

Mower



JOHN DEERE

golfers. Mike Koppen, Deere's national sales manager for turf, says the old adage about the greens making the golf course remains as true today as it was in the days of Old Tom Morris. "That's how golfers measure the course, and walk-behind mowers give superintendents a better quality of cut at lower heights," Koppen says.

Sweating the details

So how do manufacturers decide when to pursue new ideas? All three mower companies says they don't reach

that step until they've spent extensive time with customers and distributors to find out what niche is missing in the market.

Toro's Ullrich says he's on the road frequently with superintendents and turf professionals to find out the latest challenges in golf course maintenance. That's how some of the latest Toro walk-behind technologies became reality.

"I like to keep in constant touch with our end-users," Ullrich says. "Sometimes we bring people to us to discuss new ideas we have. When I feel there is a market position we can meet, I sit down with our engineers and brainstorm how to meet it."

Daly says he and his colleagues at Jacobsen are always talking to dealers, distributors, end-users and mechanics (from whom Daly insists the company gets some of its most important feedback). The conversations focus on how current Jacobsen walk-behind mower lines are meeting superintendents' needs and to see what the company can do to improve its products. He also says he starts most of his conversations with the unconventional question, "What are we doing right?"

"It's important that we know what we're doing right in addition to what we should change," Daly

says. "After all, we don't want to change a feature of our machines just for the sake of changing it. If what we're making is working for the customer, why mess with it?"

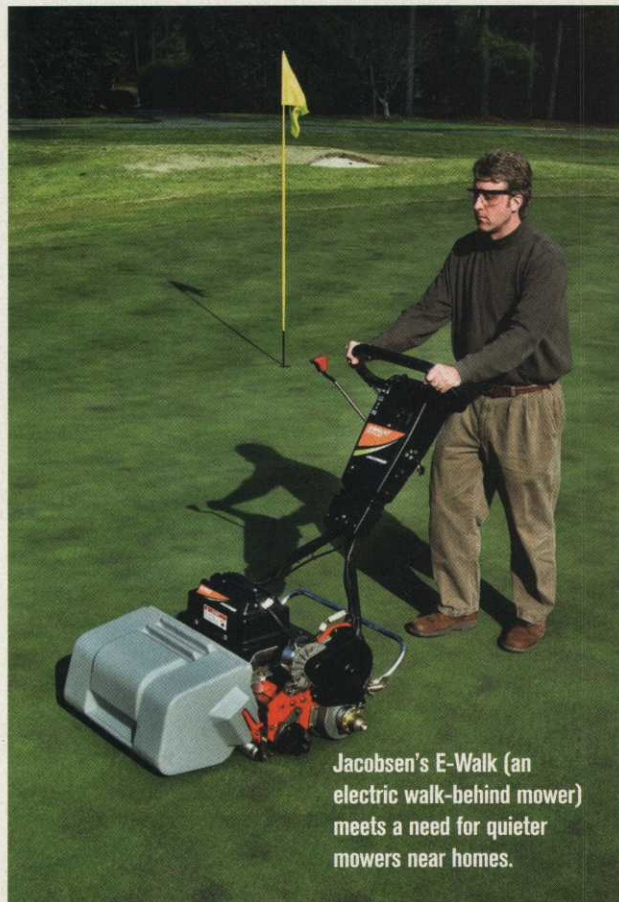
Deere's Koppen says his company has formalized programs to bring customers to its Raleigh, N.C., headquarters to talk with them about new products and show them the prototypes. Gorman says Deere strives to have personal relationships with the people it brings in to look at its equipment. The company

wants them to feel comfortable criticizing a design if it makes no sense.

"We don't hide our engineers from customers," Gorman says. "We bring the two groups face to face so they can hash out any problems. It's a great exercise that keeps our production people connected with the market."

The manufacturers agree the time frame on bringing a new walk-behind mower from the drawing board to the market is between two and

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Jacobsen's E-Walk (an electric walk-behind mower) meets a need for quieter mowers near homes.

