

TURFGRASS MANAGEMENT

At Salishan Spa & Golf Resort, Ryan Bancroft and his maintenance crew started fairway topdressing in 2000 on five holes and since have expanded the practice considerably. Photo: Salishan Spa & Golf Resort

GAINING ACCEPTANCE



SUPERINTENDENTS WEIGH THE PROS AND CONS OF FAIRWAY TOPDRESSING

BY MICHAEL COLEMAN

Topdressing fairways is gaining acceptance among more golf course superintendents these days, but not everyone is jumping on the bandwagon. With more pros and cons than the San Quentin Pro-Am, topdressing fairways has become a frequently discussed topic among superintendents. While accepted for years as a needed practice for greens, topdressing is becoming more popular on fairways with some superintendents.

At Saratoga National Golf Club in Saratoga Springs, N.Y., golf course superintendent Joe Lucas started a topdressing program for fairways last fall, after extensive research about the practice and materials.

"We're built on a very heavy clay soil," Lucas says. "During the wet time of the year, the playing surface is soggy."

Lucas talked with USGA agronomists and turf consultants and decided topdressing would improve the fairways at the public course. The pros and cons stack up for Lucas like they do for many superintendents. Reasons for topdressing fairways include:

- Quicker-drying turf;
- Enhanced turf appearance;
- Improved playability;
- Firmer turf; and
- A reduction of earthworm castings.

On the flip side, there are multiple negatives to consider:

- Labor cost;
- Material cost and storage;
- The need to raise irrigation heads;
- Scheduling hassles;
- A higher risk of disease; and
- Root problems.

DRAINAGE CONSIDERATIONS

Although New York isn't like the Pacific Northwest where rainfall is measured by the foot each year, precipitation can be significant in the Empire State. Lucas, who has been at Saratoga National since construction in 2000, says the course drains well but more sand helps dry the playing surface much more quickly.

Tony Girardi, CGCS, at Rockrimmon Country Club in Stamford, Conn., decided against topdressing fairways because drainage was the real problem. During 13 years at Rockrimmon, Girardi also has seen layering problems appear on greens because of topdressing. Layering can lead to problems if the roots stop growing through the layers. He didn't like the idea of dealing with that potential problem on fairways.

"You're going to raise fairways and crown them," he says. "At this point, it's not really clear what impact topdressing will have on surrounding areas and the transition zones in the rough."

Rather than building up sand to improve percolation and water removal, Girardi suggests honing in on the real source of excess water – ineffective drainage. Girardi believes many courses aren't looking at the entire picture of what's happening in the fairways when they begin topdressing programs.

"You're actually masking an issue you have with drainage," he says.

Still, many other experienced superintendents tell Girardi they're having success topdressing fairways.

Drainage was Bob Senseman's first target, too. Senseman, a certified golf course superintendent at Oswego Lake Country Club in Oregon, has made four applications since October of 2006.

Fairway topdressing has been going on for years at Oswego Lake.

"The program is most effective when you take care of the trouble spots with drainage," he says. "We're changing the program to one similar to putting greens in which we're doing lighter but more frequent applications of sand."

Consistency and firmness are types of playing conditions golfers at Saratoga National expect, and topdressing fairways and roughs helps Lucas meet those expectations.

"Happier golfers make for more revenue because they don't have to keep carts on the paths," he says.

The additional cart revenue is expected to help counter the \$35,000 of materials cost for four or five applications annually, although Lucas isn't sure how many the crew will be able to actually complete throughout the season.

"It's a tough process to complete because something's always coming up," he says.

CHOOSING THE MATERIAL

Many superintendents don't have the money or time to topdress fairways. However, if they decide to topdress them, they need to make sure the material they use isn't going to worsen turfgrass conditions, says Jason Henderson, assistant professor of turfgrass and soil science at the University of Connecticut.

Obviously, worsening turfgrass conditions isn't one of the goals of topdressing fairways, so superintendents should have any materials they're considering using tested by an accredited laboratory for an independent recommendation. The cost of topdressing is too high to just jump in and use material from the nearest quarry.

Lucas talked to many people before decid-



Before applying topdressing to fairways, Ryan Bancroft's crew uses a core harvester with a modified conveyor that picks up cores and transfers them to another vehicle. Photo: Salishan Spa & Golf Resort

ing which sand he would use. He took samples from all the suppliers in the area, and Brookside Laboratories examined them for particle size, infiltration and other characteristics.

"It probably took me two years of sampling before finding something I was comfortable with and that came at a good price," he says.

Lucas spent about \$9,000 for 634 tons of straight sand.

"It's a learning game," he says. "I'm just trying to figure it out for myself."

It took a while for Lucas to decide what to use because of long-term effects.

