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Real-Life Solutions

Continued from page 88

topdress the fairways once a month. He shopped all of the alternative fairway topdressers on the market and finally settled on the Turfco CR-10.

What Bastille discovered, much to his delight, was that in addition to filling his topdressing needs the machine



Of course, you can always use your fairway topdresser in the traditional way, but where's the fun in that? Finding other uses helps defray the equipment's cost.

also functioned well as a bunker building tool.

"It was a real money-saver for us," Bastille says. "You can get right up to the edge of the bunker to fill it."

Bastille also said its cross-conveyor system provided much more accuracy in the sand placement.

"There was a lot less wasted sand with this machine," Bastille says. "You don't have it spilling out the sides of the bunker the way you might if you did the job by hand."

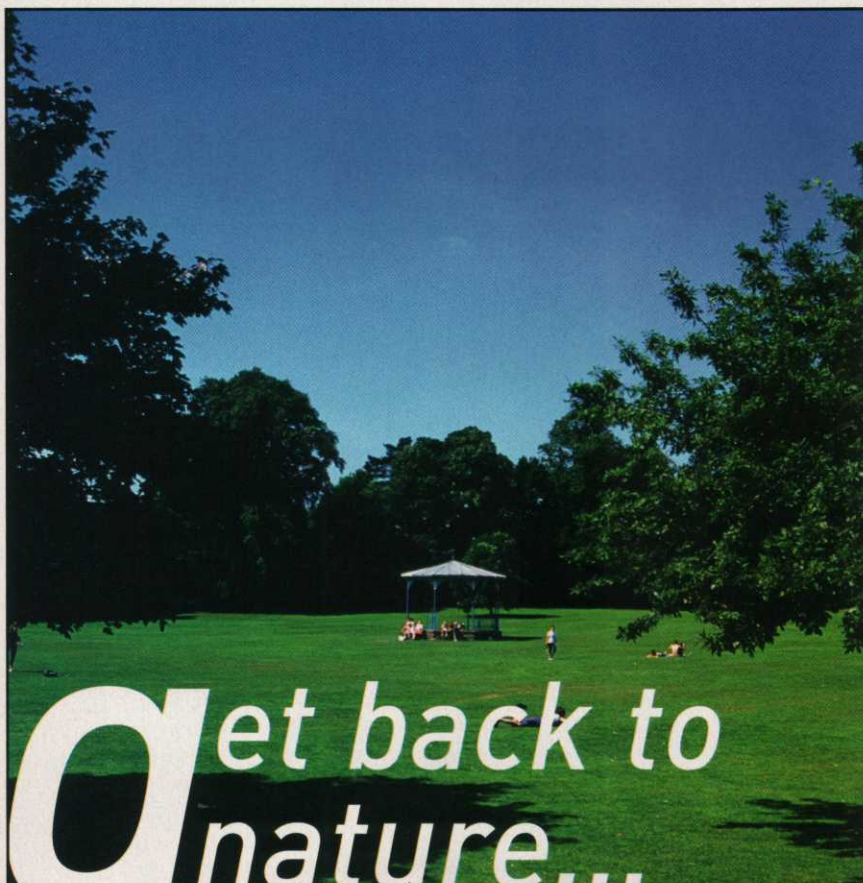
Robert Steinman, certified superintendent of Beekman CC in Hopewell N.Y., says he discovered he could more easily replace the 10 percent of the bunker sand he loses on an annual basis to wind and play by using his fairway topdresser. "It made the job go more smoothly and it saves labor costs year after year," he says.

Trench filling

Steinman also says he found his machine to be helpful in filling trenches created during a recent irrigation project.

"We have 40 acres of fairways, so it was big step for us to buy a machine strictly dedicated to the purpose of topdressing it," Steinman says. "But we were able to use it to fill up the trenches we dug when we replaced some irrigation lines recently. It was a huge timesaver."

Normally, the job would be done by five crew members with shovels, and it would take several hours to get



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it done, Steinman says. By making use of his fairway topdresser, the job can be done by two people.

All-purpose material handler

McNair says he uses his CR-10 to move dirt around the course when he needs to reconstruct waste bunker edges that erode.