JACOBSEN

Walk-Behind Mowers

Continued from page 71
three years. Toro's Ullrich was the only one to reveal how long it usually takes before the company sees a full return on investment, putting it at between five to seven years. "For some of our products, the payoff takes longer," Ullrich adds. "For others, it's shorter."

But how well a walk-behind mower performs on greens is what ultimately determines its success, Ullrich says.

"It all depends on how well you know your customers and how well your products fit the niche," he adds. "It takes time, but it can make or break your product line, so you'd better do it right the first time." ■

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Bring On the Baking Soda

Two Ohio superintendents discovered an innovative solution to moss problems on their greens after other solutions produce mixed results

BY FRANK H. ANDORKA JR., MANAGING EDITOR

The hardest part of controlling moss on greens is that there's no sure-fire way to eradicate it. Some superintendents use iron sulfate. Others swear by ammonium sulfate or copper sulfate. The use of Ultra Dawn (the dishwashing soap) has spread quickly to many parts of the country. Unfortunately, there's no one method that works perfectly for all superintendents.

That's what spurred superintendents Tom Vogel and Rob Miller to try a radical solution as moss populations expanded on their course's greens.

Vogel, certified superintendent at Portage CC in Akron, Ohio, had persistent moss problems on about six greens. His treatments ran the entire gamut of the methods mentioned earlier, and he still couldn't get a consistent kill that would leave the greens undamaged.

"I wasn't getting as much control as I needed, and the members were starting to ask questions," Vogel says. "After having met with limited success with other methods, I decided I needed a new solution."

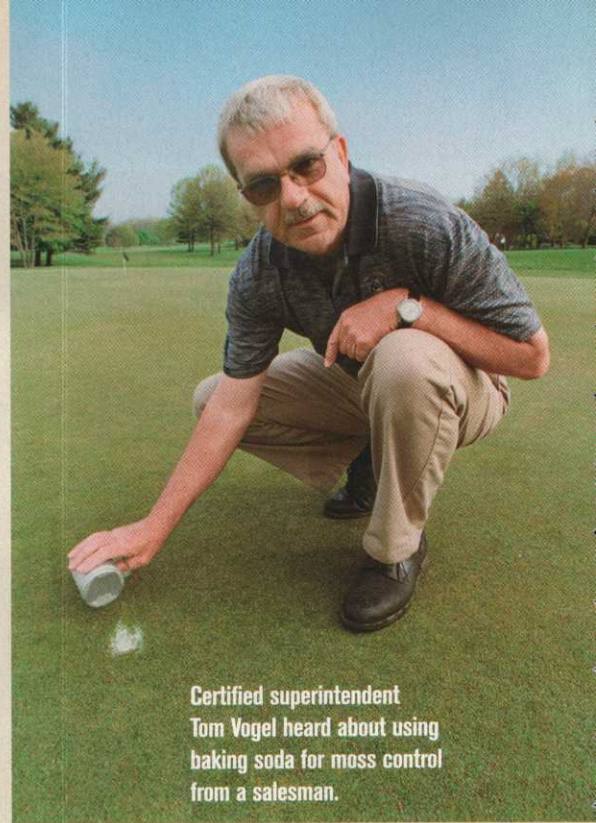
Down the road at Glenmoor CC in Canton, Ohio, superintendent Rob Miller came to the same conclusion about the hard-to-eradicate moss on two of his greens. "We could see the moss starting to expand, and we knew we needed to stop it in its tracks," Miller says.

Problem

Conventional moss-control strategies, such as copper sulfate and iron sulfate, weren't working on two Ohio courses. The popular Ultra Dawn strategy proved difficult to manage in the state's climate. Meanwhile, the moss population at both courses continued to grow.

Solution

The two courses, independent of each other, stumbled on the idea of using baking soda to burn the moss out of their problem greens – with results both superintendents refer to as "remarkable."



Certified superintendent Tom Vogel heard about using baking soda for moss control from a salesman.

