

TABLE OF CONTENTS

THE PRESIDENT'S MESSAGE
The Final Chapter 3

GAZING IN THE GRASS
Ice Caps: An Ecological Approach to *Poa* Control? 4

MISCELLANY
Soil Fumigation Risk Mitigation Update. 9

WISCONSIN SOILS REPORT
Penn State Study Confirms that Traditional Late Fall Fertilization is Not Beneficial 13

WISCONSIN PATHOLOGY REPORT
Fall Applications of Potassium: Are They Much Ado About Nothing? 16

WGCSA
The Symposium - Did We Predict the Future in 1994 18

NOTES FROM THE NOER FACILITY
EXPO 2011 27

WGCSA
Couples Weekend Held at Saddle Ridge GC in Portage WI . . . 31

MADTOWN MUSINGS
A Message from the Solicitor General. 33

GREEN SECTION
Short Memory 34

MISCELLANY
Eastern Bluebirds, Wisconsin Golf Course Superintendents . . . 36

CHAPTER CONVERSATION
Fall Business Meeting 38

THE EDITOR'S NOTEBOOK
Everything in Its Own Time 40

GCSAA
Chapter Delegates Meeting and More! 42

TDL
Summer's Revenge... A 2010 TDL Year in Review 45

WISCONSIN ENTOMOLOGY REPORT
What Impact Does the "Late or Extended Fall" Have on White Grubs? 49

BADGER STATE TURF CLIPPINGS
 50

ABOUT THE COVER

Christmas gift suggestions: To your enemy, forgiveness. To an opponent, tolerance. To a friend, your heart. To a customer, service. To all, charity. To every child, a good example. To yourself, respect."

This quote by Arnold reminds us of the importance of action towards others during the Christmas Season.

- Oren Arnold American Novelist 1900-1980

THE GRASS ROOTS

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

EDITOR

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



Front Row: Brian Zimmerman, Jeff Millies, Chad Harrington, Jim Van Herwynen. Back Row: Brett Grams, Scott Bushman, Dustin Riley, Scott Sann, Colin Seaburg, Alan Nees, Not pictured Mark Storby

2011 WGCSA OFFICERS AND DIRECTORS

PRESIDENT

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

DIRECTORS

Scott Bushman
 Fox Valley Golf Club
 W1759 CTH UU
 Kaukauna, WI 54130
 foxvalleygolf@netzero.com

VICE PRESIDENT

Chad Harrington
 Autumn Ridge GC
 335 Berge Street
 Valders, WI 54245,
 putter@lakefield.net

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

TREASURER

Jim Van Herwynen, CGCS
 South Hills Golf and CC,
 1175 Fond du Lac, Ave
 Fond du Lac, WI 54935
 jkvanherwynen@charter.net

Scott Sann, CGCS
 Greenwood Hills CC
 2002 Poplar Lane
 Wausau, WI 54403
 ssann@greenwoodhills.com

SECRETARY

Mark Storby
 Oneida Golf & CC
 PO Box 10736
 Green Bay, WI, 54307
 markstorby@aol.com

Colin Seaburg
 Ozaukee CC
 11175 N River Road
 Mequon, WI 53092
 colin@ozaukeecc.com

PAST PRESIDENT

Brian Zimmerman
 Milwaukee County Parks
 7350 South 69th St.
 Franklin, WI 53132
 bzimmerman@milwcnty.com

VENDOR LIAISON

John Jenson
 Reinders, Inc.
 13400 Watertown Plank Rd.
 Elm Grove, WI 53122
 jjenson@reinders.com

CHAPTER MANAGER

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

Visit our web site at:
www.wgcsa.com



The Final Chapter

By **Brian Zimmerman**, Executive Director, Cleveland Metroparks, WGCSA President

I now can actually say what it must be like for an author to write the final chapter of a book or an ending to a great story. It truly has been a chapter worth highlighting in my career. From the new people that I have met and worked with, to the new ideas that we have developed or issues that we have come face to face during our careers with the golf industry.

