

A VARIETY OF WINTER PREPARATION PRACTICES BY MGCSA MEMBERS

(Editor's Note: Golden Valley Golf & Country Club Superintendent Jeff Ische sent an email to a variety of MGCSA members asking them what they do to protect their greens in the winter and what they plan to do in the future.)

JEFF ISCHE

Golden Valley Golf & Country Club

At Golden Valley Golf & Country Club we use foam underneath GreenJackets on all of our greens.

I have been at GVGCC for the previous 8 opening days. The first year, 2004, the greens were covered by GreenJacket alone, no foam, and there was severe damage affecting about fi the greens. The second year I tried multiple options and the only thing that worked well was double covering with an insulating layer (either foam or Excelsior) underneath the GreenJacket. Years 3-7 we double covered all greens with foam and the green jacket and we came out of winter in good to very good condition, not perfect. Just one or two very small spots that we were able to quickly get sodded out. Year 8, this year, foam and GreenJacket did not perform very well. We had damage on 9 of our greens, ranging from 15 sq ft to 3,500 sq ft, all areas were very dead, both poa and bent (what little we have!).

I think that we will be making some changes, possibly going back to excelsior covers on a few of our greens that have good surface drainage and going to a better insulating material (possible excelsiors or even straw like those in Canada) underneath the GreenJacket. Additionally, we are looking into options for ventilating under the green jackets with back pack blowers, perhaps laying some drain tile on top of the grass to the center of the green or buying some of the product from green jacket for this purpose. Not sure how often the venting would need to be done, but would for sure do it if the ground doesn't freeze for a while after the covers are put down and again in the spring if frost comes out of the green before we are able to remove the covers.

JERAMIE GOSSMAN

Southview Country Club

We cover 17 of 21 greens at Southview. We use GreenJackets on all of these greens. Some of the covers are of original

design while others are the newer reinforced heavier cover. We use foam under six of the covers. This year we saw damage to four greens varying in size. The worse area was on the 11th green, approx 300 square feet. The other areas were much smaller in size and both poa and bentgrass were affected.

The damage happened only to greens that were covered with GreenJacket only. The four greens that do not get covers at all came through flawless and have very good surface drainage. The seven greens that do not get foam and that came through very well also drain well and could in my opinion go without covers. Of the six greens that do get foam we only saw snowmold damage under them. The foam and covers definitely create more disease pressure.

I covered two of the six greens with the AFS insulating foam that GreenJacket sells. This foam seems to be as effective as the packing foam for insulating. What I like about the AFS is it does not hold any water. It is very fibrous and water goes right through it unlike the packing foam. It does not compress very easily and allows for more air space between the cover and the green surface. It is very easy to put down and pick up in the spring, stores much drier, and is much more durable. I have used it for two years and have had good results. I plan on replacing all of the foam with the AFS. The only down side I have seen so far is it is four times the cost on the packing foam. I feel it is a good alternative to excelsiors if you are interested in putting any of them down under GreenJackets and it is a heck of a lot easier to install and cleaner.

DONNACHA O'CONNOR

Alexandria Golf Club

At the Alexandria Golf Club we cover the 12 greens with a history of winter damage. We use GreenJacket. Our issues range from wind burn to ice damage. We noticed a difference in turf quality between the older GreenJacket which sit more loosely on the turf than the newer, heavier material GreenJacket. Turf under the newer style cover looked great when removed but went into decline until June. This decline affected only the poa annua. The decline was most noticeable in the creases; our thought was a gas build-up under the cover and collecting in these

creases. We have not seen this type of decline since we began venting.

Tried insulation in a few spots, saw very little difference. Typically we get enough snow to avoid the extreme low temperatures. As a rule we wait as late as possible to put on the covers. The blue grass surrounds need enough frost to prevent the cover pulling loose. Pneumatic hammers work well to get through the frost.

This year had damage from snow mold. It was only under the covers. Seventeen green had a few patches of snow mold last year and lots more this year. Trend??

Summing up, I like the GreenJacket because they are very manageable. Wait for freeze-up before putting them on and take them off as soon as possible. Venting every few weeks from January until it's time to uncover seems to improve the odds.

