

SECURITY BLANKET



A heavy application of sand protects vulnerable greens from biting winter weather.

When snow doesn't happen, topdressing might just be the answer to protect your greens from a lack of snow and winter's chilly winds. By Jason Stahl

Topdressing greens in winter as an extra layer of protection might be as old school as “tastes great, less filling,” but it, along with the use of greens covers, is sometimes still a recommended practice. It was fairly common in the 1980s, but then greens covers came to the market and came to the rescue of greens that didn't see enough snow and were vulnerable to desiccation from winter's chilly winds.

Rick Tegtmeier, CGCS, director of grounds for Des Moines Golf and Country Club in Des Moines, Iowa, got downright nostalgic in mid-January when he resorted to topdressing a few of his target greens after not seeing the kind of snowfall he's used to.

“We haven't seen a winter like this since

1995,” Tegtmeier says. “This type of weather can really hurt turf if it's not protected or if there isn't enough moisture in the crown area of the plant. First, it's very warm, and then the temperatures drop dramatically with blustery, dry winter winds. Across the state of Iowa, a lot of turf has gotten stressed out and lost. If guys weren't out throwing some water down or trying to protect the crowns of the plant, they lost grass.”

Des Moines Golf and Country Club has 41 greens, and Tegtmeier says greens covers were installed on all of them. Still, he doesn't have enough covers to protect some target greens that are part of three driving ranges on the property, two of which sit up in the wind. They're the ones he went old school

on by topdressing them with a heavy application of sand, hoping that it would protect the target greens for the duration of the cold and windy forecast.

“This was common practice many years ago before greens covers became popular,” says Tegtmeier. “I did that when I was a younger

“It's better than nothing, but it doesn't entirely protect greens from winter desiccation... Ultimately, you really need to get snow.”

—Brian Whitlark, USGA agronomist

Protective topdressing: THE PROS & CONS

Superintendents still topdress for extra protection in winter when snow is slow. Here are some pros and cons to consider about the practice.

PROS

- Sand is cheap and can cover a wide area.
- Alternative to more expensive green covers.
- Protects turf crowns and can help prevent desiccation of greens and tees.

CONS

- Must be removed (brushed, dragged or blown) in the spring.
- When weather warms and or turns wet, could leave the turf too soft and susceptible to damage.
- Extra care must be taken of mower reels.



man and thought I should do it again because it was quick and easy and I had the sand here, so I just loaded it up in topdressers and spread it.”

Tegtmeier says he and his crew also watered some of the target greens prior to topdressing to put moisture around the crowns, which he believes helped to protect them that much more. The greens were very dry, so as a precaution they checked them all and watered all the high spots or knobs, trying to be proactive in getting them some much-needed moisture.

Tegtmeier says that a lot of superintendents still topdress for extra protection in winter when snow is slow in coming because they can't afford greens covers and sand is cheap. In fact, it was recommended in a January bul-

letin by Zac Reicher, professor of turfgrass science at the University of Nebraska.

“In the short term, a wide variety of turf covers, from fabrics to snow fences to late-season topdressing, can help prevent desiccation,” Reicher said in the bulletin, aimed at courses in the North Central U.S. “As we stand now in January 2012, we would recommend heavy topdressing and/or irrigation if possible to help reduce potential damage on exposed greens, and perhaps on tees or other high-value turf like sports fields.”

There are some drawbacks to this practice. In the spring, you have to brush, drag or blow the sand off the greens, and with the turf so soft, you risk leaving tracks and damaging the turf.

“Plus, you would be mowing

sand with reels that were freshly ground over wintertime,” says Tegtmeier. “You always had to keep one mower not sharpened to deal with that sand and then go in and sharpen that mower back up. It was just a pain in the rear. So when greens covers came out, it just made more sense to use them, and they offered more protection.”

Tegtmeier says while greens covers have been out for some time now, they're still not cheap. He paid around \$1,800 per cover this year, and he tries to replace six to seven covers per year. The process of installing them is labor-intensive, in his case taking 10 employees four solid days. Then, come spring, you have to roll them back up and store them in a dry place – which takes up quite a bit of space when you're talking 41 covers.

“Still, it's the best way to offer protection in a year like this when we have cold winter winds and no moisture at all,” Tegtmeier says.

Tegtmeier doesn't recommend topdressing for insulation for every golf course, but he can't disagree it helped him with the winter conditions he has faced this year.

