



Coming Out of Winter: How Did Your Turf Do?

By Dr. Brian Horgan
University of Minnesota

Whoa, another challenging Minnesota spring. Your general manager is asking you questions. Greens committees are referencing the golf course down the street that looks great. Consultants have been hired. Sales representatives have made site visits. Informal get-togethers by superintendents are trying to answer questions. Unfortunately, there seems to be more questions than answers at this time.

Questions like: Is your turf brown? Do you have Poa death? Does it smell? Did you cover your greens? What kind of covers did you use? Did you spray fungicides for snow mold protection? What fungicides did you spray? Was your soil wet going into the winter? Was your soil dry going into the winter? Did you fertilize your turf last fall? Did you have ice cover on your greens? How long was the ice present? Did you have open conditions this winter? Was your golf course used for recreational



Ouch!

activities this winter (x-country skiing, snow shoeing, etc...)? Did you perform a late fall aeration?

So what did we see coming out of this winter and was this unique? Dead Poa was visible on many courses this spring. And speaking with some of our senior superintendents, this sort of injury happens more frequently than we care to admit.

Two Types Of Damage, With And Without Covers

In some situations, the Poa died without any artificial greens covers. I did not observe any completely dead greens, only spots that seemed randomly distributed. This makes sense to me. Poa has many different biotypes ranging from true perennials to true annuals and every possibility in-between. Some biotypes are more susceptible to low temperatures, some are more sensitive to wind desiccation, and still others are more susceptible to crown hydration. Observing a highly mottled Poa putting green exemplifies the survival of the fittest theory. Unfortunately, those areas that contained large percentages of annual biotypes and died will probably initially grow more annual biotypes of Poa this spring and possibly lead to the same problem next year.

In other situations, the Poa died and were covered throughout the winter. The Poa under greens covers that allowed some gas exchange had damage similar to the not covered category. Again, this is the nature of the beast (growing Poa).

The Poa under greens covers that were impermeable seemed to have the biggest problems this spring. I will attempt to address this situation through a series of questions and a couple of scenarios of what might have happened starting with the placement of greens covers.

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Turf-

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Q1: When did you put your covers down? Timing of covering putting greens defines success or failure. One rule of thumb: wait until the plant has hardened off and until we have had a good freeze. This will ensure that the plant and microbes in the soil are ready for a long winter's sleep. However, don't wait too long as it will be difficult to insert the staples or stakes to hold the cover in place.

Q2: Prior to covering the greens, what was the moisture status of your soil? The books all say that your soil should be at or near field capacity. This will provide adequate soil moisture to take your plants through the winter until spring rains or your irrigation system is operable. If your soil is too dry and you do not cover greens, low temperature kill or desiccation from wind can be a problem. Therefore, follow-



Oooooooh!

ing the fall blow-out of your irrigation system, if warm weather reappears, you may need to tank water to your greens that have dried-out. Keep your soil probe handy.

If your soil is too wet and you cover, you could possibly see crown hydration or even toxic gas build up under the cov-

ers (most important with impermeable covers). If we have a wet fall, or if you saturated the soil late in the season, you MUST allow time for drainage or for evaporation to take place prior to covering

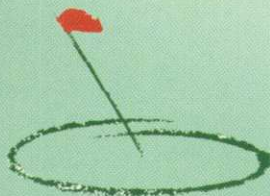
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Turf Talk in Minnesota

Coyote Decoys for Goose Control

(Editor's Note: This article was reprinted from the University of Minnesota's Turf Talk website. You can join in the on-going conversations at www.turf.umn.edu)

Goose Control

Has anyone heard of using coyote decoys around your pond edges to scare off geese? It came to my attention through a Green Committee meeting that a local course is having good success with this method. I am in the process of trying to find out which course. I'm skeptical but willing to explore. -- *Randy Allen, Tartan Park Golf Course.*

* * * *

Randy, I know Goodrich GC used the coyote decoys last year. I e-mailed the Ramsey County Natural resource specialist about the decoys since it was one of his attempts to deal with these winged rats. This is his response:

"The decoys work when used in conjunction with a dog. If you chase the geese with a dog, then put the decoy out it will

keep the geese away from that area for several days. You need to move the decoys around every few days and continue to occasionally use a dog."

