

An extreme green makeover in 21 days. While it sounds more like a reality show on The Golf Channel, it's what Devil's Paintbrush accomplished last August.

Located in Caledon, Ontario, just northwest of Toronto, Devil's Paintbrush is links-style course designed by Michael Hurdzan, Ph.D., and Dana Fry. It opened in 1992, but after a harsh winter in 2005 damaged many greens, superintendent Ken Wright thought it was time to rip up and reseed the surfaces. His main objective was to rid the greens of any traces of contaminants (mainly annual bluegrass) by resurfacing them with a new bentgrass variety. Devil's Paintbrush was originally seeded with Penncross creeping bentgrass.

"It's not obsolete, but it's an older style," Wright explains. "All the new varieties of bentgrass are more disease-resistant, and more cold-, heat- and drought-tolerant."

Wright says it was difficult to choose what seed to use. There were about five that could have worked, but he ended up choosing Jacklin's T1 bentgrass. Wright consulted research and read how many Minnesota courses – where it's colder than the Paintbrush – had done a lot of overseeding with this bentgrass variety with good results. An indicator of this variety's versatility is the fact that Shadow Creek Golf Course in Las Vegas also had used T1 successfully to regrass its golf course.

Convincing the owners of Devil's Paintbrush to agree to Wright's proposal to strip and reseed all the greens was easy, he says, since, as an equity club, the owners make the final decisions, not the 750 members.

"I've been here for 20 years and I've always had a good rapport with them," he says. "They trust me and have confidence in what I've done." It also helped that two courses comprise Devil's Pulpit Golf Association, so members still had a place to play even after

the Paintbrush was closed for the season on Aug. 4, 2009.

OUT WITH THE OLD

Basamid – a granular product that's the only registered fumigant superintendents have at their disposal in Canada – was used to kill the old grass. The Paintbrush crew says it's not quite as powerful as methyl bromide, which is often used in the U.S., but it has other benefits. You don't need another company to come in and do it; you can apply it in-house as long as you're a licensed applicator.

"Many guys will strip greens and resod, but the soil profile over the years has annual bluegrass wheat seeds," says Jayson Griffiths, the assistant superintendent, who coordinated the project and applied the Basamid. "The main objective of using Basamid was to sterilize the root zone, so any traces of annual bluegrass wheat seed, at least in the top five to six inches, would be killed outright."

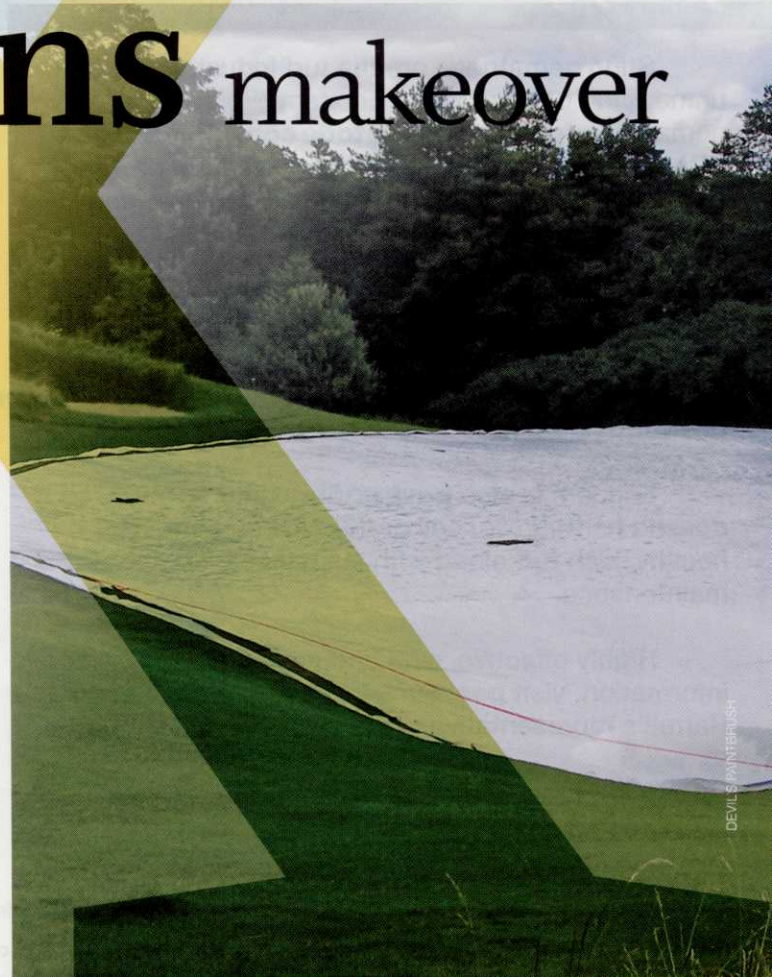
EXTREME

greens makeover

Devil's Paintbrush
in Caledon, Ontario,
gets a new putting surface
palette in

21
days.

By
David
McPherson



DEVIL'S PAINTBRUSH

Top: Devil's Paintbrush's assistant superintendent Jayson Griffiths (left) and superintendent Ken Wright seed the course's double 1-acre green with T1 bentgrass. Bottom: The greens were covered for six days during the fumigation process.



