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Ice Cover and The Role in Freezing Injury

By Dr. Karl Danneberger, Ohio State University

It's been a somewhat crazy winter so far. Prior to Christmas to the first of the year we have had cold, snow and ice. Now we have warm wet weather with projected highs in the 60's for January 11, 2005 followed by temperature back in the 10's and 20's by the end of the week. Some of you may wonder what this is doing to the turf. I guess we will have to wait and see. I thought I would make a few comments regarding one part of winter injury, that being ice injury.



Intermittent ice formation on golf greens and fairways is a common event in Ohio and most of the northern United States. However, over the last few years ice formation has increasingly been singled out as the cause or strongly associated with winter injury. Ice injury can occur either directly from continuous ice cover or as part of freeze injury (low temperature kill).

Continuous Ice Cover Injury

The first type of ice injury is the direct result of a continuous ice cover. In the early to mid 1960's Jim Beard conducted controlled laboratory study where he looked at the survival rate of three cool season turfgrasses under a continuous ice cover and two turfgrasses under field conditions (1,2). He found that creeping bentgrass could survive 120 days of continuous ice cover, however annual bluegrass (*Poa annua*) loss occurred after 60 days with substantial loss around 75 days. In a Canadian field study annual bluegrass and creeping bentgrass turf was subjected to 45 days of continuous ice cover and then the ice was removed. Seventy-five days after initiating the study and 30 days after removing the ice cover creeping bentgrass still maintained its cold hardiness, while annual bluegrass was dead (3). It would appear from this study that annual bluegrass under a continuous ice cover needs to be removed prior to 45 days.

The reasons commonly proposed for ice injury are the buildup of toxic gases and/or the development of anoxic conditions, and the loss of cold hardiness. It appears that carbon dioxide (CO₂) accumulation under ice cover is a major contributor to the death of herbaceous plants (4). Intermittent thawing helped eliminate the CO₂ buildup and injury to the plants in this study did not occur (4).

The loss of cold hardiness under ice cover occurs and varies among turfgrass species. Under continuous ice cover annual bluegrass loses its cold hardiness, while creeping bentgrass is not affected (3). The loss of cold hardiness in annual bluegrass is likely due to the anoxia (lack of oxygen) conditions that develop under an ice cover (3).

Although, ice injury to creeping bentgrass is remote, and certainly not an issue here in Ohio, I do wonder about its role in winter injury to creeping bentgrass on golf courses in the Rocky Mountains or Scandinavia where ice cover may exceed 120 days. It is not uncommon to observe creeping bentgrass greens that have suffered winter injury (photo to the left) believed to be caused by a combination of ice and freeze injury. It might be likely that prolonged anoxia conditions may reduce the cold hardiness of creeping bentgrass making it more susceptible to

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President's Message.....

It's February already. Spring is just around the corner, I don't care what Punxsutawney Phil has to say. I want to really believe that because it's only about 17 degrees outside my office right now. This is the time of year I like to contact key members of my crew and check in with them to see how their winter is going and solidify their commitment to coming back in the spring. They seem to enjoy the call from me, just so they know that someone is thinking about them. If you have a few minutes, give them a ring. It goes a long way toward easing the growing stress of our country, so they know they still have a job and you know that help is on its way come warmer weather.

Also, check out the PTGA website. Patrick Knelly has put a lot of time into it. He has made some changes that our members should find very useful. Look it over and let Pat know what you think. Your feedback is very important to the Board.

By now, hopefully, everyone has gotten the notice about the PTGA party at Water Gap on February 20, 2010. It will be a fun night for old friends and new friends to visit, laugh and enjoy some great food. Remember this date is only one week after Valentine's Day (wink, wink) two birds with one stone I always say. Hope to see you there.

Rick Anglemyer

Editor's Notes.....

Well another cold winter has set its teeth into Northeastern PA. Snowfall doesn't seem too bad thus far as I can see the ground as of this writing, although more is in the forecast. It is actually 50 degrees as I write this, and the NETS is just around the corner. Hopefully, Elk Mountain will have good conditions for our SNOW meeting.

The new Board is in place, the golf meeting schedule is about finalized, and the GIS show is rapidly approaching. Hopefully San Diego will have better attendance than they anticipate, as they have been offering some great discounts to increase attendance. The venue is awesome if you haven't been to San Diego.