You may want to call Dave Bauer at Goodrich and see what he thinks of them. Have you tried the pyrotechnic cartridges fired from a starter pistol? We have very good luck with that program. Good Luck and keep your rollers clean! -- *Paul Diegnau, CGCS, Keller Golf Course.*

* * * *

Perhaps go one step further and place a dead goose decoy next to the coyote decoy. Might give the bird something to think about! -- *Jack MacKenzie, CGCS, North Oaks Golf Club*

* * * *

Let's take it another step further; place the human hunter decoy(with gun)next to the dead coyote decoy next to the dead goose decoy. I wonder how many groups that would offend?-- *Paul Diegnau, CGCS, Keller Golf Course.*

MGCSA EVENTS

Monday, May 17
SPRING MIXER

Glencoe Country Club
Glencoe, Minn.

Host Superintendent: Jeff Vinkemeier

Monday, May 24

**BASF PEOPLE VS. THE PRO'S
CHALLENGE**

North Oaks Golf Club
North Oaks, Minn.

Host Superintendent: Jack MacKenzie, CGCS

Monday, June 7

SCHOLARSHIP SCRAMBLE

White Bear Yacht Club
White Bear Lake, Minn.

Host Superintendent: John Steiner, CGCS

Monday, August 16

STODOLA SCRAMBLE

Somerset Country Club
Mendota Heights, Minn.

Host Superintendent: James Bade

Monday, September 13

MGCSA CHAMPIONSHIP

Edina Country Club
Edina, Minn.

Host Superintendent: Mike Kelly

Monday, October 11

FALL MIXER

The Crossings at Montevideo
Montevideo, Minn.

Host Superintendent: Terry Nigen

Waste Pesticide Collection Program Undergoes Changes In 2004 Regional and County Partnerships Being Formed

Minnesota's Waste Pesticide Collection Program for the disposal of unwanted and unusable pesticides has been modified to continue its mission in the face of scarce governmental resources.

The success of the program is demonstrated by the fact that the Minnesota Department of Agriculture (MDA) has collected and safely disposed of over 2.6 million pounds of waste pesticide since the program was initiated in 1989. While the collection mechanism will be modified, the new program will continue to provide sites for the collection of household, agriculture and business pesticides.

Sites will be operated in partnerships formed by the MDA with regional and county Household Hazardous Waste (HHW) programs

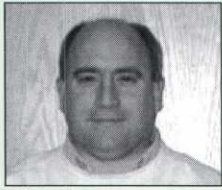
and will continue to collect waste pesticides from farmers and custom applicators, as well as homeowners. Experience has shown that these existing facilities and their established waste disposal contracts offer efficiencies and disposal cost-savings to the program.

These cooperative relationships began in the mid-90s when HHWs asked MDA to assist in the disposal of household pesticides separated by their staff from other household wastes. In return, HHWs would accept small volumes of agricultural pesticides, direct farmers to MDA event collections and offer their facility as an event site.

MDA will allocate funds to the HHWs to cover such costs as drums, transportation and waste disposal in an amount based on the

number of farms, households and companies licensed to apply pesticides in the area and the quantities of waste pesticides collected at the location in the past. Partnering counties and regional HHW facilities will schedule collection dates and contractors will provide transportation and disposal.

(Editor's Note: For more information on the county or regional collection site in your area contact your solid waste office or Stan Kaminski, Agronomy and Plant Protection at 651-297-1062 or stan.kaminski@state.mn.us or the MDA website: [www.mda.state.mn.us / appd / wastepest / default.htm](http://www.mda.state.mn.us/appd/wastepest/default.htm).)



Musing the Minutes

By Rick Traver, Jr., CGCS
Monticello Country Club

Turf-

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with an impermeable cover. Not doing so will potentially cause you significant problems in the spring dependent upon soil types!

Q3: What happened with the weather?

+ Looking through climatological data for the Twin Cities Metropolitan Area (TCMA), November ended with 4" of snow cover and temperatures hovering around freezing. This snow eventually melted in early December.

+ An inch of frost initially developed around November 25. This increased to 3 inches the first week of December. The ground thawed around December 15 before refreezing the 25th.

+ We had an additional 9" of snow which melted in mid-December.

+ Air temperatures warmed up, from December 15 through January 3, where 17 of 19 days, the daily high exceeded 32°F.

+ Remember, the snow melted and was gone in mid-December and did not return until January 24, 2004.

+ Temperatures declined dramatically after January 3 and we had our coldest temperatures for the winter during the last week of January (daily highs below zero).

Uncovered Poa greens were injured dependent upon retained snow cover, biotypes of poa present, snow/ice melt drainage patterns and exposure to the elements.

Poa death on native soil putting greens seemed to be most common amongst a large group of superintendents who used an impermeable greens covers. Another similarity was wet soil. Maybe not saturated, but the soil was wet when the greens were covered.