“Every superintendent has to decide what's best for him or her, factoring in budget, course and conditions,” he says. “I wouldn't do it if I didn't feel it was advanta-

geous to do so. Obviously, snow protection is the best thing that can happen to you. We're forecasting snow later this month and are praying for two inches to get some cover, and if it melts we'll have moisture again too.”

Terry Gill, superintendent of Brae Burn Country Club in Houston, Texas, has never had to resort to putting down sand to protect his greens in freak cold spells, but he has some experience with greens covers, including last year when temperatures got down around 16 degrees for a few days.

“That's when we covered everything, and it made a huge difference,” says Gill, who has 20 covers for 18 regular greens and two putting greens. “The covers keep the temperature 10 degrees warmer.”

When Gill hears of a cold front coming from the north, he knows he and his crew have to get the covers installed before the front hits and it gets too windy. But first, they water the greens heavily.

“That's the secret,” says Gill. “If you did that for a period of two to three months, you would probably get fungus. But for two to three days, you won't get much fungus at all.”

In the south, USGA Agronomist Brian Whitlark says topdressing to protect turf in winter is done as more of a proactive



Topdressing is easier and more cost-effective for some courses, but requires a lot of work in cleanup and can leave turf open to damage.

measure than in the north.

"In my region in Northern Arizona, it's a common practice for the courses to put a quarter-inch or one-eighth of an inch of sand down prior to the onset of winter to protect the crown of the plant and act as a method to deal with desiccation in the event there is no snow to provide a blanket of protection," says Whitlark. "Watering isn't an option because

these courses have to blow out all the water from their irrigation systems."

Aside from topdressing in a mild winter to avoid desiccation in a drought situation, topdressing combined with aeration in summer improves the ability of soil to hold water, providing a more hospitable environment for

Topdressing can be protective during the winter, but has benefits through the season as well.



the rootzone.

"The courses I deal with have very compacted soils, and superintendents have to apply more water to those areas more frequently, hand watering and setting out portable sprinklers," says Whitlark. "In this case, topdressing with aeration is an effective strategy for eliminating or reducing drought stress in localized areas. When you improve soil conditions through aeration and get three to four inches of sand built up on top of this field off the native soil, ultimately that soil environment becomes able to hold water and accept it so your runoff potential is severely reduced. You then get healthier turf that's less prone to drought stress."

As far as topdressing in winter, Whitlark cautions that it's only one strategy and far from a panacea to winter desiccation.

"It's better than nothing, but it doesn't entirely protect greens from winter desiccation," he says. "Ultimately, you really need to get snow."

Whitlark echoes Tegtmeier's concerns about what to do with the sand come spring, which may make a superintendent wonder how much to put down.

"It's a fine line," he says. "If you put a blanket down and get a nice snow pack, the snow tends to help the sand work its way down into the turf canopy. But if you don't get any snow and you're trying to expedite growth in spring, you're sitting on your hands because you're waiting for the turf to grow and you're fertilizing like crazy but it's not growing up through the sand, so you have to remove it. Sand is angular and abrasive, so in the process of removing it, if you have too much down you can injure the turf by creating a scouring effect."

"There are plenty of guys who are successful without putting any sand down because they go in and core aerate and hope for snow. If they don't get it, then they find another means to get water on greens, whether it's portable water trucks or whatever." GCI

Jason Stahl is a Cleveland-based freelance writer and a frequent GCI contributor.

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“The first thing we had to do is remove as much thatch as possible, creating some cavities for air and water to move through.”

KEY POINTS

- Blue Hill Country Club had to address significant thatch issues and heavy soils.
- First, the maintenance team dethatched and aerated to encourage air and water movement through the soil.
- Next, they began to incorporate sand into the soil profile through drill-and-fill methods.
- As a result, the facilities problematic greens improved dramatically.

Jason Adams used photos of the soil profiles throughout the course to convince the greens committee of the importance of draining the greens and incorporating sand into the profiles.



Dealing with *Poa* push-up greens

The turf team at Blue Hill Country Club troubleshoots the thatch and soil issues that were hampering their greens.

by Jason Adams

Four years ago I was hired at Blue Hill Country Club, a 27-hole facility that was constructed in 1925. The club was the host of the 1956 PGA Championship and hosted an LPGA event for several years.