The problem

Moss poses a complex problem for superintendents because it can live under duress for long periods of time, according to Tony Koski, an extension turf specialist at Colorado State University in Fort Collins, Colo. Moss is a bryophyte, meaning that unlike turfgrass it has no roots or vascular system, reproduces vegetatively or by spores, and can survive long periods of desiccation. These factors taken together make it hard to design a fungicide to eradicate it.

At the same time, the problem has reached epidemic proportions in recent years because more intense turf management has created perfect conditions for moss survival, Koski says. These practices include low mowing heights, lower nitrogen rates on greens, discontinued use of mercury-based fungicides and use of finer topdressing sand, which inhibits good drainage by creating a perched water table.

Koski says his research shows that the Ultra Dawn was the most effective of the several methods he tested. (Ultra Dawn is most commonly applied in a spray form at a ratio of 4 ounces/gallon of water, and superintendents should drench the moss with the solution.)

But Vogel, who tried the Ultra Dawn treatment on his problem greens, says it's tricky to apply.

"You have to get the timing exactly

right, and the weather conditions have to be ideal for it to work properly," Vogel says. "It has to be a completely sunny day, but it can't be too hot [*Editor's note: Koski says that Ultra Dawn should be applied between 55 degrees F and 80 degrees F in full sunlight.*] For some of us, that makes it tricky to do in the summer."

Miller hoped to burn his moss out of his greens and tried the Ultra Dawn and hydrogen peroxide treatments, but neither gave him the control he wanted.

"You'd make the application, and it looked like it worked," Miller says. "It would turn the moss brown, and it would appear to be dead. But two weeks later, it would be back, and it was stronger than it was before you tried to kill it."

Vogel was nearing his wits' end when a salesman from J.R. Simplot came to visit. As they sat in his office discussing the salesman's products, Vogel mentioned his moss problem. The salesman paused for a moment, and then told Vogel he'd heard that some superintendents were having success with an entirely new method of moss control: baking soda. Though he wasn't sure how he was going to get it out on his greens, Vogel

thought to himself, "This idea is so crazy, it just might work."

Less than 25 miles away, Miller was also coming to the same conclusion.

"It kind of came to me happenstance when I was talking it over with my assistant, Jerry Cox," Miller says. "He had heard about the baking soda idea, and suggested we try it. It couldn't work any worse than anything else we'd tried."

The solution

Vogel says he played around with the right amount of baking soda to apply during last summer's brutal heat. Since he didn't have any details about an appropriate rate, he experimented with it.

"I was excited, but I was scared at the same time," Vogel says. "The biggest question I had to answer was how to get the baking soda from the box to my greens."

First, Vogel tried to use a saltshaker, but the holes were too small. Then one day while Vogel watched the cook in the course's restaurant shake powdered sugar on to each delectable order, an inspiration came to him.

Vogel took one of the myriad powdered-

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"After having met with limited success with other methods, I decided I needed a new solution."

TOM VOGEL
CERTIFIED SUPERINTENDENT
PORTAGE CC
AKRON, OHIO

**Read another
Real-Life Solutions
on page 88.**

Vogel (center) discusses his moss control strategy with two fellow staff members at Portage CC in Akron, Ohio.

Real Life Solutions: Moss Control

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sugar shakers from the kitchen, filled it with baking soda and covered 90 percent of the holes. Then he took it out to his greens and shook it twice. The baking soda landed on the moss, but also landed on the turf surrounding it, causing some phytotoxicity. "Two shakes was far too much," Vogel says.

After more trial and error, Vogel learned the best way to apply the baking soda is to put the powdered-sugar shaker on its side next to the moss patch and gently tap the shaker, allowing a puff of baking soda to land gently on its surface.

"It sucks the moisture right out of the moss," Vogel says. "We had what we considered a severe problem, and we got

100-percent control with a little bit of product."

Miller, on the other hand, applies his baking soda two ways. First, he uses a saltshaker for smaller moss spots the size of a quarter or less. For larger moss patches that are inextricably intertwined in the turf, Miller concocts a less "hot" application by mixing 6 ounces of baking soda per gallon of water and applies it with a backpack sprayer.