A couple of things could have happened underneath the covers: Environmental conditions following the snow melt that occurred in mid-December when temperature fluctuations led to the loss of frost in the soil could have caused soil moisture to be drawn to the soil surface and water condensation under the impermeable cover. When the next batch of frigid air occurred at night, the water that had condensed under the covers would have frozen, causing an ice layer to form. We would also expect that the condensed moisture would be present in the upper soil profile near the crowns of the plant which could lead to super-hydration after freezing. Repeated cycles of this phenomenon from December 15 through the 25th, is when some of this damage could have occurred.

The other possible scenario involves the formation of toxic gases under these impermeable covers. If the covers were placed over greens that had excessive moisture (moisture greater than field capacity), anaerobic bacteria could still have been active. These respiring bacteria can produce lethal concentrations of CO₂, CH₄ (methane) or H₂S (hydrogen sulfide) and by placing an impermeable cover over the anaerobic soil, in effect, seals in these toxic gases causing plant death.

If this were the cause of Poa death, it probably occurred very soon after covering during a transition period when soil temperatures were adequate for bacteria and anaerobic decomposition. Upon removal of the covers, you probably noticed a putrid smell which is indicative of rotten, decaying plants. In addition, you may have witnessed variable kill of the Poa near the edge of the cover where gas exchange may have occurred.

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I hope everyone is having a great and stress free spring. The last board of directors meeting was enjoyable and short, so this column shall also be a bit brief. The MGCSA Board of Directors met on Monday, April 5th at Monticello Country Club. The highlights to this months meeting were the roster and again the new golf tournament proposed by BASF.

* * * *

The roster is currently being completed and you will soon have the updated sheets to put in the binder you received last year. It appears we will be saving about \$2,000 on the cost of producing the new sheets by having them copied rather than printed. The only drawback to this could be that the ink could smear if it got wet. The board felt that because you will get new sheets every year this was an acceptable risk for the cost savings.

* * * *

Kudos to Fred Taylor, CGCS, for his response to an editorial written in the Mankato Free Press. It appears Fred has had to do some written sparring with one of the professors in his neighborhood who doesn't have a high regard for golf courses and their supposed negative affect on the environment. While I haven't read the article, those who did stated that Fred's response was very articulate and represented our association well.

* * * *

Thanks to Jack MacKenzie, CGCS for getting his club to host the new BASF People vs. the Pro tournament this year. It was short notice and I am sure it took some salesmanship. Also thanks to Dave Oberle for bringing this event to the MGCSA. This could be an excellent event for our association, so send in your registration early. Class A & B members do have priority placement, but applications must be in early.

* * * *

In other news, James Bade reported that all is well with the MTGF; their new president is John Hopko and vice president is Dan Miller. The MTGF has also committed \$25,000 to the design of the new TROE Center building as well as giving \$30,000 to Dr. Horgan's program and \$15,000 to Dr. Wadkins' program.

* * * *

Paul Eckholm, CGCS reported that Dr. Frank Fleger is retiring as head of the plant pathology department at the U of M. He has been a strong advocate of hiring a new turf pathologist and his leaving could make filling that position a tougher sell. Eckholm also reported that the legislature is looking at Restricted Use Pesticides and are entertaining the idea of requiring all users of RUP products to file a report monthly to the MDA.

* * * *

Here's wishing you all a great spring. I hope to see many of you at Glencoe Country Club. I grew up on that course when it was still nine holes. I am looking forward to getting the opportunity to play there again. Take Care! RT

Turf-

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Couple these previous two scenarios together. If soil moisture moved to the surface in mid-December and an ice layer developed under an impermeable cover, toxic gas build-up and/or crown hydration could have caused death. The longer these covers were in place or the longer the ice was present, the more death occurred. Data suggests that bentgrass can survive ice cover for 100 days but Poa can die under ice after only 60 days.

Q4: What about those of us that grow bentgrass on a USGA specification putting green? You tell me, did you have any damage. My experience this year tells me that damage did not occur on well-drained soils growing bentgrass. In other

words, this is a drainage issue.

After talking with many of you that had significant damage, I would ask the question, "Are you planning on using these same covers next year"?

Of course the initial response is NO!

The question then is usually turned to me, "Should I use covers next year"? My answer is no and yes. If you have soils that do not drain well, I would not recommend using an impermeable cover. If you

have well-drained soils in areas that do not hold snow cover, I would recommend a cover to protect the plants from desiccation or low temperature kill.