JAKE SCHMITZ

Olympic Hills Golf Club

We had six greens that came out very well this year, another six that were okay and another six that were hammered.

Two of the last three years we have had some sort of damage to the greens, primarily from lack of surface drainage. The bird baths in 2009 and again in 2011 got nailed, and our lower holes in the marshy area sustained substantial damage, most likely from a high water table.

We typically apply a heavy topdressing going into winter. I will continue with this practice, but lighten the rate a bit and use the wide spin versus the meter-matic. Any overlapped areas this year sustained damage.

Olympic has never covered its greens, but damage to the same 4 greens in two of the last three years has prompted us to look into excelsiors. We will more than likely cover 6 greens total this year as we head into winter.

TOM PROSHEK

Brackett's Crossing Country Club

For the past 17 years here at Brackett's Crossing, we haven't used covers; however we have a couple of Evergreen/HPI covers on hand to utilize come spring if need be to kick start soil temps. We also needed to borrow couple of covers this past spring from Legends Golf Club as

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they have the same covers. We will be purchasing a couple more during off season to be ready if the need arises, and hopefully never to use them!

Way back when, we fertilized greens with Milogranite, heavy top-dress (after winter applications) and began the praying during off-season. The first couple years doing this process came with some success and more areas of damage where drainage is across the greens. When we'd get late fall rains, the Milogranite and top-dressing would pool in drainage areas and kill the turf. We stopped this process of fert and top-dressing and put up snow fences across greens that were on high ground (full 4' fences, wooden). This worked couple years, then we get couple years of deep snow fall, then we are out early spring shoveling the large drifts by the fence. Then thinking we should cut fence in half (now 2' wooden fence) and this worked much better, minimizing our need to shovel come spring as I really don't like to be on turf during spring melting if at all possible. Well year after year we were getting plenty of snow fall, so decided to abandon the snow fence practice and low and behold we come into years of 'lack of snow' - go figure. So

we've got back into the snow fence practice and about eight years ago we began late fall aeration. We aerated just after we closed, use fi" solid on Wiedenman, winter application and put up snow fence and began praying.

The next spring we saw little 'drying out' around aeration holes (not bad and recovered quickly); however, we decided to use needle tine (1/8" quad tines) at a depth of 5 - 6" and are currently using this practice. I truly believe that allowing these aeration holes open during late fall and throughout winter, allows late fall rains, melting of snow, ice formation etc, the turf canopy and roots to breath.

We had damage on four greens this year and I'd say of these four, one was worst with damage over / of green, other greens had spots ranging in sizes of large pizza to my office size (8 x 10). Areas of damage weren't all in low drainage areas, most were though. I feel we started to expose week after Northern Green Expo, had little desiccation, but the melting adjacent to these areas did the lovely freeze/thaw and proceeded to pool in my low area of green, hence damaged turf. What was tough to digest here, was I have a couple of greens with surface drainage and low areas on these greens, and we had no damage! I'm glad, but was a good head scratcher to say the least. The club was suppose to close Monday, Nov. 8, but

we decided to stay open until Wednesday Nov. 10 (Men's day). Last year we aerated our greens (needle tine) on Monday and Tuesday (Nov. 8-9), applied winter chemicals on Tuesday (Nov 9) and after course was closed, Thursday (Nov 11) we applied for the first time re-green at 8oz/1000 and we all know when it snowed (Sat) and it was my weekend to plow! Darn.

As far as changes, not many other than purchasing a couple more Evergreen/HPI covers and covering 3 of our greens with these covers to minimize desiccation issues we've been having more often than we'd like to see. We also won't spray re-green, rather transitions or something similar, little too much damage to our sprayer with re-green.

JIM NICOL, CGCS
Hazeltine National Golf Club

At Bunker Hills I used Excelsior blankets on part of greens and found a distinct line of Poa incursion in the covered area vs the uncovered area.

When I arrived at Hazeltine they had used Excelsior with poor results and cheered when they were burned. We would monitor ice formation and when the melting began at the crowns we would

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remove snow. With the higher sun angle in March the ice would go pretty quickly. Once they dried (important) we would treat and cover with HPI or a woven plastic cover. We had pretty good results with this method. Areas prone to wind did suffer from desiccation. Because of the positive results we were seeing from the GreenJacket and foam on other courses we began that practice.