I hand the reigns over to the President Elect Jeff Millies with great pride and appreciation for all the commitment and dedication it takes to be a part of this great association. I can remember moving back from Michigan over 8 years ago and joining the board. I can say the organization gave me more than I could ever give back. I not only got to help shape the future of the organization, I was able to tap into some of the greatest minds in the field. I challenge everyone to engage in the activities of the association. Committee service would be a great start to get involved. All it takes is a phone call to get on a committee or run for office.

As our chapter manager enters his third year I can say that it has been a great move for the association. He is pro-



viding quality day to day operation support to the membership. He has truly taken the overall management to a new level. I would be remiss if I didn't thank the WSGA for all the years of assistance in managing our affairs.

I would like to highlight out going Past President Dustin Riley. His leadership and dedication to this association for the past 10 years goes without saying. He directed a very successful PAR 4 research and auction with a great committee in a short order. Not to mention his years of service as an officer and director. To all that I served with, thank you for taking the time out of your lives to provide your time and talents to better the profession, and for those that haven't served why not? What are you waiting for? With that said I would like to say thank you for allowing me to serve as president for a great organization.

One last thing it sure is great living in Ohio when the Badgers stomped on the pride of the Ohio State Buckeyes. If ever in Cleveland please don't hesitate to look me up. 🌿

WGCSA Mission Statement

The Wisconsin Golf Course Superintendents Association is committed to serve each member by promoting the profession and enhancing the growth of the game of golf through education, communication and research.

WGCSA Vision Statement

The Wisconsin Golf Course Superintendent Association is dedicated to increase the value provided to its members and to the profession by:

- Enhancing the professionalism of its members by strengthening our role as a leading golf organization in the state.
- Growing and recognizing the benefits of a diverse membership throughout Wisconsin.
- Educating and promoting our members as leaders in environmental stewardship.
- Offering affordable, high value educational programs at the forefront of technology and service.
- Being key to enjoyment and the economic success of the game of golf.



Ice Caps: An Ecological Approach to *Poa* Control?

By Dr. John Stier, Department of Horticulture, University of Wisconsin-Madison

For years I've watched golf superintendents and sports field managers try every possible new chemical to control annual bluegrass (*Poa annua*). There are some superintendents with whom I have wonderful, thought-provoking discussions on a regular basis about *P. annua* control. I have similar conversations with sports field managers. Just this week I had a phone call involving a field situation which has been going on for over 10 years, where *P. annua* continues to be a problem because the control is attempted sporadically with chemicals, often not at the ideal times, due to school policies.

At UW-Madison and other land grant universities, researchers have evaluated numerous herbicides and plant growth regulators for *P. annua* control. Several of these studies have been published in The Grass Roots (Stier and Gregos, 2001; Stier, 2004; Stier, 2007). At the Crop Science Society of America meetings the first week of November this year, at least eight research projects were presented for *P. annua* control using herbicides. In most cases the results were fair at best, and were more likely to be successful with fairway situations (Calhoun and Hathaway, 2010). *Poa annua* control on putting greens is more problematic. One of the most promising projects was presented by graduate student Marcus Jones working with Dr. Nick Christians at Iowa State University (Jones and Christians, 2010). In 2009, bispyrabic-sodium (Velocity®) applications to putting greens reduced *P. annua* amounts from 50% to 20% and all seemed well.

No researcher in their right mind makes recommendations based on a single year of data from a single site, however, because environmental variables are too important to ignore. The next year proved the point. In 2010, a similar amount of *P. annua* control was obtained, but at a tremendous cost. Much of the bentgrass was also killed, so much that I could't imagine any superintendent keeping their job if the product had been applied across any of their putting greens. The toxicity to bentgrass in 2010 was presumably due to the interaction of the herbicide and the hot, wet conditions in our region.

When *P. annua* control from single products or approaches has been less than desirable, we've tried systems approaches. In the golf course industry, fertil-

ization levels have dropped and irrigation has been withheld. Occasionally new, dense turf varieties are tried with the hope they will block emergence of *P. annua*. We've even tried growing better types of *P. annua*, but to no avail (Stier and Hollman, 2003; Stier and Hollman, 2004).