The PTGA is hosting a holiday party for the membership and guests. The site will be Water Gap Country Club; the host is president Rick Anglemyer. There will be an email about the event.

Anyway, the first newsletter of the year is ready to go. Thanks to all those sponsors who supported us last year. Thanks also to those who will help with Association production costs this year as well.

Enjoy the wind down before everything gets cranked up. Spring will be here before you can say pitchers and catchers!

Jim Gurzler



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Mental Golf Practice to Improve Your Swing and Your Golf Performance

By: Andrew Fogg, The Golf Hypnotist

Imagining yourself playing mental golf can be just as effective for your swing and golf performance as actually hitting shots on the range or playing a round of golf on the course.

Golfers and other athletes have used mental imagery to complement their physical practice. Sometimes practicing golf in the mind actually produces better results than physical practice. In a study of medical students in Texas, students were given 30 minutes of guided practice for a complex medical procedure followed by either

1. no further training
2. a further 30 minutes of physical practice
3. 30 minutes of guided mental imagery.

In follow up tests, the students who did the guided mental imagery performed at the same level as those who had the additional physical practice and both these groups were significantly better than the group who received no further training.

So why is mental golf practice at least as good as physical practice? Well other research shows that the act of "Imagining" fires up the identical parts of the brain that would be activated if you were actually playing a stroke. The neurons used in the brain are the very same ones that would be used if you were actually playing. Indeed, some of the actual muscles involved in the imagined shot experience tiny movements. You effectively practice just by the act of visualization.

One of my favorite stories about the power of imagination in golf comes from an American Major, James Nesmeth. He was an average golfer consistently scoring in the mid 90's, until he developed a unique way of improving his golf game. It came when he spent seven years in North Vietnam as a prisoner of war. During those tortuous years, Nesmeth lived in solitary


confinement inside a prison cell that measured four and a half feet high and 5 ft long. To keep from losing all hope, he realized that he needed to do something to occupy his mind.

Every day he played 18 holes of golf in his mind. He imagined everything in vivid detail from the country club he was playing at to the smell of freshly cut grass in the summertime. He would imagine the grip of the clubs and practice his swing mentally many times until he perfected it. In reality, he had no place to go, so he spent four hours a day on the course in his mind never leaving any detail out. When he was released from prison and returned home, he played his first real game of golf for 7 years, he scored 74!

So when you find yourself with nothing important to do, maybe when you're travelling on public transport, when there's nothing worth watching on television or you're just daydreaming, just go inside your golf mind and imagine playing a round of golf. You may be surprised by the positive results.

Article Source: <http://www.bettergolfarticles.com>

Andrew Fogg, the Golf Hypnotist, is an enthusiastic golfer, hypnotherapist, NLP Master Practitioner and author of a soon to be published book "The Secrets of Hypnotic Golf" and a series of golf hypnosis MP3 programs. To receive his fascinating newsletter, packed with the latest on golf psychology, golf hypnosis and NLP, visit www.golf-hypnotist.com. You'll also receive your free "Your Own Virtual Caddy" Golf Hypnosis audio MP3 program. Article from the website Better Golf Articles.com



Congratulations to **Seth Fleetwood** on his appointment as the Superintendent of Frosty Valley Country Club. Seth is a graduate of Penn State and Horry Georgetown Technical colleges. Seth had been the assistant at Frosty Valley CC since January of 2009.



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freeze injury.

Beard (5) reported differences among creeping bentgrass cultivars to ice cover. He found that seeded creeping bentgrasses, especially 'Seaside', are less tolerant of ice coverage than the vegetative cultivars like 'Toronto'. In addition, the colonial bentgrasses were considerably less tolerant than the creeping bentgrasses. Although published over 39 years ago - and the creeping bentgrass cultivars used may not be relevant at this time - the idea that variability among cultivars to ice coverage exists may make it difficult in extreme situations of ice cover to say "creeping bentgrass is not affected by ice covers".

Ice in Association with Freeze Injury

In Ohio and most of the Midwest and Northeast, a continuous ice cover exceeding 45 days is unlikely. The winter weather pattern is generally broken with intermittent periods of thawing that melts the ice. Where "ice injury" plays a more likely role is as a component of freeze injury. In this role the freezing of water that would occur with a rapid drop of temperature in or around the growing point during or after dehardening of annual bluegrass.