For the past three seasons we have used GreenJacket with the foam. We would deep tine prior to installation and utilized approximately 2000 sand bags. We have not used the stakes inside of the perimeter of the green. We had some issues with bird bath areas. This past season we were able to cover 8, 10 and 16 greens. I waited because they were still growing. Very gun shy with them not hardening off and figured when the rest were covered with snow and would deal with it later. The 10 and 16th green were open during January with -40 degree wind chill but the cover was intact. The other greens we monitored the ice, and snow was removed in mid-March. They were treated and not covered. Some minor tip burn but all greens came through in acceptable condition.

I have been happy with the performance to this point and will continue. I see the air move under the cover when they are snow free. May use the venting product. I like the idea of the Excelsior under the Green Jacket.

I believe covers are successful nine out of 10 seasons no matter what is used.

MIKE MANTHEY **Midland Hills Country Club**

Midland purchased 18 GreenJackets with foam the fall of 2009. Prior to that, the greens were left uncovered during the winter. They had, from what I've been told, significant damage the spring of 2009 and had a poor recovery which prompted them to purchase the covers. I've been told that in years prior they had damage every fourth year, mostly from desiccation or surfaced drainage areas that iced up. They had also used EverGreens/HPIs on a few greens to experiment but did not see a difference in damage between those uncovered and those with EverGreens.

I started at Midland in the spring of 2010 and we had 4 greens with significant damage under the GreenJackets. Both Bentgrass and Poa (~50/50 mix) did not survive and sizes ranging from 20x20 to 70x50. We also had 4 greens with substantial tip burn which grew out over time.

Last fall I purchased Excelsior covers to put on those four damaged areas, then covered over the top with foam and

GreenJacket. I Verti-Drained those 4 areas with 1/2" solid tines to a depth of 10" and topdressed/drug in all greens prior to covering. All of those areas died again except those areas of death were larger this spring. There was no difference in survival between what had an Excelsior under the GreenJacket or not so I personally rule out lack of insulation from ice accumulation on top of the GreenJacket, which I had plenty of.

In total I had nine damaged greens this spring. Both Bentgrass and Poa were lost and sizes ranging from 20x20 to an entire green (11,000ft²). I also had 3 greens with substantial tip burn and lost some of that Poa but the Bentgrass did survive.

Two years in a row of what I consider significant damage is enough for me to make changes; status-quo is not cutting it. I will no longer use GreenJackets on those nine damaged greens from this spring and will switch to Excelsiors. I've never liked the idea of having a cover that can kill your grass on its own. No one knows how much CO₂ buildup is enough to vent, how long to vent, when to start the process and when it's safe to stop, etc. My subsoil is as black as night and does not perc out very well, even with VertiDraining. I have 5-8" inches of topdressing built up and some of my greens went into winter dryer than I would have liked. When we uncovered them, the damaged greens were soaking wet. We made sand bag lines on all of the slopes leading onto our greens to prevent surface drainage getting under the covers so I'm ruling out water getting in under the covers. We also do not stake in the middle of the greens so there are no holes in my covers but that might be a bad thing since a cross country skier went over our 15th green, poked holes in it, and the turf survived in that small area while the surrounding area died. Given how wet my subsoils were last year and how high the water table is right now, I assume I will be just as wet again this fall.

I'm becoming convinced from my own results that being able to breathe is easier with a paper/wood-fiber bag over my head instead of a plastic bag.

WES STONEBACK **The Wilds Golf Club**

At The Wilds Golf Club we have not used covers for several years. We had enough damage this year that we sodded spots on 8 greens and went through 3000 square feet of nursery. In 2010 we had about 300 square feet of damage and were able to put some covers on for a few days and things came right through. Prior years to that there was not much for death other than some desiccation in some very open spaces.

JEFF JOHNSON **The Minikahda Club**

We've been using greenjackets for the past 8 yrs. '04 was the worst year using them and that was w/o foam. Since then we've been installing w/ foam. The past few years we've come out of winter in good condition. This year our only damage was to our 1st green, a 20x20 section in the middle of the green. We have no plans on changing our current approach.

Since '04 we've monitored soil temps throughout the winter and last year monitored soil moisture prior to covering. Tactics we will continue in the future.

