

Sowing Sand On Fairways

Topdressing improves soil profiles and playability and is not solely the province of top-tier clubs

BY FRANK H. ANDORKA JR.

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Certified superintendent Jon Jennings topdresses his fairways once a month.

CHICAGO GC

Problems

Like the bears beds in children's story, *Goldilocks*, Chicago GC's fairways were too soft, and Hudson National's fairways were too hard. Both superintendents had to make their fairways just right.

Solution

Topdressing the fairways once a month during the growing season solved both clubs' problems.

Most superintendents accept the idea of topdressing greens as a necessary part of keeping them healthy. It builds a healthier soil profile by controlling thatch, while also helping to level and smooth the greens.

It takes a lot more effort, however, to convince superintendents that they should extend the practice to their fairways. When they calculate cost per acre, many say it's too costly.

Two superintendents, however, decided it was essential to topdress their fairways to solve opposite problems. They say the costs involved are more than worth the better playing conditions the practice brings, and there are ways for superintendents without unlimited budgets to do it (see sidebar).

The problems

The midnight black soil beneath the Chicago GC is left over from an earlier time. Before the course was built, farmers toiled for backbreaking hours to coax a living from the ground that now lies beneath the course. It's nutrient-rich and descends 3.5 feet below the surface of the club's fairways. Most backyard vegetable gardeners would kill to have soil that good.

Which would be marvelous if certified superintendent Jon Jennings were looking to grow corn, tomatoes or some other food crop on the land. Unfortunately, such soil makes growing the turf he is nurturing more difficult because the soil holds water like it's gold.

"The loamy soil here has a tendency to hold water," Jennings says. "That turns several of the fairways into soggy messes. We had to find a way to fix that problem."

Gregg Stanley, certified superintendent at Hudson National in Croton-on-Hudson, N.Y., had the opposite problem at his course. Hudson National was built entirely on rock, so the fairways were incredibly hard.

"Topsoil doesn't exist on this course," Stanley says. "We had to do something to create a growing medium for the turf."

The solutions

Jennings says he inherited a topdressing program that the club had started in 1999. He says he wanted to control thatch, create a firmer playing surface between drain lines and level the fairways. The latter was important so he could mow the fairways at lower heights without scalping.

"We felt that if we created a sand cap on top of the soil, we could get the water off the surface more quickly after a hard rain," Jennings says. "It doesn't make the water go away, but it creates a buffer zone for the water to sit in before it works its way down into the heavier soil beneath. It makes it much easier to maintain the turf."

He says the initial program is designed to run for three to four years until a sand base is established. Consistency is the key, Jennings says.

"It's not a good idea to enter into this program half-heartedly," Jennings says. "You're not going to get the full benefits unless you topdress consistently, which for us is once a month."

He also says superintendents should make sure they have multiple staging areas where the topdresser can pick up sand on the course. The intense maintenance, however, does come at a price. Jennings says it costs him \$201.58 per acre to topdress his 37 acres of fairways. Jennings says he spends \$33,000 per year on materials alone.

"It started being too expensive for us to do all 18 fairways, so we started focusing on our six wettest fairways this year," Jennings says. "If you do have problem soils under your course, however, topdressing is a great way to address them."

Stanley didn't need to firm his fairways at all because Hudson National, located 30 miles north of New York, was built completely on rock.

"They had to use dynamite on every hole to build the course," Stanley says. "We had to supplement it in some way. We had no percolation at all."

The crew at Hudson National starts topdressing the fairways each spring as soon as the ground allows them to do so, Stanley says. Stanley and his staff topdress the fairways once a



What About the Little Guy?

Randy DuFault, sales manager at Dakota Peat and Equipment, has the following tips for superintendents who'd like to topdress their fairways but fear they can't afford it:

Purchase a multitasking machine.

"If you can budget for an applicator that can be used across a number of jobs instead of just topdressing, it will be easier to get budgetary approval," DuFault says. "The number of different jobs the new machines allow you to do is amazing."

Buy a wider application machine.

