

Comb over

Brushing greens prior to mowing provides multiple benefits without the surface disruption. by Rob Thomas



LEFT AND BOTTOM: JOHN DEERE
BELOW: CHRIS TRITABAUGH

Brushing to stand up the turfgrass has many benefits, from helping work in amendments.

IN THE NEVER-ENDING quest for smoother, faster putting greens, superintendents who choose not to brush may be leaving some valuable ammo in the chamber. According to Bob Vavrek, USGA Senior Agronomist for the North-Central Region, brushing encourages more upright growth of creeping bentgrass and provides a smoother putting surface.

“Less lateral growth means the greens will be less likely to scuff and spike up from aggressive non-metal spikes, when golfers drag their feet across the putting surface,” Vavrek says.

Like most golfers, members at Fieldstone Golf

Club in Greenville, Del., want fast greens. Superintendent Damon Di Giorgio obliges through brushing.

“At Fieldstone, we use it to increase green speed,” Di Giorgio says. “While our mowing heights are very low, the creeping bentgrass on our greens has a tendency to lay down from constant rolling and other maintenance practices. With the thought that brushing stands up the turfgrass plant – versus having it lay down – we believe the ball contacts less leaf tissue when rolling and therefore provides a smoother and faster roll on the putting surface.”

Chris Tritabaugh, superintendent at Northland



“My experience with brushing is on seashore paspalum, Bermudagrass and creeping bentgrass greens. When done during times of optimal turfgrass growth, I have not seen any negatives.”

—Damon Di Giorgio, Fieldstone Golf



Brushes have been around since the late 60s or early 70s and the popularity between aggressive and non-aggressive has shifted back and forth.

Country Club in Deluth, Minn., fights to manage and promote bentgrass over *Poa annua*. He’s been at the club for six years and has been brushing the last three seasons.

“I have worked to limit surface disruption,” he says. “In my opinion, brushing prior to mowing provides many of the benefits desired from vertical mowing, without the surface disruption.”

Tritabaugh warns, however, that brushing, like mowing, is a practice which places physical damage on the leaf tissue. Additional abrasion and wear to the turf is more likely to occur on a severely undulating putting surface. “During time of high heat and/or other climate stresses, the bruising involved from the process may damage the plants,” he says.

Di Giorgio adds: “My experience with brushing is on seashore paspalum, Bermudagrass and creeping bentgrass greens. When done during times of optimal turfgrass growth, I have not seen any negatives.”

Typically, cool-season grasses are more susceptible to injury from overly aggressive cultural practices, especially in stressful summer months. However, warm-season grasses can suffer a similar fate in cooler weather, less conducive to recovery.

Poa annua has an upright growth habit and a predominantly *Poa* green would not benefit as much as a bentgrass green, Vavrek says.

For *Poa*, Tritabaugh would recommend another method. “I believe if you are maintaining *Poa* surfaces, then vertical mowing is the ticket,” he says. “I also believe that the newer, more vertical growing varieties of bentgrasses are unlikely to need regular brushing. Their growth habit is already upright and thus there is little need to stand the leaf tissue before cutting.”

Brushing to stand up the turfgrass has many benefits, from helping work in amendments, such as sand, to aid in combating the development and persistence of grain, especially on warm-season turf, says Kevin Stinnett, territory sales manager at Jacobsen. He’s in a unique position, having been a superintendent and now working directly with others on the equipment side.

“In addition to working in amendments such as sand, it also keeps the turf canopy open (up-right) to accept amendments and granular fertilizer, and also keeps air space in the canopy and prevents the turf from laying/stacking on itself, creating stagnant conditions that can lead to disease, increased thatch development and overall reduced turf health,” Stinnett says.

Considering the benefits, Tritabaugh and Vavrek aren’t sure why brushing hasn’t significantly gained in popularity over the years, aside from the fact that verticutting and grooming can produce similar effects. While Vavrek says he sees more courses occasionally brushing greens now versus five years ago, it’s still a minority of superintendents who brush.

Stinnett sees that trend growing in certain regions of the country, however.

“With the aggressive growing nature and the tenden-

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cy for thatch and grain development, especially with the new ultra-dwarf Bermudagrasses, [brushing] has actually gained popularity with warm season turf," he says.

Di Giorgio points to a common reason many superintendents don't utilize various agronomic practices - money.

"With reduced maintenance budgets, costs need to be cut," he says. "If the brushes are not connected to a mower and an extra piece of equipment is needed, or additional labor, then this practice may be reduced due to costs.

"When doing greens, we use hand brooms and brush in a perpendicular direction to what we are mowing," Di Giorgio adds. "In the Dominican Republic, on seashore paspalum greens, we had brushes connected to our walk-behind greens mowers that sat in front of the reel."