"It took us a while to figure out what rate worked best for us, but more than 6 ounces was too hot," Miller says. "On the other hand, if you go any lower than that, you won't have the desired effect."

Miller says he also does spot applications with spray bottles, but he warns that the mixture must be shaken periodically to keep the baking soda in suspension. He also raves about the length of control, which can be anywhere from two to four months. "Compared to some of the other products I've used, the control is amazing," he adds.

Outcome

Vogel says he was so pleased with his experiment last summer that he's planning on doing it again this year, possibly suspending it in water like his colleague Miller did. The two downsides — that baking soda is not labeled for turf and the mild phytotoxicity it causes — are outweighed by the positives, which include no weather restrictions on its application and the long-term moss control it provides.

"Once I told my members not to worry about the slight yellowing of the turf in the patches where the moss had been, they were delighted we were controlling the problem," Vogel says. "You're not handcuffed by the calendar anymore."

Miller adds that he plans to apply baking soda to problem greens in the spring and fall this year.

"You always see complete control when you put it out," Miller says. "It's the consistency of the process that I like. My comfort level with baking soda is high." ■

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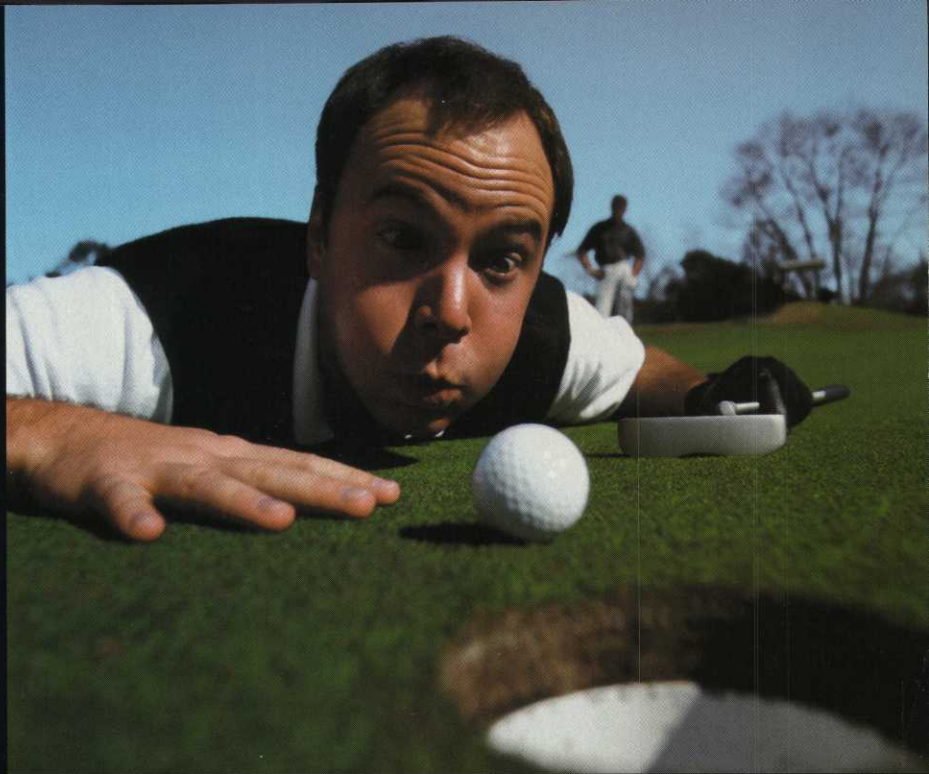
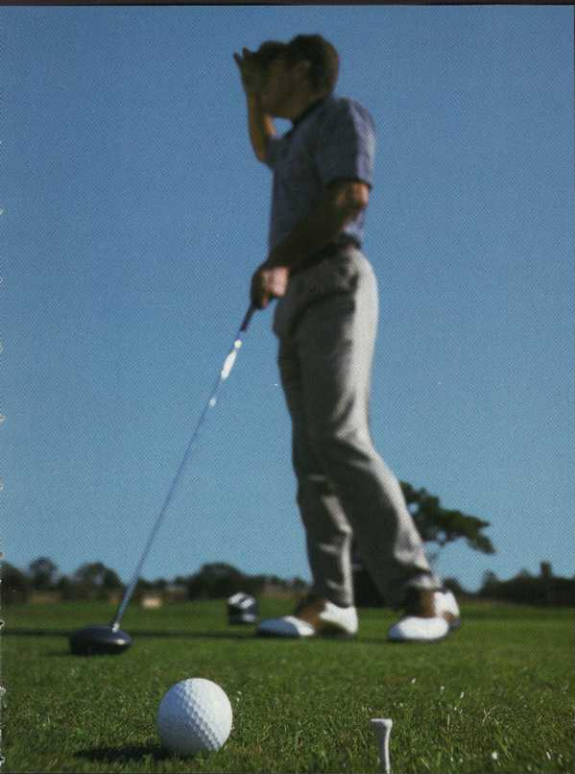
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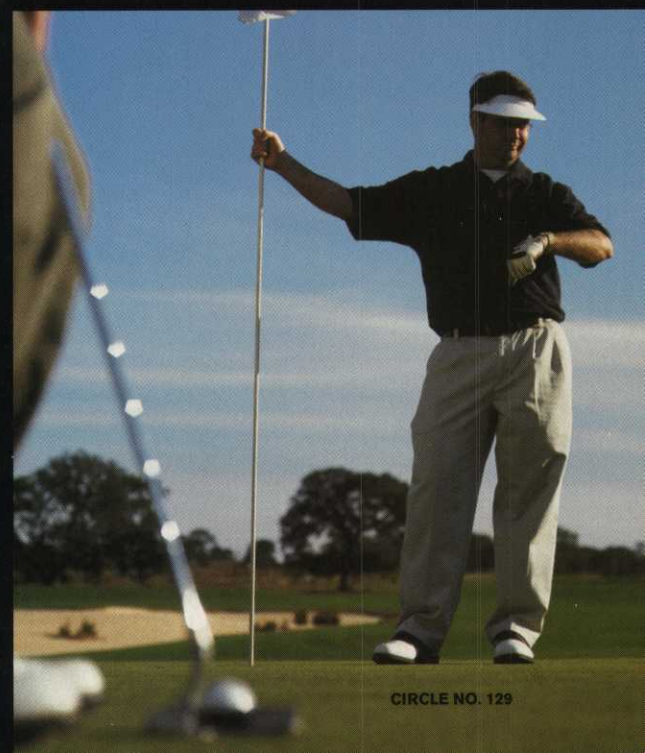
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Just Greens