The critical precursor to freeze injury is the loss of cold hardiness through dehardening and subsequent rehydration of the annual bluegrass crown region. Continuous ice covers as previously mentioned contribute to the decline in cold hardiness. However, the most important factor regulating dehardening is temperature (6). In annual bluegrass the dehardening process can occur quickly when soil temperatures exceed 46 F (8C) for 48 hours (7).

What cultural practices can be instituted to minimize ice injury and/or freeze injury? A thorough discussion is found in the 2004 November/December issue of the USGA Green Section Record in an article entitled "Winter Damage" by Keith Happ, which is worth reading. A management program for reducing ice or freeze injury should center on:

1) Produce a healthy plant going into the winter. A

weak annual bluegrass plant with low carbohydrate storage is not going to tolerate ice cover or be resistant to freeze injury as a healthy plant. Shaded areas are more prone to freeze injury than sunny areas, probably due to the carbohydrate status of annual bluegrass (8).

2) Eliminate poorly drained areas. Annual bluegrass growing in areas where water accumulates is at high risk to rapid freezing during freeze/thaw cycles.

In conclusion, winter injury is normally a combination of several factors one of which is ice cover. A continuous ice cover alone here in the Midwest is not a likely event. However, freeze/thaw cycles in late winter can create a situation where excessive water in and around annual bluegrass crowns can create freeze injury from the ice formed from the freezing of water.

References:

1. Beard, J.B. 1964. Effects of ice, snow and water covers on Kentucky bluegrass, annual bluegrass and creeping bentgrass. *Crop Science* 4: 638-640
2. Beard, J.B. 1965. Effects of ice covers in the field on two perennial grasses. *Crop Science* 5: 139-140.
3. Tompkins, D.K., J.B. Ross, and D. L. Moroz. 2004. Effect of ice cover on annual bluegrass and creeping bentgrass putting greens. *Crop Science* 44:2175-2179.
4. Freyman, S. and V.C. Brink. 1967. Nature of ice-sheet injury to alfalfa. *Agronomy Journal* 59:557-560.
5. Beard, J.B. 1966. Winter injury. *Golf Superintendent* 34 (1): 24-30.
6. Tompkins, D.K., J.B. Ross, and D.L. Moroz. 2002. Dehardening of annual bluegrass and creeping bentgrass during late winter and early spring. *Agronomy Journal* 92:925-929.
7. Tompkins, D.K, C.J. Bubar, and J.B. Ross. 1996. Physiology of low temperature injury with an emphasis on crown hydration in *Poa annua* L. and *Agrostis palustris*. *PTRC Report*. web site: <http://ptrc.oldscollege.ab.ca/researchreports.html>
8. Rossi, F.S. 2003. New light on freeze stress. *CUTT* 14(3): 1,4

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GCSAA Education Credits have been applied for details to follow

Northeastern Turfgrass Show 2010

Penn State University hosted another popular turfgrass conference in Wilkes Barre, PA this January. We had our normal snowfall which was light where we were, but did cause some issues for those in the Lehigh Valley coming north to the show. Attendance was good again and vendor support was strong for the event yet again.

It was nice to see so many PTGA members in attendance. I know PSU looks to have speakers that will be both good topics and pertinent to the crowd. The golf session had a great staffing of speakers. The speakers included Dr. John Kaminski, Dr. Andy McNitt, Dr. Peter Landschoot, for the golf session in the AM, along with Darrin Bevard of the USGA. In the afternoon, more PSU alumni helped to fill the day with more pertinent information to provide more information to help make the growing season a little easier. These speakers included: Dr. Gary Moorman, Dr. Mike Fidanza, Mr. Tom Serentis of PSU, Ms. Nancy Bosold of the Extension service, and Mr. Ron Edwards and Mr. Chris Santore of the Pennsylvania Department of Agriculture.

I think a big thanks should go out to Dr. McNitt and his staff who put this event together each year for the turfgrass industry in Northeastern PA. Thanks for all the hard work.

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Height and Reed attend Syngenta Business Seminar

Tom Height and Eric Reed CGCS, were selected as two of 25 golf course superintendents to participate in the Syngenta Business Institute, a unique, educational program.