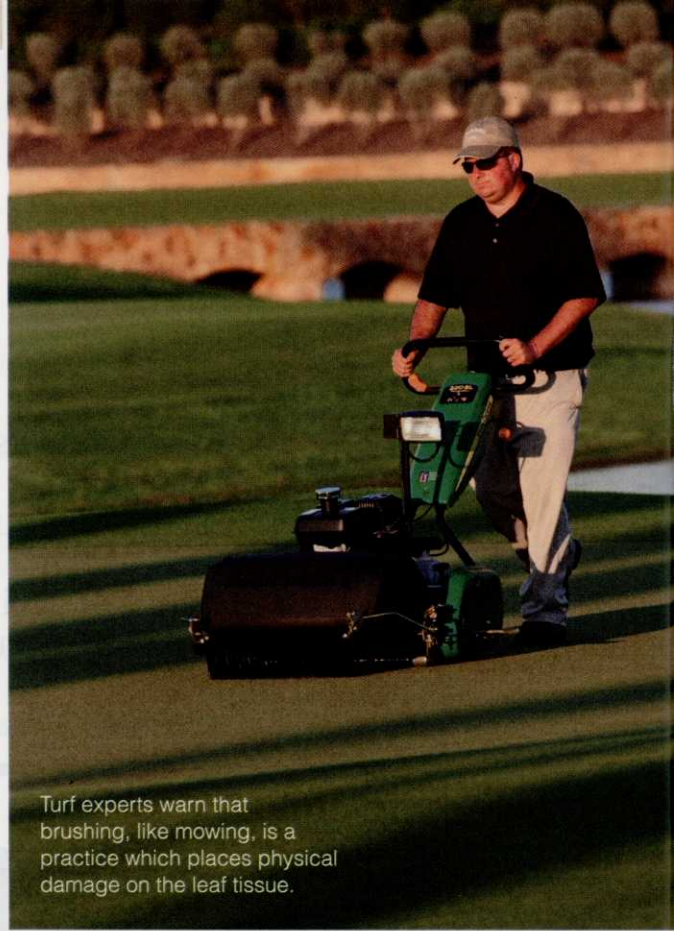
In-front brushes generally cost in

the neighborhood of \$500-600, while the rotary-style brushes are upwards of \$2,000-2,500. "Push brooms at a local hardware store are cheap," Di Giorgio pointed out, adding that hand brushing takes a staff of five about two hours to do three acres of greens at Fieldstone.

Tritabaugh says many courses, with good equipment managers, are fabricating their own brush units for the front of their mowers, but any kind of broom will do.

"Pull behind brushes used for the incorporation of topdressing work well, but they also produce more damage," he warned. "Brushes used out front of a mower are our option of choice at Northland. I like these brushes because they can be used or not used on any schedule and they are less damaging than the pull-behind brushing units."

Tracy Lanier, product manager for John Deere Golf, says superintendents generally look to their products when



Turf experts warn that brushing, like mowing, is a practice which places physical damage on the leaf tissue.



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wanting to lift turf to reduce grain and increase playability, making greens more consistent. He says potential negatives really depend on the condition of the turf, but even healthy turf may take a step back, in the beginning.

"The first time brushing, you may see initial negatives— thinning, marking and discoloration," Lanier says. "Eventually, the playability comes back."

Deere offers both out-front and rotary-style brushes, with rotary being the more aggressive of the two. Brushes have been around since the late 60s or early 70s and the popularity between aggressive and non-aggressive has shifted back and forth.

In addition, there's the Greens Tender Conditioner (GTC). Like the rotary brush, the GTC rotates in the opposite direction of the reel to stand grass up prior to cutting for a consistent quality of cut. Both control runners and reduce grain by lifting horizontal grass blades, while the GTC also slices stolons to promote new growth.

Jacobsen is developing a rotary brush. According to Stinnett, lot of thought and time with their customers goes into the process. "When developing new products, we work very closely with customers in all regions of the United States and world to understand their needs," he says. "We spend time at different courses to be aware of how the product will work in various grass types and conditions. We regularly test product in the U.S., Europe and Asia/Pacific.

Like any agronomic practice, the frequency in which a superintendent brushes greens is a matter of choice.

"We will brush greens every day at certain times of the year, but generally it revolves around our topdressing schedule," Tritabaugh says. "We will topdress on a Monday, then not brush for the following week. Then, beginning the next week we will run the brushes down for a week. So for us: one week on, one week off.

"Leading up to a tournament we will brush for a numbers of days, and then keep the brushes up for the tournament," he adds.

Turfgrass health is the overriding determinant at Fieldstone - never when the plant is diseased, thin or otherwise stressed, but the tournament schedule also plays a factor.

"During optimal growing conditions, we try one-to-two times per week," Di Giorgio says. "More during tournaments or when greater speeds are needed."

Frequency should depend largely on turf type and time of year, Stinnett says.

"During the peak growing season and under optimum temperatures, turf health, etc., for warm-season turf you could lightly brush in a different direction every day," he says. "Today, most practices – cultural, chemical, fertilization – have gone to 'light and frequent.'"

Tritabaugh is a strong proponent of brushing, but not at the expense of healthy turf.

"Care needs to be taken any time the plants are under stress," he says about when not to brush. "Out-front brushes are pretty gentle, but when used on many consecutive days the stress can add up. During a stress period and when it doubt, I would say 'brushes up.'" GCI

Rob Thomas is a Cleveland-based freelance writer and frequent GCI contributor.

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