Kent McCutcheon is in charge of maintaining the 24 "inspired by" greens at The Greens of Las Vegas.

THE GREENS OF LAS VEGAS

Superintendent says he's up to the peculiar turf task presented to him at Las Vegas putting complex **By Doug Cantor**

The scene is the 17th green at Augusta National GC, where a mere 8-foot putt will mean the Masters championship. The speed is perfect, the ball breaks just right and the crowd goes wild. One more hole and the green jacket is in the bag.

Suddenly, the roar of a jet engine interrupts your round . . . and your fantasy. Yeah, it's the world-famous green (sort of). But this isn't Augusta, and it surely isn't Sunday afternoon at the Masters.

In reality, it's 3 a.m. and this is Las Vegas, City of Illusion, where the Eiffel

Tower, the Great Pyramid and the Empire State Building meet. This latest illusion comes courtesy of The Greens of Las Vegas, a unique putting complex currently under construction near McCarran Airport in Sin City. Slated to open this fall, the 23-acre facility features authentic recreations of the greens from 24 of the most celebrated golf holes in the world.

Even more than it is for golfers, the layout of The Greens is a change of pace for its superintendent, Kent McCutcheon. With its desert location, lack of fairways and four sets of six

greens inspired by courses as disparate as Medinah CC and St. Andrews, the complex has significantly different construction and maintenance issues from more traditional courses.