Might the answer be simpler for northern turf areas? The winter of 2004-05 caused tremendous amounts of damage to putting greens in Wisconsin, Minnesota and Michigan. A quick, short January thaw accompanied by tremendous rainfall immediately followed by freezing conditions created layers of ice on putting greens across the region. By March superintendents were wor-

9-5989

Consider us part of your time.

John Deere GOLF

Have experience. Will travel.

If you're looking for some help on your course, consider the Stores-on-Wheels®. We can deliver agronomic expertise, top brands and more straight to your course. Call us at 1-800-321-5325. We can help with whatever job you have in mind. www.JohnDeere.com/golf



ried, many rightly so, that the *P. annua* on their putting greens wouldn't survive the winter. In all too many cases they were right.

Jerry Kershasky of Westmoor CC held a winterkill summit at which Bob Vavrek and I explained winterkill and potential solutions for turf recovery and prevention of ice-related damage in the future. University personnel from UW-Madison, University of Minnesota, and Michigan State University worked with the GCSAA to develop and send letters to general managers and owners of golf courses explaining the phenomenon. The incident spawned various articles in trade journals for superintendents over the next year, describing how ice kills turf and ways to thwart ice damage (Stier 2005a; 2005b; 2005c; Stier, 2006). Later that spring superintendents did everything possible to get turf cover back on the greens such as verticutting, overseeding, topdressing, even things to get *P. annua* seed in the soil to germinate.

Newer putting greens were less likely to suffer serious damage from ice cover than older putting greens because *P. annua* comprised a greater proportion of the turf on the older putting greens. As greens age, *P. annua* usually becomes the predominant species on putting greens in Wisconsin because management practices and biology favor *P. annua* more than creeping bentgrass. In many cases the amount of *P. annua* is not well-known because some ecotypes blend in too well with creeping bentgrass, and it's only when a catastrophe like ice cover occurs that the true amount of *P. annua* becomes evident.

At other times, superintendents are aware that *P. annua* has become an important part of the green, and various chemicals are applied to reduce if not eliminate it. Once the *P. annua* is prevalent, though, it's been difficult to eliminate enough *P. annua* while getting bentgrass to fill in without going through such a devastating killing of the turf that a superintendent wouldn't be worried about their job. At some point, many superintendents take on the unenviable task of convincing their club and members that it is necessary to do a course-wide greens reconstruction, a costly and exhaustive process.

If done right, the new greens can have little to no *P. annua* for the first several years after construction. Timing is critical: Murphy et al. (2005) showed seeding of new greens in mid-summer when high temperatures were unfavorable for *P. annua* seed germination produced relatively *P. annua*-free surfaces. If chemical applications begin soon enough after a new putting green is constructed, their regular application may be able to keep the amount of *P. annua* to a minimum. There are several problems with this approach, however. The first is that even the best chemicals don't consistently provide sufficient control. Cost and regulations also hamper their use; both factors are likely to

worsen. The general trend in all plant production is to use less synthetic chemicals, and rely more on natural substances or better management practices.

When it comes to *P. annua* control, the only non-synthetic, selective agent with any promise is a specialized form of the bacterium *Xanthomonas campestris*, which causes bacterial wilt disease. While it has shown promise in controlled environment studies, it has not worked well enough in field trials to be a viable control strategy (Johnson, 1994; Zhou and Neal, 1995).

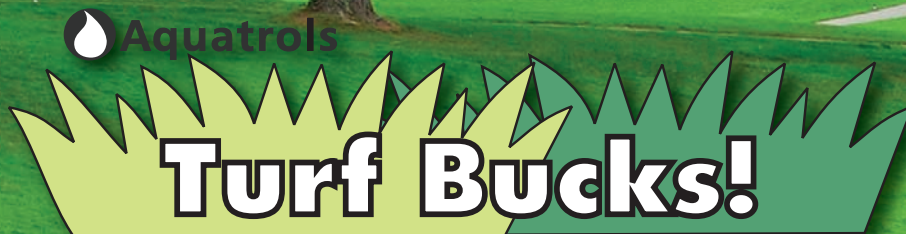
There's an old adage which states "Fight fire with fire". Ice kills grass primarily due to lack of oxygen, with *P. annua* more susceptible than creeping bentgrass (Castonguay et al., 2009). We also know that creeping bentgrass is relatively immune to ice damage. The landmark study by Beard (1964) showed that ice sheets, formed on previously frozen soil, killed 40% of annual bluegrass after 75 days without any death of

COME VISIT
MILORGANITE
AT THE GOLF INDUSTRY SHOW

 **ORLANDO, FL**
FEBRUARY 9TH & 10TH
▶ ▶ ▶ ▶ ▶
BOOTH 2511

08-270 JAN10

We know money doesn't grow on trees...