Wright and Griffiths did a lot of research and experimented with Basamid on a test green in 2008 before starting this project.

Devil's Paintbrush did not want to close the course for the full year. That's why they chose to begin August because, to be effective, Basamid needs heat; plus, it must be applied in dry, wind-free conditions. Griffiths recommends using a drop spreader and applying the recommended rate of 8 pounds of Basamid per 1,000 square feet, so your walking speed is critical.

Research Wright and Griffiths consulted included a Penn State University study by Peter J. Landschoot, Ph.D., and Bradley S. Park where Basamid was used with and without covering the greens in plastic, to see the difference in how many wheat seeds were left in the ground following each technique.

"With covering, you get almost 100 percent control versus not covering where a few viable seeds remain," says Griffiths. "We couldn't afford to let any of the gases escape. We wanted to make sure once they were active they remained in the soil profile."

Devil's Paintbrush fumigated 5.5 acres of greens, which included the aprons. Griffiths' role in the project was putting together a plan and time line. Once Wright gave the go ahead, Griffiths says the first challenge was to acquire enough plastic to cover all of the greens. He worked with contacts in the greenhouse industry and managed to find a plastic supplier in Edmonton, Alberta.

"Once we had the plastic we needed to come up with a way of putting it together, as no one had done this before," Griffiths says. "We acquired all the plastic ahead of time because we knew fabricating all the covers would take time."

Griffiths says a good GPS outlay of the golf course allowed them to understand the sizes of the greens they were going to cover. The plastic covers ranged from

GREENS RESEEDING

4,000 to 5,000 square feet per single cover; an average small green apron would require approximately 12,000 square feet of plastic. Senior members of the Devil's Paintbrush crew fabricated the covers. It was rolled up, and then steamed together. A bead of vapor-barrier adhesive was put down, overlapped, and then fastened further using duct tape.

From the research Wright and Griffiths conducted, they learned that once you activate Basamid, it needs to be covered for six days. Then you want it to off-gas once the chemical has done its work on the weak seeds and insects and anything organic left in the soil profile. It has a very short half-life (approximately 24 hours), so you need to give the greens time to dry once the covers are off.

"Once the covers are off, you need six days to make sure the seed bed is ready to receive seed," says Griffiths. "If you seed too soon and there is any viable product left in the ground, once you water that seed to activate it for germination, you could reactivate any Basamid product that's left."



Maintenance crew members fabricated the plastic greens covers.

JUST LIKE PEELING AN ONION

The project was like peeling an onion, says Griffiths.

"There were a number of tasks we needed to do simultaneously along the process," he says. "On day one, we stripped the sod off our greens; one individual was responsible for this with a sod cutter and quality control was the No. 1 issue."

The crew removed all the sod in-house by hand and aerified on the same day. After aerification the Basamid was applied and watered in to the profile incrementally, so it wouldn't flood or run off into the bunkers to cause adverse effects. The crew watered 0.6 inches of water to a depth of 5 or 6 inches, and then stopped. Then, within 90 minutes, the plastic covers were applied.

AT A GLANCE: Devil's Paintbrush

Location: Caledon, Ontario, Canada

Cost: \$71,481 (includes the fumigant, bentgrass seed, plastic covers, personal protective equipment, sand topdressing and labor)

Project: Greens reseeding

Superintendent: Ken Wright

Assistant superintendent: Jayson Griffiths

Date began: August 5, 2009

Date reopened: TBD, May 2010

Acres of polyplastic sheets: 7

Man-hours: 2,500

Acres of greens: 5.5

Old turfgrass type: Pennncross creeping bentgrass

New turfgrass type: T-1 creeping bentgrass from Jacklin

DEVIL'S PAINTBRUSH

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GREENS RESEEDING

"Because the covers were 10,000 square feet, it took a crew of eight people to apply them," says Griffiths. They also removed a ring of sod from outside the perimeter of the apron/green to weigh down the plastic.

"If it was a windy day, we would parachute the covers over the green, and once it was down, the other crew would place the rolls of sod back on the edge to ring around the outside of the green to secure the covers and make sure there were no gaps," adds Griffiths. "Then the ends of the plastic were rolled up, wrapped around the sod and staples were put through it. Any excess was cut and taken away."

The greens were then left to gas for six days. Devil's Paintbrush crew did five to six greens per day. One crew did the sod cutting, another crew came behind doing the aerifying, and then Griffiths would follow applying the Basamid. Finally, there was a crew that applied the plastic.

It was a sunny day with a high of 79 F when Wright, Griffiths and the crew started peeling



Devil's Paintbrush's No. 1 green looked good, even just 28 days after seeding.

back the layers of plastic from the first six of these greens seven days after the covers were placed down. The greens were left to off-gas for one day and then the crew took four days to prepare the seed beds. They worked from the center out, breaking up cores with a verticutting machine and removing any organic matter that may have accumulated from the dead root mass.

"We added root-zone topdressing and did manual sand probing," says Griffiths. "We wanted to improve the transition from sand-

based greens to fairways, so we used very shallow tines in the aprons and broke cores out systemically to have a smooth transition."

Devil's Paintbrush did more than 20 mowings in September and October and they were pleased with the initial germinations of the new greens.

Wright says, "We're hoping for an early spring and success in the year to come." **GCI**

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