"I don't want to throw something out there that five to eight years down road could be hindering me," he says.

Negative outcomes are a possibility because the practice is so new in most areas, Henderson says. Once sand begins to settle into the turf after several applications, one starts to see changes in the infiltration rates and moisture levels.

Henderson is working on a study at the University of Connecticut that examines how various topdressing sands react with soil. His study includes USGA-spec sand, fine sand and course sand. He hopes to learn more about how each type of sand interacts with soil and what results might be seen in practical applications.

"The big challenge – the unknown right now – is once you've built up this layer of sand on top of this finely textured soil, how's it going

to change how that soil reacts to various soil moisture conditions?" he says.

CONCERNS

The uncertainty of the long-term effects of topdressing fairways worries some superintendents. Not everyone is comfortable with some of the risks posed by it. For example, during a storm, normal surface runoff occurs at a high rate. But with sand present after topdressing, water goes through the permeable sand to the root zone. Depending on the depth of topdressing, the soil might remain saturated, especially after a heavy rain. If a big rain is followed with extreme heat, it's a potentially lethal combination.

"You can literally cook the roots," Henderson says.

The possibility of extreme conditions causing havoc increases with a regular topdressing pro-

gram. Higher soil temperatures are detrimental in wet conditions – harsher than ambient air temperatures on the health of the turf.

"Do you essentially create the perfect storm scenario in which you get higher infiltration rates, but increase risk in terms of disease susceptibility and a lot of potential for direct injury kill?" Henderson wonders.

Henderson's concern is echoed by those in the field, such as Senseman, who recognize the potential danger.

"You put down a lot of sand, and you can fry things in a big hurry," says Senseman, whose budget for fairway topdressing materials is \$30,000 a year, which costs about \$15 a ton.

Another considerable drawback that becomes apparent as time progresses is the need to raise irrigation heads. Several superintendents that are topdressing expressed their concern about that problem. Unfortunately, that's one of the prices to be paid for the benefits of topdressing.

FULL STEAM AHEAD

While the negatives of topdressing can be daunting, some course managers begin to see the benefits slowly and continue to ramp up their programs. Ryan Bancroft, golf course superintendent of the course at Salishan Spa & Golf Resort in Gleneden Beach, Ore., has a staff of nine full-time employees and 10 part-time employees. Bancroft and his crew started topdressing in 2000 on five holes and then started applying heavier applications twice a year in addition to

The pros and cons of fairway topdressing

- Quicker-drying turf
- Enhanced turf appearance
- Improved playability
- Firmer turf
- A reduction of earthworm castings

PROS

CONS

- Cost of labor
- Material cost and storage
- The need to raise irrigation heads
- Scheduling hassles
- A higher risk of disease
- Root problems

Topdressing treatments are applied across multiple fairways to compare effectiveness of different topdressing frequencies. Photo: University of Connecticut



one light application. His topdressing materials budget for the year is \$55,000, and there's not much acreage neglected by his crew.

"We throw sand everywhere," Bancroft says. "It's on the fronts, it's on the greens, the tees, fairways and some of the high-traffic rough areas."

Bancroft favors topdressing to help percolate water and prevent thatch layers in the turf. The main reason he topdresses the fairways is because of drainage. The course receives 80 to 100 inches of rain annually. He's hoping to get close to six inches under the surface to improve

drainage and stretch the prime season.

At Salishan, nine holes close so the crew can aerify and then topdress. The process allows the crew to work a regular day, which reduces overtime and fatigue. It also allows nine holes to remain open each day and keep revenue flowing.

Ingenuity kicked in to help speed up things for Bancroft. His crew uses a core harvester with a modified conveyer that picks up the cores and transfers them over the bed where they fall into a transfer vehicle. When that vehicle is full, an empty vehicle takes its place to keep up the

pace. The process reduces the time required almost in half.

"I'm actually going to try a once-a-month application this year," Bancroft says, adding that he's planning for two moderate applications and four or five light applications. "We're just going to put a lighter amount down so it doesn't affect the golfers as much."

Senseman's crew is taking a similar approach – more frequent light applications.

"We have a program in which we're just sanding two to three fairways a day," Senseman says. "It takes us a week, and we wait three to four weeks and start over again."

While the drawbacks can be significant – some might not surface until the practice matures throughout the years – some superintendents stand by topdressing fairways as a sure way to improve conditions for demanding customers.

"The standard expectations for the golf course are continually being elevated," Senseman says. "Any kind of light-frequent topdressing you can afford to do is only going to improve the condition of the golf course." **GCI**

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At Oswego Lake Country Club, Bob Senseman and his crew have made four fairway topdressing applications since October 2006. Photo: Oswego Lake Country Club