... it grows in turf!

Stretch Next Year's Budget

Everyone is looking for ways to stretch their 2011 budget dollars further and the Aquatrols' Turf Bucks fall booking reward program can help you do just that.

Order Now – Save Later

Book your Aquatrols products for the 2011 season before December 31st and earn Turf Bucks reward savings on every gallon or pound purchased. Use the rewards you earn to take an immediate discount off your order. Or receive a Visa gift card and use it to buy other turf chemicals, help pay for a piece of equipment, or take your crew out to lunch to thank them for a job well done. Plus, you don't have to take delivery or pay for your order until spring.

Donate Your Turf Bucks Rewards Too

You can also donate your Turf Bucks rewards to support important turfgrass organizations like the Wisconsin Turfgrass Association or the Wee One Foundation. It's your choice.

Talk to your Aquatrols distributor representative today to get more information about the Turf Bucks fall booking rewards program.



Larry Lennert, Territory Manager • Greenfield, WI
llennert@aquatrols.com • www.aquatrols.com

creeping bentgrass. Freezing of newly flooded soils killed about 50% of the *P. annua* after 90 days, without any death of creeping bentgrass.

I'm curious if superintendents could purposefully create ice caps on putting greens to prevent *P. annua* from ever becoming a dominant species. I know this is a scary, and perhaps absurd, thought to anyone whose greens had suffered unintentional ice damage. However, I'm not proposing this approach for greens with an extensive amount of *P. annua*. It would likely work best with greens which have relatively little *P. annua* in order to avoid extensive damage which would affect spring play.

In the late fall, after the course is closed and air and soil surface temperatures are below freezing, greens could be sprayed with water in thin layers to allow rapid freezing. Applying in thin layers would reduce the likelihood of the water simply pooling in low areas or running off the green. The idea would be to have the ice kill minor infestations, ideally scattered plants, of *P. annua* from which the surrounding bentgrass would readily grow over without the need for any overseeding or anyone even noticing some plants died. Not all greens would have to be treated in a given year. In fact, since *P. annua* encroachment is usually a slow, steady process, greens might likely only need treatment once every few years. Out-of-the-box thinking, perhaps, and a little scary, definitely. But after listening and seeing various permutations of the same old approaches tried after nearly 15 years, maybe its time for something different. If anyone wants to volunteer a nursery, chipping, or other low-profile green this winter for testing, let me know.

