

## Deserving two thumbs up!

Brown Deer facelift a success for Bob Stock

MILWAUKEE — Brown Deer Golf Course was once ranked among the top public facilities in the United States. Now the course is pulling out all the stops to return to its former glory.

In the late 1970s, *Golf Digest* rated Brown Deer as one of the nation's 10 best public golf courses. Unfortunately, outdated irrigation and drainage systems took their toll on the course. Fairways and greens began to deteriorate, and the course fell out of favor with local golfers.

Under the direction of superintendent Bob Stock, Brown Deer is making a comeback. New irrigation and drainage systems have led to improved turf conditions. Bentgrass fairways have replaced bluegrass.

Stock hopes these efforts will regain the course's prominence.

"Our goal is to bring the course back to what people grew to expect from its national reputation of excellent conditions," he said. "We want to get tournaments again, such as the U.S. Amateur Public Links Championship." Brown Deer was the site for the 1977 championships.

### \$2 MILLION RENOVATION

Milwaukee County began its \$2 million renovation in 1987. Spurred by an analysis conducted by a course architect, the county decided to update the drainage and irrigation systems, as well as the fairways.

"We may not have used the architect's plan 100 percent, but he gave us an understanding of where golf is today and where it is going," Stock said. "His study laid the groundwork for us about what our next steps should be.

"When I arrived here in 1986, the course needed considerable up-

grading. The drainage system was nearly 60 years old, and the 40-year-old irrigation system was antiquated at best."

Stock and his crew used Band-Aid measures to keep the course going until conditions became so bad that play became impossible. Soon after Stock took over at Brown Deer, drainage heads collapsed, flooding fairways, traps and greens.

"We had a soup bowl with a 200-foot drop on one side of a creek," Stock recalls. "There was no positive drainage. Anytime it rained, there was ankle-deep water. Over 20 sandtraps had to be pumped out after each rainfall."

The county reacted to the drainage problem in 1987 by revamping the old tile drainage system. Two thousand feet of cement drain tile was installed to control overflow from rain.

Now, with a built-in, positive swale drainage system, the course drains out within an hour, Stock said.

Step two involved the irrigation system. As it was in 1987, the system could only water two greens at a time without shutting down. Eventually, the system failed completely.

The county installed a \$500,000 double-row network irrigation system that discharges 1,050 gallons of water per minute.

It also dug out a three-quarter acre irrigation pond with its own pumping station. Despite the overhaul, the classic layout of the course did not change, Stock said.

### BENTGRASS CONVERSION

Stock consulted amateur and PGA professionals about converting fairways to bentgrass. He de-



Brown Deer's fairways were converted to bentgrass.

ecided to make the switch.

"The bottom line is, we would never get any tournaments without bentgrass," he explained.

Once the decision was made to convert the fairways, Stock had three options:

- Slit-seed bentgrass seed and spray glyphosate, a non-selective, post-emergence herbicide on the fairways as a burn-down treatment.
- Aerify fairways two to three times a year for several years. Stock's crew would mow the grass close each year, while overseeding bentgrass.
- Continuously overseed bent.

"We decided to spray glyphosate. Over the long run, it was less expensive, took fewer man-hours and provided quicker, and better, results than the alternatives," Stock said. "One benefit with aerifying the fairways is that the course would have remained open."

Instead, Brown Deer was closed for nearly three months. Stock and his crew slit-seeded the fairways with Penncross bentgrass seed a day before applying glyphosate. They applied Roundup herbicide

at three quarts per acre with a 15-foot boom sprayer. The edges of greens were also treated.

"Glyphosate is really the way to go. It's a one-step process instead of waiting two to three years for overseeding," Stock said. "Ten to 14 days after application, we saw the results."

Stock has changed his maintenance program since the conversion. His crew now uses light-weight mowing equipment.

It also plans to cut the number of mowings in half.

### SHORT- AND LONG-TERM

Public reaction to the renovation has been positive, despite the fact the course had to be closed.

"People were more frustrated when things weren't getting done. Overall, we're proud of what we've done and plan to keep on going to get the course back into the top 10," Stock said.

Ongoing and future projects include: adding cart paths, creating a driving range, replacing bridges, and converting tees to bentgrass, Stock added.

## Research green

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application rates. "We noticed some major differences at certain times of the year and almost no difference at other times," Elliott said.

• Two fungicides, mancozeb and chlorothalonil (Daconil 2787), are the most effective in controlling blue-green algae.

• The best way to control root-zone degeneration on Tifway 328, one of the older Bermudagrasses, was simply raising cutting heights from 3/16- to 1/4-inch. Fungicides and fertilizers had little effect.

Other studies underway are designed to test the effects of 1990s maintenance practices on grasses developed in the 1960s and 1970s. These include:

• Tracking pesticide movement through a USGA-spec green. Drs. George Snyder and John Cisar are concentrating on insecticides and nematocides.

• A root biostimulant study testing whether various organic fertilizers improve turf quality and increase rooting. Among the products being tested are Milorganite (composted sewer sludge); three products — Eco, Sustain and Ringer — that consist of composted organic materials such as turkey feathers and bone meal; and natural cytokinin-like materials made from sea kelp.

"Because of today's low cutting heights, we're losing grass on many greens," Elliott said. "These products could help."

Portions of the two greens have been set aside to study existing grasses as well as experimental cultivars and varieties that researchers hope "will help us find a Bermudagrass that needs no overseeding, retains its color and is tolerant of low cutting heights," Elliott added.

Eight 500-square-foot plots containing currently marketed Bermudagrass strains have been provided by sod producers in Florida and Georgia. They allow superintendents to visually compare the characteristics of today's varieties. Two more plots are planned.

Several USGA-sponsored experimental grasses and a United States Department of Agriculture-funded Tifdwarf will be sprigged into the newer green shortly after the April 1 Field Day, Elliott said.

Much of the money to maintain the research greens and pay staff is raised during the field day and exposition. The major exhibitors, Elliott said, are DeBra Turf Co., a Jacobsen distributor; Hector Turf Co., a Toro distributor; Pifer Inc.; and LESCO.

Jacobsen, Toro and John Deere have donated equipment, and the Florida GCSA and USGA have provided additional funding.

The purpose of the green is to provide a field research laboratory that simulates a Southeastern U.S. putting surface. Research will include evaluation of new products, development of new management practices and studies of the environmental impact of turf management practices.

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