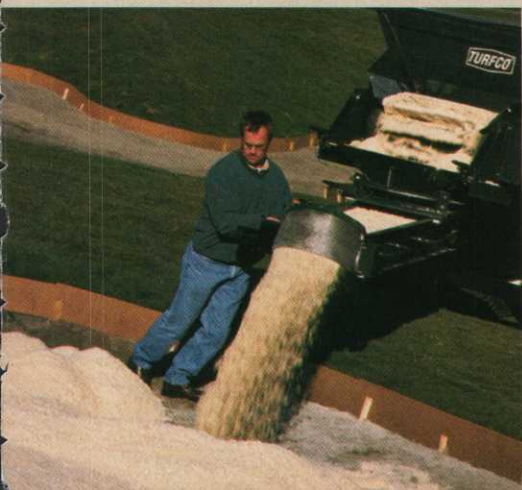
"It always occurs at the edge of the bunker nearest the green," McNair says. "That's the spot where golfers exit. When the edges erode, we need to go in there and rebuild them. I use our fairway topdresser to haul topsoil to the edge of the bunker to help me do the job."

He says he has also used his fairway topdresser to fill in washouts after bad storms. "We haven't had to do a lot of

causes less turf damage with its high-flotation tires.

Kinkead says Turfco's spreaders can also spread organic fertilizers, which is important as superintendents move toward using more of these products in response to environmental restrictions.

"Our goal was to create an all-in-one machine that superintendents can use for a variety of tasks," Kinkead says. "The feedback we've received indicates we have succeeded, and we'll be looking to create more uses in the future." ■



Filling bunkers used to require multiple workers to do the job, but using a fairway topdresser can reduce the crew to two.

that, but when we do we use our CR-10 to handle the material."

The fairway topdresser also functions as a mobile "nurse truck" for his greens topdressing program, which prevents his crew members from wasting time running back and forth to piles of sand dumped around the course, McNair says.

Steinman says that although his course owns a large dump truck, he'd rather use his topdresser to move materials around because it

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Nobody Could Have Predicted How Vital PGRs Have Become

BY KARL DANNEBERGER

Plant growth regulator (PGR) use has evolved from a niche product 20 years ago to an integral part of many golf course management programs. In the past, superintendents may have looked at a PGR application or two for the purpose of reducing mowings in tough-to-mow areas. Usually compounds like maleic hydrazide would provide rapid and long-term growth stoppage. The downside was fairly harsh activity on plant growth, including turf thinning, root loss and enhanced disease development.

In the early 1980s, mefluidide (Embank) found a niche on Northern golf course turf for suppressing *Poa annua* seed-stalk/seedhead development. The suppression of seedheads resulted in a more aesthetic-pleasing turf and a higher-quality playing surface. Two additional PGRs, flurprimidol (Cutless) and paclobutrazol (Trimmit), quickly followed suit and found a niche in creeping bentgrass/*Poa annua* fairway conversion. Applications were made once or twice a year at a fairly high rate to exploit the differential suppression of the two grasses. Once applied, *Poa annua* growth was suppressed to a greater extent than the creeping bentgrass. This allowed the creeping bent to grow over the top of the annual bluegrass. PGR applications during this time ranged from one to three applications yearly.

The development of trinexapac-ethyl (Primo) in the early 1990s ushered in a new era of PGR use. Trinexapac-ethyl in many ways catalyzed the use of PGRs beyond niche applications. Research showed that trinexapac-ethyl primarily and a few other PGRs could enhance the stress tolerance of turfgrass to both heat and cold, reduce growth with no detrimental affect to the plant and have no effect on disease development. Superintendents rapidly developed season-long PGR programs for both warm- and cool-season turfgrasses.

PGRs and bermuda

In the Southern United States, rapid bermudagrass growth during the heat of summer has always resulted in excessive clipping production. Clippings are also unsightly and when left on the turf may interfere with ball striking. From a physiological perspective, clippings left on the turf cause shading that impairs the photosynthetic efficiency of bermuda-



grass. PGRs not only reduce clippings through growth regulation, but provide dense bermudagrass turf.

Trinexapac-ethyl, and to a lesser extent paclobutrazol, are often applied on a three- to four-week schedule beginning with the initiation of bermudagrass growth in the spring and continuing through the summer. Where bermudagrass is overseeded in the fall, trinexapac-ethyl is used

to slow bermudagrass growth, providing a competitive advantage to the cool-season turfgrass.