References

- Beard, J.B. 1964. Effects of ice, snow, and water covers on Kentucky bluegrass, annual bluegrass and creeping bentgrass. *Crop Sci.* 4:638-640.
- Calhoun, R., and A. Hathaway. 2010. Herbicide and plant growth regulator programs for controlling annual bluegrass (L.) in recently established creeping bentgrass (*Agrostis palustris* Huds.) fairway turf. ASA, CSSA, and SSSA 2010 Int. Ann. Meetings, Long Beach, CA, 31 Oct.-3 Nov. 2010.
- Castonguay, Y., G. Thibault, P. Rochette, A. Bertrand, S. Rochefort, and J. Dionne. 2009. Physiological responses of annual bluegrass and creeping bentgrass to contrasted levels of O₂ and CO₂ at low temperatures. *Crop Sci.* 49:671-689.
- Johnson, J.B. 1994. Biological control of annual bluegrass with *Xanthomonas campestris* pv. *poannua* in bermudagrass. *HortScience* 29:659-662.
- Jones, M., and N. Christians. 2010. Renovation of established golf course putting greens using non-disruptive techniques. ASA, CSSA, and SSSA 2010 Int. Ann. Meetings, Long Beach, CA, 31 Oct.-3 Nov. 2010.
- Murphy, J.A., H. Samaranyake, T.J. Lawson, J.A. Honig, and S. Hart. 2005. Seeding date and cultivar impact establishment of bentgrass in soil containing annual bluegrass seed. *Inter. Turfgrass Soc. Res. J.* 10(1):410-415.
- Stier, J. 2004. Velocity: A potentially new herbicide for selective removal of *Poa annua*. *The Grass Roots* 33(5):4-5.
- Stier, J. 2005a. When ice kills. *The Grass Roots*. Vol. 34(2):4-5, 7.
- Stier, J. 2005b. Take advantage of *Poa annua* winterkill: Increase bentgrass on putting greens. *The Grass Roots*. Vol. 34(3):4-5, 7, 9.
- Stier, J. 2005c. Preparing for winter. *The Grass Roots*. Vol. 34(5):4-5, 7, 9, 10.
- Stier, J. 2006. Autumn turf management for best winter hardiness. *The Grass Roots* 35(5):6-7, 9, 10-11.
- Stier, J. 2007. New formulation and application strategies for *Poa annua* control with Velocity herbicide. *The Grass Roots* 36(3):5-7, 9, 11.
- Stier, J.C., and A.B. Hollman. 2003. Cultivation and top-dressing requirements for thatch management in A,G bentgrasses (*Agrostis stolonifera* L.) and creeping bluegrass (*Poa annua* var. *reptans* Hausskn). *HortScience* 38:1227-1231.
- Stier, J., and A. Hollman. 2004. WGCSA Research project: Managing the new bentgrasses and perennial annual bluegrasses for putting greens. *The Grass Roots* 33(3):27-29.
- Stier, J., and J. Gregos. 2001. New strategies tested for *Poa annua* seedhead control. *The Grass Roots* 30(5):5-7.
- Zhou, T., and J.C. Neal. 1995. Annual bluegrass (*Poa annua*) control with *Xanthomonas campestris* pv. *poannua* in New York State. *Weed Technol.* 9:173-177. 

Wisconsin Turf Equipment Corp.

Established in 1956

Deep Tine Aeration * Grass Seed

Athletic Field Conditioners & Supplies

Equipment Rental * Tee & Green products * Reel Services
Custom made Hydraulic Hoses * Used & Demo'd Equipment



800-443-1840

sales@wisconsinturf.com

www.wisconsinturf.com

1306 West B-R Townline Rd. Beloit, WI 53511-9002





REcommit

to professional improvement



REnew

your business opportunities



REfresh

your team for a new season



REconnect

with friends and colleagues



REdiscover

January 5 -7, 2011

Minneapolis Convention Center

651-633-4987 | toll-free 888-886-6652

www.NorthernGreenExpo.org





Soil Fumigation Risk Mitigation Update

By **Matt Sunseri**, Pesticide Specialist, Wisconsin Department of Agriculture, Trade and Consumer Protection

In July 2008, the U.S. Environmental Protection Agency (EPA) started the process to set new use requirements for soil fumigants to minimize inhalation risks and other risks posed to persons using the products and to persons near to the application sites. Some of the new safety measures will begin appearing on marketplace product labels in December 2010; the remaining measures will follow late in 2011.

The five soil fumigants of concern are chloropicrin, dazomet, metam sodium/potassium (including methyl isothiocyanate or MITC) and methyl bromide. Based on a review of the pesticide product registration database, Wisconsin has 25 soil fumigant products that contain one or more of these targeted active ingredients.

The department has put together an internal soil fumigant workgroup that is led by Matt Sunseri, pesticide specialist. The group participates in monthly conference calls that include other states, the EPA and product manufacturers and labelers. We will keep

WGCSA up to date with any critical information that comes from these conference calls.

The first group of safety measures will be found on product labels set to appear in the marketplace later this year. EPA is requiring that all products sold and distributed by pesticide manufacturers or labelers (registrants) after December 1, 2010 must include the following safety measures on the product label:

- Restricted use pesticide classification.
- Good agricultural practices.
- Rate reductions and use site limitations.
- Handler and worker protections (including specific respirator requirements).
- Training information for workers.
- Site specific fumigant management plans.