After evaluating the property, I realized that there were some significant thatch issues on some of the greens, as well as some very heavy soils 4 inches below the surface. The combination of the two resulted in greens with severe isolated dry spots, inconsistent playing surfaces and poor drainage after high amounts of precipitation.

The first thing we had to do is remove as much thatch as possible, creating some cavities for air and water to move through. That first year we core aerated three times, twice with $\frac{3}{8}$ -inch tines on a 2-inch by 2-inch spacing and a $\frac{1}{4}$ -inch core aerating. We also performed a $\frac{5}{16}$ -inch needle tine three times throughout the season and deep-tined with 10-inch deep $\frac{1}{2}$ -inch tines in the fall.

It was a drastic change in aeration than what the members were used to. In the past, they were only allowed to pull cores one to two times per year with varied deep tine in the fall. They relied more on the hydroject to fracture the soil profiles underneath.

After the third year of this program, the top six inches of the soil profile showed dramatic improvement, as well as the playable consistency of the greens. It was now time to attack the deeper depths of the soil profile.

During the early summer of 2009 – with record heat in the northeast and a July rainfall – several greens at Blue Hill CC became severely stressed with no place for the moisture in the root zone to go. The soil profile was saturated with 90- to 100-degree heat. The result was significant annual bluegrass loss on about seven greens on the course. They just couldn't dry down.

The No. 9 green, which had been notorious for being a problem green, suffered the worst that summer with a 60 percent loss in turf. The No. 9 is one of those greens that has poor drainage with heavy soils underneath, sits in a pocket on the property and was surrounded

by trees.

During my second season, we had removed 20 large pine trees from behind the green and followed that up with removing six large oak trees on the southeast side of the green to encourage the morning sunlight.

Once we had recovered from the summer, it was time to sell the membership on modifying the lower 6 inches of our profiles.

The first thing I did was to compile a series of photos of the soil profiles from every green on the golf course. The photos were put into a PowerPoint presentation along with "drill-and-fill" photos from Norfolk Golf Club, my previous club. I described the importance of draining the greens and the incorporation of sand into the profiles.

It was decided by the green committee and the board of directors that this was an important step in the conditioning of Blue Hill Country Club. That fall we performed the drill-and-fill process on 10 of the 18 greens on the course.

The results this summer from our "problem greens" were dramatic. The greens rooted and drained better than they ever had in the four seasons I have served



as superintendent of Blue Hill Country Club. It was decided that we would continue this process on all 19 greens on the main course for the next four seasons.

This fall we completed our second application of drill-and-fill on the greens. Approx-

mately 40 tons of sand was drilled into 8,500 square feet of greens. We hired an outside company to perform the process, which cost the club \$8,500. Blue Hill then provided the labor to keep the machine hoppers filled during the process.

This process is very labor-intensive because of the loading process and the height of the hoppers. It is also imperative that kiln-dried sand be used during the process for easy flow through the machines. We had a staff of 20 guys who all took turns loading 5-gallon buckets of sand, hauling them to the machines, loading carts and stationed on the machines filling the hoppers.

While it doesn't sound like a difficult or taxing process to complete, after about the fourth or fifth green everyone's shoulders and biceps start to get a little sore. That's where you tag out and perform another duty for a while.

After each green is completed, we push off the remainder of sand and soil that is left behind, the greens are dragged with a broom and then blown off. The greens come out pretty

clean and smooth after all is said and done.

Our PGA Golf Professional, Lou Katsos, played the following day and was surprised how well the greens rolled. Lou has been a huge part of the success in all of our practices by relaying the importance of what we are trying to accomplish to the members.

The positives of this process are that we are starting to modify the soils in the old push-up greens so they can perform up to the members' expectations and have a fighting chance with Mother Nature. The negatives are that it is an expensive process – about \$17,000 if you use bagged, dried sand. In addition, you have to have a lot of labor to complete the process efficiently.

Moving forward we will begin to incorporate the process of the dryject. This process will also help to introduce sand a deeper depths and fracture the lower levels almost helping to "mix" the soil profiles. **GC**

Jason Adams is superintendent at Blue Hill Country Club, Canton, Mass.

Pros & Cons

PROS

- Modifying the soil profile encouraged better air and water movement through the greens.
- Greens better met member expectations.
- Greens became more resilient to adverse weather conditions.

CONS

- The process was costly – about \$17,000 if you use bagged, dried sand.
- It required a lot of labor to complete the process efficiently.
- The aeration process disrupted the playing surface for the members.

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