"I don't know of any superintendent who's had to do something like this," says McCutcheon, The Greens' director of agronomy.

Formerly the director of golf course operations at Las Vegas Paiute Golf Resort, the 31-year-old McCutcheon is now responsible for maintaining the 24 "inspired by" greens, complete with bunkers and water hazards, as well as two other 18-hole putting courses. In case that were not enough, one of the courses is modeled after Japanese-style greens with a wide variety of vegetation not normally found in the United States.

According to Brent Harvey of San Diego's Harvey Mills Design, the arid climate poses the biggest challenge to maintaining the greens.

"The Greens of Las Vegas is about 20 acres of turf compared to 90 acres we normally see in the desert," says Harvey, whose golf course irrigation consultancy worked closely with McCutcheon to develop the irrigation system. "But it is probably equal in terms of the effort."

Fortunately for McCutcheon, the plan is to use the same type of grass for every green. Still, he is going to have his hands full maintaining that much manicured turf.

"We have six acres of bentgrass," he explains. "It's the same as two golf

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Just Greens

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courses. The greens will get 85 percent of the focus.”

The experienced McCutcheon, who just completed his term as president of the Southern Nevada Superintendents Association, has his own gallery of supporters.

“He’s the best,” says Eddie Heinen, an amateur golfer who got the idea for The Greens of Las Vegas while playing in Canada with recent Masters winner Mike Weir, his old teammate from Brigham Young University. The original plan was just to hold a series of putting tournaments. But over four years of raising capital, securing government approvals and scouting locations, it evolved into the present project.

“Eddie’s added new features to make it not so one-dimensional,” says Weir, who regularly talks with Heinen over the phone about the progress of the project. “It will really work well in Vegas.”

When it opens its doors in November, The Greens will offer free instructional clinics, a golf camp for kids and daily putting competitions with sizable cash prizes. It also will have a pro shop, a sports bar and a radio broadcast studio, as well as the four signature six-green courses.

Architects from the renowned Dye Design Group assisted Heinen with selection of the greens. Heinen admits he has played only two of the original holes, Castle Pines No. 12 and Shinnecock



MIKE KLEMM

Hills No. 18. But for him, that’s the beauty of the project — now anyone can take aim at greens that otherwise might never be accessible.

“Within an hour after Tiger Woods makes a long putt at Sawgrass, we can set it up so anyone can try that putt,” he says.

McCutcheon will have to stay on his toes to accommodate all of Heinen’s big ideas. Besides all the other maintenance demands, the course will be open around the clock.

“It’s a 24/7 town,” McCutcheon says. “You have a lot of people who get off work at 2 a.m., and they’re not ready to go to bed.”

So far, McCutcheon has not had much trouble with the course’s lighting system, but he is a bit worried it could create a problem by

attracting cutworms.

Given the never-ending schedule, it will be hard to predict when the course will experience the greatest amount of traffic or just how heavy it will be. McCutcheon has not yet decided when his eight-person crew will do the bulk of the prep work, though he says it could, in fact, begin in the wee hours of the morning. In Vegas, there’s just no rest for the weary.

One saving grace unlike traditional courses: There is not a first tee that must be ready in the morning. If need be, the crew can work on one set of greens while people play on the others.

Though he does not expect to put in too much overtime, McCutcheon says the complex will require a lot of hand-work and attention-to-detail. Indeed, he

The famed Shinnecock Hills GC in Southampton, N.Y., is represented at the Greens of Las Vegas.

may need to increase the size of his crew to handle landscaping after the facility opens for business. He’s also keeping his fingers crossed that the once-a-decade flood Las Vegas is due for won’t come anytime soon.

But with all these concerns, the veteran superintendent remains undaunted. Even when working on a standard course, he says: “I always focus on greens first. If there’s anything I want, it’s good greens.

“And,” he adds confidently, “we’re going to have the best greens in town.” ■

Cantor is a free-lance writer from Chicago.