

FAIRWAY TOPDRESSING IN THE MID-ATLANTIC REGION

Taking fairways to the next level.

BY STANLEY J. ZONTEK

Fairway topdressing programs have been popular and successful in the Northwest for many years. The goal has been to firm up and dry up fairways in that region of the country because of their heavy soils and unique climate. In all honesty, this author was skeptical that this program would ever be used by all that many golf courses in the eastern United States. I was wrong.

This article will support the concept of fairway topdressing. This program works for many reasons, some of which are slightly different from those in the Pacific Northwest. The article will describe how the program is being adapted by turf managers in the Green Section's Mid-Atlantic Region.

Why topdress fairways? There are a number of very good reasons. Interestingly, some benefit the golfers and others benefit the grass.

GOLFER BENEFITS

Firmer fairways. As topdressing sand accumulates, soft and sometimes puffy bentgrass (and *Poa annua*) fairways become firmer. This makes for better ball roll and overall fairway playability. Increased turf density also occurs, along with nice tight lies. Firmer fairways also mean . . .

Drier fairways. Due to a combination of factors, such as less thatch and better rooting, fairways need less water, and water that is applied soaks in better. With topdressing, sand intermixes with thatch, as opposed to there being a mat of organic matter that can hold water like a sponge. Topdressed fairways hold less water near the surface and are drier underfoot compared to non-



topdressed fairways. Water percolates better through thatch that is diluted with sand. This means . . .

Fewer traffic restrictions. Golf carts and turf equipment can return to fairways sooner after heavy rainfall events, which are so common in the eastern United States. One of the major benefits in the Pacific Northwest has been firmer and drier fairways during those extended periods of soggy weather so common in that area. In the East, it is much more common to have thunderstorms with large amounts of rainfall in a short period of time, causing flooding and saturating everything. Then, the sun comes out and the golfers want to play and ride their carts on fairways. The benefit of the return of traffic on fairways was made clear to me while making a Green Section Turf Advisory Service visit to Aronimink Golf Club in Newtown Square, Pennsylvania, the day after torrential rains. These storms dumped more than 2.5 inches of rain on the course. Guess what? The fairways were firm and dry enough for them to be topdressed after heavy rains that would normally have left them saturated for days! I became a believer. Sure, there were a few drainage swales that were still wet, but the vast acreage of fairway turf was incredibly firm and dry. This means . . .



Topdressing the fairways at Aronimink Golf Club (Newtown Square, Pa.). This is considered a light rate.

A heavier rate of fairway topdressing. In this case the small stones may ultimately present headaches for the mechanic and the mowers.



One pass of the fairway topdresser applies the topdressing material evenly. The impact on play should be minimal.

Happier golfers. How can it not be worth the cost of topdressing when golfers now can use their course more fully more days of the year? Maybe, just maybe, with fewer complaints during wet weather, this means . . . a happier superintendent!

TURFGRASS BENEFITS

Improved drainage. In conjunction with a good fairway aeration program, sand-diluted thatch, and sand accumulation over heavy topsoil,

water percolates through the soil profile better and faster. Again, less water also is held in the thatch layer, which means . . .

Less disease. The primary disease of bentgrass and *Poa annua* fairways is dollar spot. Classically, dollar spot is made worse by thatch. Also, other diseases of bentgrass and combination bentgrass/*Poa annua* fairways are *Pythium* and brown patch. Both of these diseases have been associated with high levels of soil moisture. Therefore, diluted organic matter, which holds



Between a light dragging and irrigation, most of the fairway topdressing sand is worked into the grass.

less water and is less thick, has the potential for less disease. This means . . .

Reduced/offset costs. A topdressing program is, after all, a program above and beyond how fairways traditionally have been maintained. In theory, part of the extra cost of fairway topdressing can be offset by less chemical usage, more days of cart traffic, and potentially even fewer days when the course is closed.

THE PROGRAM

Programs vary. Nonetheless, in conducting an informal survey prior to writing this article, most of the superintendents I spoke with who topdress their fairways basically use variations of the following program. Eventually, each superintendent needs to work out what is best for his or her course. Generally speaking, most superintendents topdress their fairways once per month during the grass growing season, for an average of six or seven topdressings per year in the Mid-Atlantic region. Rates of sand range from four to six tons per acre. Initially, some courses topdressed their fairways more heavily and less frequently. Unfortunately, this led to layering concerns similar to those experienced when topdressing greens using the same approach. It also led to unhappy mechanics. Coincidentally, the industry has developed large-capacity fairway topdressers that

make lighter and more frequent applications of topdressing easy to accomplish. In fact, it is the availability of this large-capacity equipment that is the key to the success of such a program.