The Syngenta Business Institute is sponsored by Syngenta in conjunction with Wake Forest University's graduate school of business and will take place Nov. 30 to Dec. 3 in Winston-Salem, N.C. The role of the golf course superintendent involves not only agronomic but also business manager responsibilities. Syngenta has worked with Wake Forest to develop a program that will focus on business management in the areas of financial management, leadership and effective communications, and negotiation skills.

Superintendents from across the country were nominated by either their state GCS associations or the Syngenta Golf Advisory Team. Height and Reed were selected from a talented pool of superintendents based on an application process that reviewed their educational background, industry achievements, and an essay.

Reed said of the experience:

The entire program was run by the Wake Forest MBA Faculty; I thought they played a major role in who was selected for the program. We all stayed at the Graylyn Resort and Conference Center, Graylyn is an old mansion from the RJ Reynolds era. I believe the house was built for the CEO of RJ Reynolds in the 1920's. Classes were taught by three faculty members from Wake Forest, and the entire program was moderated by the Associate Dean of the MBA Program at Wake. They were hoping to have a lot of group participation and they could not have been happier with the response from the participants.

I thought it was one of the most rewarding experiences I have ever had in this profession, and what made that possible was spending three days with the same guys. The more we were together, the more we realized we were all virtually identical personalities facing the same issues at each of our jobs. By the second night, the needling was relentless. All these years going to the GCSAA Conference, you spend one day with people, and after being cordial all day, you leave not knowing anything about each other. I would love to see formats like this at the National...spending multiple days with one group in moderated discussions about different subjects. Syngenta really stayed in the background this whole week, and

kept any commercial intent out of the picture. Their feeling with an event like this is that they want to do what they can to promote the success of the superintendent knowing that that is necessary for their survival.

Height said of the event:

My overall feeling of the SBI trip was definitely a successful one, the best seminar I have attended to date! Despite this being the first year, Syngenta, the Graylyn Conference Center, and experienced staff of MBA teaching professionals at Wake Forest University provided an incredible experience and learning environment. It was a unique opportunity to build and improve upon important skills that we all don't salivate at the chance to study, but because of the ability of those teaching and interactive focus of the classes made it both beneficial and enjoyable.

The MBA faculty at Wake Forest did a tremendous job throughout the week. They kept the classes interactive and adjusted their content for subsequent sessions based on superintendent feedback if something more beneficial was desired. Also, the trip was not commercial (which is nice), but the support group from Syngenta got just as much out of the experience by listening to our thoughts and interaction as we did from the classes. During certain exercises we all realized that no matter where in the country you're from or what type of club you come from, we all constantly negotiate similar issues. The opportunity to meet and interact with superintendents from all over the country at educational events is always valuable; but this experience within the same small group over four days enabled us to share ideas and good stories while enjoying a soda or two .

USGA Green Section Regional Meeting



Tuesday, March 16, 2010

DuPont Country Club
1001 Rockland Road,
Wilmington, DE 19803

Speakers from 9-noon including breakfast and lunch
GCSAA CEU's available

Topics include:

Audubon Sanctuary information by Ron Dodson and
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POCONO ROUNDUP

Our condolences go out to two families. In January we lost both Ed Zimmerman of John Deere Golf and Dr. Paul Heller of Penn State.

Ed Zimmerman, passed away in early January leaving his wife Wendy, and two children Aimee and Anson. The family asked that in lieu of flowers donation be made to American Cancer Society to benefit the Relay For Life of Pottstown. Memorials and donations can be sent to National Penn Bank, c/o Relay For Life of Pottstown, 1503 Sunset Drive, Pottstown, PA 19464.

Dr. Heller passed away from cancer, as well. His department head, Gary Felton, said throughout his long struggle Paul reminded Dr. Felton "Reduce Your Stress and Keep Healthy!!" His advice is good advice for all of us.

Dr. Heller asked that no memorial service be held in State College. His interment will be in Minnesota. E-mail condolences may be sent to the family at www.sturmfh.com

PTGA SCHEDULE

- Feb 8-12** GIS Show
San Diego, CA
- Feb 20** Pocono Turfgrass Outing
Dinner and Dancing
Water Gap CC (see details inside)
- Feb 23-24** NYSTA Southeast Regional Conference
Holiday Inn Suffern, NY
- March 1-4** New England Regional Turfgrass Show
Rhode Island Convention Center
Providence, RI

Congratulations go out to Shane Miller, who has taken the position of Golf Course Superintendent at Iron Lakes Country Club in Allentown, PA.



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