On cool-season turfgrasses, PGR programs are implemented to reduce mowing on creeping bentgrass and creeping bentgrass/*Poa annua* turf. Where PGRs are used for clipping reduction, additional benefits include *Poa annua* seed-head suppression and prestress conditioning. Trinexapac-ethyl is applied through the growing season on a biweekly to monthly depending on the rate.

Battling *Poa*

If *Poa annua* seedheads are a concern, mufluidide is applied during early spring and timed to correspond with seedhead emergence. Currently, there is interest in combining trinexapac-ethyl and ethophon (Proxy) for seedhead control. Although based on a limited number of studies, recent research studies and selected experiments on Midwestern golf courses show promise for combining trinexapac-ethyl and ethophon for *Poa annua* seedhead suppression.

In California, the combination of trinexapac-ethyl and ethophon are commonly used throughout the growing season to suppress seedheads and reduce clippings on *Poa annua*. The combination rate used most is .25 ounces of trinexapac-ethyl per 1,000 square feet and 5 ounces of ethophon per 1,000 square feet.

Fifteen years ago, no one would have predicted how integral PGRs are in golf course management programs. Now, PGRs are not only used to reduce mowing costs but to enhance the aesthetics and health of the turf. ■

Danneberger, Golfdom's chief science editor, is a professor in the department of horticulture and crop science at The Ohio State University.

The Company Line

■ PRODUCTS & SERVICES



▲ Software

A new QuickView interface included with Toro's PRISM Pocket PC central control software eliminates the need for a map, enabling users to more quickly and easily take advantage of the software's many remote management functions.

With PRISM software on a Compaq iPAQ PDA, users can make fast, accurate changes and adjustments to a SitePro central control irrigation system without memorizing radio commands. The handheld device can be used to manually start stations, change station percent adjustments or put selected sprinklers on hold. In addition, users can review and adjust system data and download changes to the SitePro system.

For more information, contact 909-688-9221 or

CIRCLE NO. 200

Herbicide

Bayer Environmental Science introduces Revolver postemergent herbicide. The product is labeled for use on tolerant warm-season grasses, including numerous cultivars of bermudagrass and zoysiagrass.

The sulfonylurea herbicide contains the active ingredient foramsulfuron. It selectively removes unwanted cool-season grasses from warm-season grasses by disrupting the plant's production of three key amino acids. It can be applied up to four weeks prior to overseeding on warm-season grasses.

Revolver effectively controls: *Poa annua*, *Poa trivialis*, goosegrass, perennial ryegrass, bentgrass, bluegrass, tall fescue, henbit and centipede grass (suppression).

Application rates range from .1 to .6 ounces per 1,000 square feet.

For more information, contact 800-331-2867 or

CIRCLE NO. 201

Mowing system

National Mower offers its new Vertical Mowing System (VMS), designed as an attachment for the company's 8400 and 84VAN mowers.

The VMS provides an efficient answer for turf managers who want higher efficiency from vertical mowing equipment, according to the company. As part of the 8400 and 84VAN mowers, it handles tough areas

around bunkers, tee boxes and on banks and slopes. Its design gives it versatility for a wide range of tasks, including dethatching, stimulating root growth, overseeding preparation, and grain and runner control. It's also a great tool for vertical mowing fairways.

For more information, contact 888-907-3463, www.nationalmower.com or CIRCLE NO. 202



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CIRCLE NO. 146

The Company Line

Surfactant, soil amendment

Aquatrols offers two new products: Sixteen90 is a long-term surfactant that remains effective in the soil for up to three months, reducing water repellency and promoting turf uniformity. Caltrisal is a soil amendment that overcomes salinity issues in soils by moving desiccating salts away from the root zone quickly and efficiently.

For more information, contact 800-257-7797, www.aquatrols.com or

CIRCLE NO. 203

Training

Superintendent's Video Workshop (SWW) offers new two new training titles:

Tee Service covers the importance of well-maintained tees, including general maintenance, tee-marker placement, divot repair, accessories and practice tees.

Pruning Deciduous and Ornamental Trees covers how and why to prune young deciduous trees and shrubs, reasons for pruning, do's and don'ts, safety and maintenance of tools.

Also, *Golf & Environment*, a video trade magazine for superintendents, is enjoying



tremendous response to its recent conversion to CD-Rom as its primary distribution format. Subscribers can receive G&E on VHS videotape or on an easy-to-use Mac/PC-compatible CD-Rom. G&E is an hour-long program that consists of eight five-minute stories featuring tours of golf courses, interviews with superintendents, research, hot tips and a commentary by *Golfdom's* Pat Jones.