Which sand should be used? Generally, use a locally available (and less expensive) mason's type sand. Sand used for fairway topdressing does not have to meet the same requirements as sand used to topdress greens or tees or for use in sand bunkers. Such a sand can have more fines and can even have a few more coarse particles than sands associated with other uses. Work with a physical soil testing laboratory or ask your local Green Section agronomists for their opinions. *There are no specifications for fairway topdressing sands.* In all honesty, choosing the right sand is as much *art* as it is *science*. The final determination could be the availability of the sand and its cost. Sands used for topdressing fairways do not have to be costly.

The cost of sand. The golf course superintendents I surveyed have experienced a wide range in sand costs. Some have found sands for as little as \$10 a ton, delivered, whereas others must pay nearly \$20 per ton. Obviously, the cost of the sand can and will have a huge impact on the cost of this program. High-quality (and expensive) putting green-grade sands, while more than appropriate for use, do not seem to be necessary. Find a local sand company, choose a good-

looking sand and see if they will sell directly to you. With the volume of sand you will be using, sand companies seem more than willing to negotiate. This can save a lot of money!

What about labor? Most superintendents use their existing crew. While a little extra labor is necessary once the program begins, with the right equipment the extra labor hours are not burdensome. Nonetheless, with the high-capacity fairway topdressers now available, two or three operators can fill, spread, let dry, and then mat in a topdressed fairway. Light fairway watering also can help work in the sand.

What about time to do the work?

Obviously, having the course closed for a day to do this work is preferable. However, most superintendents tend to topdress when time is available, even through regular weekly play. They seem to receive few complaints.

What about special equipment needs?

Obviously, walking topdressers designed for spreading sand on greens or tees would not be appropriate for topdressing fairways. Our industry has several models of large-area topdressers to choose from. Also, each golf course needs to have a dedicated topdressing storage area (preferably an asphalt or cement base), a front-end loader to fill the topdresser, a tractor to tow the topdresser, and a drag mat to brush the sand into the grass.

What about fairway aeration? Initially, traditional core aeration should continue until such time as the sand begins to accumulate. Then, fairways are aerated more with solid tines and less with hollow coring tines. The thought is to not contaminate the sand as it accumulates. In reality, an eventual switch to the use of solid tines is one of the real benefits of this program. Traditional core aeration is despised by most golfers, even though it is a necessary operation. Potentially, fairway topdressing with sand can allow traditional core aeration to be replaced by less-disruptive solid-tine aeration. In the long term, especially as the sand accumulates, there can be a return to core aeration when all the material that is brought up in the aerating process is the accumulated topdressing sand. That's years away. In the final analysis, each course must adjust its fairway aeration program to its own conditions.

Are there other concerns? The answer is "yes." They include:

- **Rocks in your topdressing.** Rocks and gravel can come from a less-than-adequate

storage area or sometimes they occur as a contaminant/carryover from the bulk hauler that delivered the sand. In any case, stones in the topdressing sand, which cannot be worked into the grass, are bad for obvious reasons.

- **Shocked mechanics.** The thought of topdressing fairways will not make most mechanics very happy. Be prepared for, "You want to do what?" Yes, there will be some extra reel sharpening and more mower maintenance. Tell your mechanics that this program will help ensure their long-term job security! Seriously, as the program evolves it becomes just another maintenance chore to which the staff must adjust.

- **Communication.** It takes some work, legwork in fact, to prepare for this program. You need to find a source for an economical sand of reasonable quality. The proper equipment and a reasonable storage area where sand can be dumped are necessities. You must have adequate labor for this program and communicate with everyone at the course about the short-term as well as the long-term goals of this program. It may even be a good idea to take a field trip to visit other golf courses that topdress their fairways.

IN CONCLUSION

This article cannot discuss all aspects and details associated with a program of such a massive scale. Each course will have to adapt this program to its own special needs. For example, we are seeing golf courses with bermudagrass, zoysiagrass, and even perennial ryegrass fairways beginning a sand topdressing program for all of the same reasons, including, on ryegrass fairways, earthworm cast suppression.

In the Mid-Atlantic Region, which is a transition zone area, topdressing fairways is a program that is being embraced on different grasses, sometimes for different reasons. Nonetheless, to use perhaps an overused cliché, this program can take fairways "to the next level."

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Sand accumulating on a topdressed fairway. Note the healthy roots and how the organic matter is intermixed with the sand topdressing.