Stay tuned as I'm sure 2004-2005 will continue this soap opera of the Fickle Finger of Fate.

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Of course the initial response is NO!

Make Plans to Attend the Spring Mixer at Glencoe Country Club on Monday, May 17

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In Bounds

By Jack MacKenzie, CGCS
North Oaks Golf Club

Only in the far reaches of my imagination am I a mechanic. Wielding a Snap-On tool belt and man handling a pneumatic drive impact gun, I traipse around my fictitious garage tearing apart, repairing and then rebuilding to perfection anything that runs on fossil fuels. And then I wake up.

My mechanic will attest that since my first winter at North Oaks Golf Club I am no longer allowed to work on the equipment. During the winter of 1985 I was self-charged with "fixing" the old Toro Pro 70 tri-plex mower. We had been experimenting with this unit as a precursor to lightweight fairway mowing, and it had taken a beating during the summer. According to my method, less plan parts were removed and strew about "my" shop area. The mound of parts grew until I felt ready to put my life-size Revel model back together.

Of course in the process I changed out a few nuts and bolts, replaced the muffler, changed the oil and sharpened the reels. However, when my project was reassembled I ended up with a left over spring, a rather large spring useful in the counter balance of the machine when the operator vacated his seat. With the spring unit in place, the Pro 70 set on all three tires. Without the spring the rear end popped up off the ground several feet.

I never did figure how to get that spring back on the mower, and Bob wouldn't fix it. He felt I needed a reminder to "keep out of MY area of expertise." Okay, okay, I am not a professional mechanic and know where my deficiencies are, and who to call upon concerning all things mechanical. You see, Bob is the best mechanic I know of.

It was about a quarter of the way through my 20-year career here at North Oaks that I decided to take on another project. It was of the personal nature. You see, I was beginning to think that I was broken and, being a good superintendent, I could fix myself. Funny how being good in one field makes a person think they can conquer another with ease.

Although I had been out of college, was married and had two children I still maintained some of my adolescent mentality. I enjoyed partying and would share beverages with my staff after work many (most) evenings of the week. Tired of this behavior and bored with my absence, my former wife ended our marriage.

Somewhat shattered and knowing of the core to my problem, I quit drinking for several months. All went well for a while. I applied myself to my job and children. They were the sunshine in my life and I enjoyed my newfound relationship with them. However, as things tend to go when you have a compulsion such

as mine, old habits returned.

Along with the booze came a live-in girlfriend, her children and the loss of my sanity. By 1994 I thought that I was going crazy. Totally nuts! My parenthood skills were beginning to suffer, my relationship with a woman whom I thought I loved was crashing on the rocks and my thirst was at its all-time high. And finally my inability to think straight and act "normal" created havoc in every aspect of my life. I was the one broken and I needed some serious fixing, and not a tune-up found in a bottle!

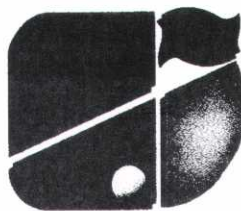
Enter my psychologist. The first and second visits went well. She began to know me and I felt comfortable with telling her everything. On the third occasion of our acquaintance she suggested I quit drinking for a week, perhaps it would clear my mind. Simple thought I, the one in charge, the commander of his own ship, the king of his city the man in control. I lasted two days. However, this was one dry day longer than I had been in the previous few years.

My fourth session with Nancy was interesting to say the least. Confronted with my issues, I began the session acknowledging that I drank too much. Of course I wasn't an alcoholic, but just consumed too much booze (like everyday!). After a total mind blitz she told me at the end of the meeting that if I indeed wanted my sanity back I, first had to confront my inability to control my compulsion and enter a treatment center.

Two weeks later I was sitting in a room surrounded by everyday Joes and Mary's who were also attempting to regain their mental faculties. On March 6, 1995 I took my last drink. On April 7, 1995 I graduated, clean and sober, from spin dry and have never looked back.

In the course of one month I learned the skills I would need to help me give up my compulsion and thus allow me to become a better father, partner, employee and employer. I was empowered to make good and healthy decisions. My "live in" was invited to "move out." 40 pounds slipped off my body in no time. And best of all I had some control over a compulsion that was making my life insane.

After nine years of sobriety I am still a bit crazy, but I don't wrestle over issues at night. And I have come to the conclusion that I cannot "fix" everything all by myself, nor do I need to. When in trouble I humbly seek professional help. And just having that tool in my box provides me an incredible amount of comfort.



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