingly, snow cover also completely blocked out any sunlight from penetrating to the turf surface. In addition, it was interesting to note how the overall strength of sunlight gradually increased beginning in early February by measuring the Watt per sq. m. from turf without snow cover. In fact, by April 1st the sun's rays in Madison were 60% stronger than they were in late December.

What does all this information mean for us as turfgrass managers? In my opinion, the biggest takeaway was that despite the winter extremes we all experience living in Wisconsin the conditions remain remarkably consistent under the snow. The temperature stays around 32°F, its dark, and its humid. These relatively mild temperatures and high humidity keeps the turf greener throughout the winter, but they are also perfect conditions for gray/speckled snow mold fungi to infect. Since the *Typhula* fungi grow very slowly, they require months to infect even under optimal conditions. A break in the optimal conditions, even for just a period of several days, can set back the fungal infection significantly and prevent symptom development from occurring. This constant need for optimal infection conditions is why 2 or 3 months of continuous snow cover is required for gray and speckled snow mold to occur. In fact, if you replace snow with another medium (winter green covers, leaves, etc) that can hold temperatures consistently around 32°F and keep humidity near 100% for prolonged periods of time, its likely you would see snow mold develop without any snow around.

Knowing the precise environment that snow mold pathogens thrive in is important for developing more effective and efficient means for controlling them. Hopefully future research focusing on the pathogen's environment and relationship with the plant will allow us to not only make highly effective fungicide applications, but also to develop low-input management strategies that will significantly reduce snow mold development and provide high quality turfgrass. But that's certainly a few years off, so as you peer out the window at the white expanse of turf, remember that while it may look peaceful, and the turf underneath is likely cozy and warm, its also cozy and humid...and may be under attack. 

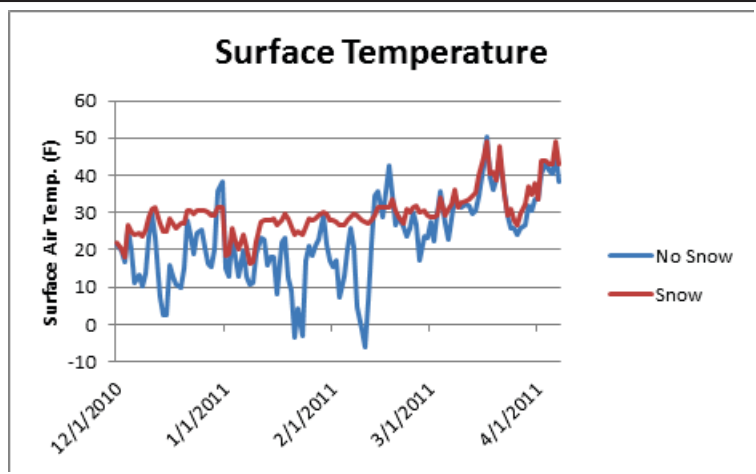


Figure 3. Surface temperature on top of fairway height bentgrass from both snow and non-snow covered turfgrass throughout the winter of 2010-2011 in Madison, WI.

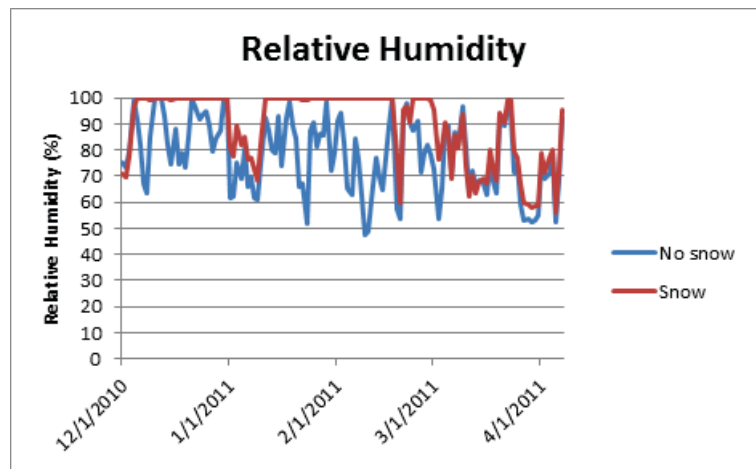


Figure 4. Relative humidity 3 inches above the turf surface from both snow and non-snow covered turfgrass throughout the winter of 2010-2011 in Madison, WI.

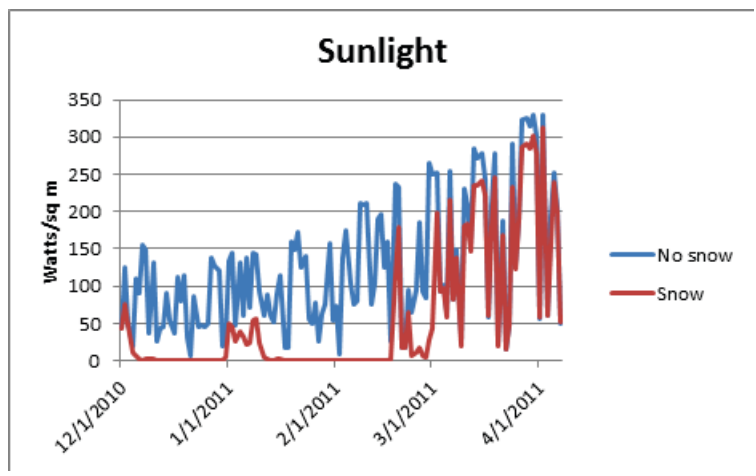


Figure 5. Sunlight measured 3 inches above the turf surface from both snow and non-snow covered turfgrass throughout the winter of 2010-2011 in Madison, WI.