"When you go to purchase the equipment, make sure you buy a spreader wide enough to accommodate fairway topdressing," DuFault says. "If you purchase one that's too small, the labor costs will explode because it will take workers longer to do the job."

Focus only on the fairways about which you hear consistent complaints.

"Even the wealthier clubs don't topdress all of their fairways," DuFault says. "Pick the ones that give you trouble consistently and treat only those."

Topdress once or twice a year instead of every month.

"There's no rule that says you have to topdress every month," DuFault says. "Every little bit helps. If you can only afford to do it twice a year, that's better than not doing it at all."

Outsource the job entirely.

"There are companies across the country who are getting into this business," DuFault says. "See if there's one in your area you can hire for a reasonable price. It will save you from having to make the capital investment yourself!"

month from May to October.

The course uses 1,200 tons of sand per year to cover 20 acres of fairway at a cost of \$20 per ton (that works out to approximately 9 to 10 tons of sand per acre per month). Materials cost \$24,000.

"You handle the topdressing of fairways the same way you'd handle greens," Stanley says. "You do it at a rate that equals the growth rate."

Stanley, who started his topdressing program in 1998, says the effects were evident immediately. He says the fairways are much softer than they were when the course opened, and they're far more consistent. He added that the percolation has increased only "a little" since he started the program, but he believes it will get better.

Stanley moves the sand throughout the course in dump trucks and applies it with a Tycrop MH-400. At the moment, he has built a 2-inch layer of sand under the turf, and he plans to continue until he reaches the 4-inch mark.

"We're halfway there," Stanley says. "During the growing season, it does a fabulous job of reducing thatch and keeping the playing conditions consistent. We've been really happy with the results." ■

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Real-Life Solutions

MANAGING NATIVE AREAS

The Natural Look

Colbert Hills features an array of prairie grasses and wildflowers, but managing the native areas is like a judo match with Mother Nature

BY CURT HARLER

It's the constant interplay between weed and wildflower that makes Colbert Hills GC a key part of the distinctive prairie environment in and around Manhattan, Kan.

Colbert Hills, a track owned by Kansas State University's Golf Course Management and Research Foundation, was designed in part and named after KSU alumnus and current Senior PGA Tour pro Jim Colbert. The course, which opened in 2000, is a living



PHOTOS BY CURT HARLER

laboratory for KSU researchers. That's because more than 800 acres of the course are maintained in native prairie grasses and wildflowers.

At first glance, the course, while one of the more stunning looking in the Heartland, is typical: L93 bentgrass comprises the greens, fairways are Meyer zoysia, and the perimeter rough is a combination of Kentucky Bluegrass varieties.

However, most holes feel isolated from each other, thanks to the sharply rolling topography and wide expanses of native grasses surrounding them, which iso-

lates one fairway from the next. Players can easily believe they are the only ones on the course.

"The original idea was to minimize the environmental impact and soil erosion at the site," says certified superintendent David Gourlay, Colbert Hills' director of golf operations and general manager. "It cost us a little more money in the beginning, but it made a big difference environmentally."

The course is not without its challenges, however, that are directly related to the native grasses and indigenous plants.

More than 800 acres of Colbert Hills GC are maintained in native prairie grasses and wildflowers.

The problem

When the decision was made to go natural with native and indigenous plants, species like Johnsongrass, nutsedge and a host of woody invaders didn't get the message they would not be welcome at Colbert Hills.

Managing native grasses is like a judo match with Mother Nature. One parlays Her strengths and moves to meet the needs of a premier golf course while trying not to get

Problem

Can a golf course commit to extensive use of native grasses without inviting a full-scale weed invasion?

Solution

A combination of controlled burning and selective herbicide use can keep weeds to a minimum.

tossed for a loss by an unexpected twist of fate.

The natural areas begin just 10 yards beyond the rough. While the near-in areas are mainly turf-type tall fescue for perhaps 10 yards, there's a full array of native species beyond that.