The registrants are still in the process of updating product labels to include the new '2010' requirements and submitting the new labels to the pesticide regulatory agency in each state where the products are regis-

PENDELTON TURF SUPPLY

Ed Witkowski
414-640-6447
pendeltonurf@tds.net

Mike Werth
414-640-4172
pendeltonurf@tds.net

Todd Fregien
414-640-2265
pendeltonurf@tds.net

805 Ela Avenue

Waterford, WI 53185

Phone: 262-534-3334

Fax: 262-534-2990



FULL LINE OF TURF PRODUCTS
CHEMICALS • TEE & GREEN SUPPLIES
TIRES & TUBES • NEW PRODUCT INFORMATION

**SATISFACTION
GUARANTEED**

QUALI-PRO

Nufarm
Turf & Specialty

**BASF
PROFESSIONAL
TURF™**



EC GROW

**JACKLIN
S E E D**

AQUATROLS®

Jay-Mar, Inc.
Liquid Golf Course
& Turf Fertilizers

tered. DATCP has received 13 updated labels as of late October. While it is possible that soil fumigants with the new labels may appear in the marketplace before Dec. 1, the registrants have indicated this is not likely.


With new product labels likely entering the marketplace after Dec. 1, the soil fumigation applications to be done this fall will be with product under the 'old' labeling. Any applicator using product with the new label affixed to the container must follow the new requirements.

The second group of safety measures will be found on product labels set to appear in the marketplace late in 2011:

- Site specific fumigant management plans (expanded requirements).
- First responder and community outreach.

- Applicator training.
- Restrictions on applications near sensitive areas.
- Buffer zones and credits for best practices.
- Buffer zone posting requirements.
- Buffer overlap prohibitions.
- Emergency preparedness and response requirements.

The issue of greatest concern for users appears to be the buffer zone requirements. EPA is still working on those details and they will not be part of the product labels until late 2011.

Be aware that some of the soil fumigants will become restricted use pesticides so pesticide applicator certification and pesticide dealer licensing may become an issue with the new product labels. The following table provides a quick list of the initial impacts of the labeling changes on the five active ingredients. 

Licensing and Certification Impacts with New Soil Fumigant Labeling

Soil Fumigant	Applicator Impact	Dealer Impact
Chloropicrin	None – all soil fumigant products with this ingredient are currently classified as restricted use.	None – all soil fumigant products with this ingredient are currently classified as restricted use.
Dazomet	Yes - many soil fumigant products with this ingredient are not currently restricted use and ATCP 30 does not address this ingredient. New product labeling will require users to be certified applicators in a main category and the soil fumigant subcategory.	Yes - many soil fumigant products with this ingredient are not currently restricted use but will be under new labeling. Dealers can only sell to certified applicators. Dealers must have a restricted use pesticide dealer license and meet recordkeeping and reporting requirements.
Metam sodium	No impact for commercial applicators as ATCP 30 already requires users to be certified pesticide applicators even though current products are not restricted use.	Yes - many soil fumigant products with this ingredient are not currently restricted use but will be with new labeling. Dealers can only sell to certified applicators. Dealers must also have a restricted use pesticide dealer license and meet recordkeeping and reporting requirements.
Metam potassium	Yes - many soil fumigant products with this ingredient are not currently restricted use and ATCP 30 does not address this ingredient. New product labeling will require users to be certified applicators in a main category and the soil fumigant subcategory.	Many soil fumigant products with this ingredient are not currently restricted use but will be with new labeling. Dealers can only sell to certified applicators. Dealers must also have a restricted use pesticide dealer license and meet recordkeeping and reporting requirements.
Methyl bromide	None - all soil fumigant products with this ingredient are currently classified as restricted use.	None –all soil fumigant products with this ingredient are currently classified as restricted use.

Based on a review of the pesticide product database, Wisconsin currently has 25 soil fumigants that contain one or more of the targeted active ingredients. Four of the products will be discontinued and will not be relabeled, however, products with the old labels could still be in the marketplace.