For more information, contact *EPIC of Wisconsin* at 800-938-4330, www.golfandenvironment.com or CIRCLE NO. 204

Trimmer

Standard Golf introduces a heavy-duty irrigation head trimmer with six interchangeable blade sizes designed to clear overgrown grass around irrigation heads and fairway bunkers. The new tool allows maintenance personnel to use the same handle and quickly attach one of

six blades sized from 5 to 10 inches.

For more information, contact 866-743-9773, www.standardgolf.com or

CIRCLE NO. 205

Sprayer

Echo's MS-100 Manual Sprayer

delivers reliability, power and control for commercial spraying jobs, according to the company. It's designed for faster and more accurate spraying of liquefied herbicides, pesticides and fertilizers. The backpack sprayer has a long-lasting enclosed piston and diaphragm pump.

For more information, contact www.echo-usa.com

CIRCLE NO. 206



Turf news

Milliken Turf Products offers the publication, *Keeping It Green, Proven Solutions and Programs for Golf Course Superintendents*. It details solutions to problems typically faced by superintendents who must meet today's demands for faster putting speeds while still being expected to provide superior playing and putting quality at all times.

For more information and to receive a copy of the publication, contact 1-800-845-8502.

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Biofungicide

Novozymes Biologicals offers EcoGuard biofungicide, a natural fungicide that provides effective dollar spot control that is good for the environment, the company says. The product, registered by the EPA, combines a patented microorganism and other natural ingredients for control of dollar spot, faster recovery from disease and protection from future infestations. EcoGuard helps superintendents reduce the cumulative chemical exposure on their courses and meet integrated pest management objectives when used in a recommended rotation program with standard chemical fungicides.

For more information, contact 800-788-9886, www.novozymes.com or CIRCLE NO. 207

Golfdom

April 2003

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- 01 10 Daily Fee/Public
- 02 20 Semi-Private
- 03 30 Private
- 04 40 Resort
- 05 50 City/State/Municipal
- 06 55 Other Golf Courses (please specify) _____
- 07 60 Golf Course Architect
- 08 70 Golf Course Developer
- 09 90 Golf Course Builder
- 10 105 University/College
- 11 115 Distributor/Manufacturer/Consultant
- 12 100 Others Allied to the Field (please specify) _____

2. Which of the following best describes your title? (fill in ONE only)

- 13 10 Golf Course Superintendent
- 14 15 Assistant Superintendent
- 15 25 Owner/Management Company Executive
- 16 30 General Manager
- 17 35 Director of Golf
- 18 70 Green Chairman
- 19 45 Club President
- 20 75 Builder/Developer
- 21 55 Architect/Engineer
- 22 60 Research Professional
- 23 65 Other Titled Personnel (please specify) _____

3. What is your facility's annual maintenance budget?

- 24 A More than \$2 Million
- 25 B \$1,000,001-\$2 Million
- 26 C \$750,001-\$1 Million
- 27 D \$500,001-\$750,000
- 28 E \$300,001-\$500,000
- 29 F \$150,001-\$300,000
- 30 G Less than \$150,000

4. If you work for a golf course, how many holes are on your course?

- 31 A 9
- 32 B 18
- 33 C 27
- 34 D 36+
- 35 E Other (please specify) _____

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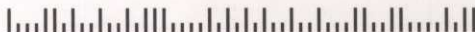
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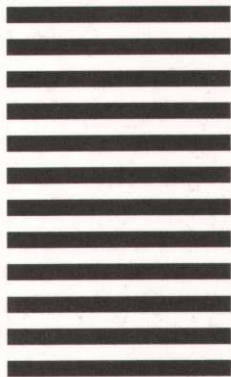




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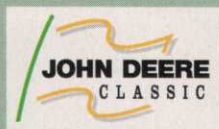
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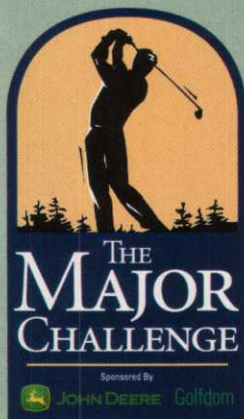
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