"We had Kansas State come up with a blend of native grasses: fescues, little and big bluestem, Maximilian sunflowers, other sunflower species and native plants," Gourlay says. A seed supplier provided for the blending, but species not in the original mix are thriving, too, Gourlay adds.

The native grasses received a boost of fertilizer when they were planted, since they can take up to two years to mature. However, Gourlay says the native grasses don't need a lot of supplemental assistance. "We found if we overfertilize native areas, the grasses tend to become too dense and over the

winter lay down from snow and are smothered," Gourlay says.

After more than two years, the native grasses are mature and prospering. But around tee boxes, native species gulp the irrigation water that drifts to the wild areas. This doesn't help Gourlay's management program because the native grasses are getting denser all the time. Hence, golfers are losing more balls.

In a way, Gourlay works against himself. He wants to increase native areas in nonplaying locations, but not lost golf balls. Native species are allowed to creep in closer in areas not in play.

A good example is the "Little Amen Turn" at Nos. 10, 11 and 12. No. 12 is a 434 yarder and trends a bit uphill. Nobody hits a ball 350 yards from the tee. So in that area, Gourlay is allowing native grasses to move in behind the fairway bunkers. "It re-

duces maintenance costs, irrigation costs and gives a better backdrop for the tee shot," he feels. "The wildlife sure likes it."

But while turf-type fescue does its job along the margins, Gourlay stresses that it's not impervious to invaders. Johnsongrass, nutsedge, and other grassy species are constantly on the move. So something has to be done.

The solution

The best way to assure continuity of native grasses is to burn the prairie, and that's what they do at Colbert Hills. The City of Manhattan Fire Department does a controlled burn of the course in late March or early April. The burn serves as a learning lab for firefighters and helps control the sumac and evergreen woody plants.

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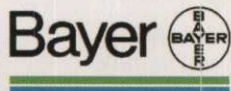
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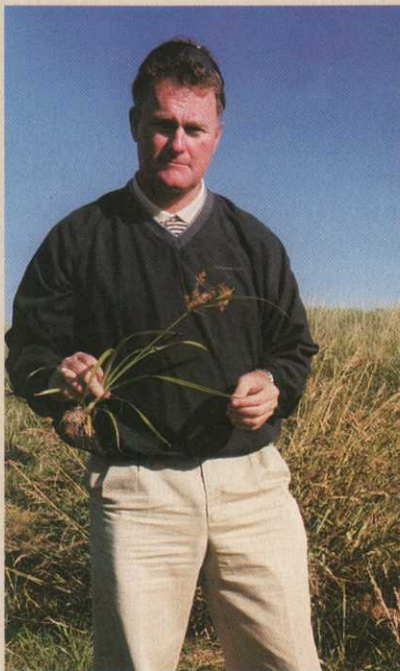
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The fire department burns 450 acres in three to four days. Yet even fire does not seem to slow down some species. Red sumac, for example, is aggressive. "It's a good soil stabilizer, especially in shallow soils, but it's tough to eradicate," Gourlay says.

The burning strategy is to hit the more visible areas hard and eliminate invading perennials and annuals.

Noting that Colbert Hills is a laboratory, Gourlay says he will experiment with both mechanical and chemical control of noxious and woody invaders. Some areas will be mowed, and some areas may be treated with pre-emergent and post-emergent herbicides.

"Our biggest concern is to make [the course] more uniform and not too weedy-looking," Gourlay says.



David Gourlay says he wants to make the course more uniform but not too weedy-looking.

Outlook

In addition to staying on top of the many native species of native vegetation and plants, the program run by KSU at Colbert Hills monitors water and soil quality, aquatic ecosystems, wildlife and insects. The course has plenty of room for coyote, deer, birds, snakes and other indigenous species.

It's the natural areas that give Colbert Hills the unmistakable look and feel of playing on the great prairies of the Midwest. Colbert Hills is one of a handful of Audubon's Silver Signature courses in the world, boasting everything from lark sparrows and Eastern meadowlarks to hawks.

Like a partner in any good marriage, Gourlay knows Colbert Hills and Mother Nature are in a long-term, give-and-take relationship. ■

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