CHRIS TRITABAUGH **Northland Country Club**

We have used Excelsior covers exclusively for my time at Northland as well as many years before. This winter I left some edges of greens uncovered for experimental purposes. Most of those areas were better than the covered areas, while a few small areas were worse.

As long as we are covering I will continue to use Excelsiors. They do an excellent job for us.

We have experienced very little winter kill in my five springs. The past two years saw some slight damage to Poa in areas where water had flowed and ice had formed. Our greens have excellent surface drainage so we have no real "bird baths." Movement of water across the surface is our biggest concern.

I do not have any plans to change our covering practices, other than the possible reduction of covering.

JAMES BADE **Somerset Country Club**

At Somerset, the greens have a significant amount of old bent varieties. We cover 6 greens with HPI covers, four for wind and two for ice. We also top-dress heavy and drag it in. One year the sand was too thick and the freeze thaw cycle hurt the poa. We also put a fair amount of Sustane down on the greens (2-3-3).

This past year we did topdress but we didn't get the covers down. Two greens were weak, that we usually cover, but they rebounded very fast. The back of our fourth green took a hit, from the ice in November. I plan on getting some Excelsior mat for this area. Otherwise, we won't change a thing. In general the green sites are good for keeping snow as a good cover.

One other thing I would quickly add is, Somerset has really allowed me to take

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down trees around the greens to favor the bent over poa. Any tree creating fall shade and competing for water (except the 100 year old oaks) has come down. And once it hits mid October we start storing up the carbohydrates as best we can.

And one last thought on the HPI covers; I try to put them down as late as possible so the greens harden off and I take them off as soon as I can. However, when I didn't get them down last year I remember thinking, "hardening off, they're plastic with holes in them, went it gets cold they will harden off." So, get them down.

SCOTTIE HINES, CGCS
Windsong Farm Golf Club

At Windsong we do not use covers. Our protection program has been to heavily topdress after our final snow mold spray. With the sudden snow storm this year we did not get that topdressing accomplished. We had damage to all greens to some extent. Five greens are what I would classify as significant damage. Almost all damage was in the drainage areas. I do not know if the topdressing would have helped or not.

We have had little to no damage since opening in 2003. Twenty square feet in 2005 was our worst on two separate greens. This year we saw damage on all putting surfaces, a handful of tee surfaces and low spots in all fairways.

I am not one to make changes in any program based on one particularly bad year. This may have been one of the worst winters followed by one of the worst springs in the last 50 plus years in Minnesota. Making wholesale changes based on an anomaly does not make sense to me. We will continue with our current practices until I see a marked trend to this type of winter.

DALE CALDWELL, CGCS
Minneapolis Golf Club

I have used GreenJacket with foam insulation for the last 5-7 years. I have two covered with the heavier tarp with bubble wrap insulation underneath. Two years ago those two were my worst greens, this year they were my best. We had no significant damage on any greens this year, only slight discoloration which quickly disappeared as they grew out of it. I can not explain why we had no damage this year. Most damage in the past 5-7 years has been minimal, small areas that we were able to plug or sod out. Prior to 10 years ago, my results were more spotty, with significant damage several years.

This spring with the injury reports flooding in, I approached my Board of Directors, telling them that we might not be as fortunate next time, and we should be thinking of replacing our current covers with the Excelsior blankets, starting with six greens this year, going to 12 next year and all greens the third year. Much to my surprise, they approved all 18 greens this year.

I'm not sure how I'm going to approach this, I still like the water proof concept, but I am for sure going to be purchasing the Excelsior covers for the insulating layer. I may position the Green Jackets near the greens and then after the ground freezes, providing there is no snow cover, nail them over the Excelsiors. I wish there were an easier black and white solution.

JACK MACKENZIE, CGCS
North Oaks Golf Club

2005...hammered by ice accumulation and hydration damage. 16 of 20 greens all messed up. No covers used at all. Since then we have purchased Excelsior blankets for all putting surfaces. Even though I was told they only last three years we have yet to replace more than a handful. In 2009, we did suffer some damage under the covers, but mostly thinning and not wholesale mortality. We did not suffer any damage this last winter. Until they fail completely we will continue to use the wood fiber mats.



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