### MAINTENANCE

BRIEFS



### SHIRLEY IS GEORGIA PRESIDENT

William Shirley of Idle Hour Club in Macon is the new president of the Georgia Golf Course Superintendents Association. Shirley is joined on the board by Vice President Mark Esoda of Atlanta Country Club and Directors Jim Dusch of Atlanta National Golf Club, Mike Hamilton of Harbor Club, Ralph Hinz of The Landings, Bob Perry of Griffin Country Club, Chuck Underwood of Northwood Country Club, Stephen Wilson of Druid Hills Golf Club, and Franz "Buck" Workman of Valdosta Country Club.

#### **N.C. TURFGRASS EVENT PLANNED**

RALEIGH, N.C. - The Professional Turfand Landscape Field Day will be held at the Turfgrass Field Laboratory (Field Center) on May 12. This North Carolina State University event is jointly sponsored by the Turfgrass Council of North Carolina and the North Carolina Landscape Contractors Association. For more information contact TCNC at 919-695-1333.

### LONGVIEW TURF PROGRAM ACCEPTED

Longview Community College's grounds and turf management program has been officially accepted as an asso-

ciate degree program by the Coordinating Board of Higher Education in



the state of Missouri. Training coordinator Allen L. Earle said: "I feel very strongly that this program will be very beneficial to anyone involved in the 'green' industry. Currently, there is no horticulture degree program in the Kansas City area. It is our desire to present the highest quality training that will be pertinent to 'real-life' experiences."

#### **N.C. EVENT BREAKS RECORDS**

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The 31st Annual North Carolina Turfgrass Conference & Show shattered all previous records, according to Tom Bland, president-elect of the Turfgrass Council of North Carolina. Bland attributed the success to a combination of factors, a total-event marketing plan. Twentytwo hundred and fifty turf industry professionals participated in more than 20 hours of educational programs focusing on effective turf management and environmental stewardship based on integrated pest management. Attendance was up 501 over last year's event. The 10th Anniversary industry Trade Show boasted 159 companies exhibiting in 350 booth spaces. The previous show record was 302 booth spaces. Bland said most significant, he said, was the \$66,000 in cash contributions to the Research Endowment and Foundation



The University of Florida's new research green in the background was added last fall next to the old green. The Envirocaster system in the foreground, which collects weather data, is in the center of the old green. The hybrid Bermudagrass cultivar Tifgreen 328, on the left, and Tifdwarf, on the right, are maintained at 3/ 16-inch height. The new green is being planted with Tifdwarf.

# Florida research green sheds light on effects of maintenance

#### By PETER BLAIS

he University of Florida's research green in Ft. Lauderdale

has yielded interesting findings regarding the effects of nitrogen levels, various fungicides and maintenance practices on Bermudagrass putting surfaces, according to researchers and course superintendents.

New and ongoing studies involving pesticide movement through turfgrass, organic biostimulants and experimental Bermudagrass cultivars should help Southern superintendents grow stronger turf in the not-so-distant future, according to Monica Elliott, the university's Research and Education Center coordinator.

"The research green project has been very well received and well supported so

**RICKY WIDEMAN** 

Harbor Town Golf Links

far," said Kevin Downing, superintendent at nearby Willoughby Golf Club. Downing is also chairman of the Florida Golf **Course Superintendents Association** committee that spearheaded development of the Otto Schmeisser research green. The facility opened almost two years ago.

Elliott listed some of the early findings on the original 20,000-square-foot USGAspec green and the new 10,000-squarefoot, 85-15 (sand-to-organics) root-zone mix addition added last fall:

· Synthetic nitrogen levels can be reduced a moderate amount without adversely affecting turf characteristics, although extremely low application levels do cause a dropoff in quality. Researchers tested low-, moderate- and high-

Continued on page 15

# **Tour of Duty**

**DEAN CROUCH Forest Oaks Country Club** Greensboro, N.C. K-Mart Greater Greensboro Open April 22-25, CBS

Dean Crouch, 31, came to Forest Oaks in 1989 from the prestigious Atlanta Athletic Club, where he served as assistant superintendent. Prior to that, he cut his teeth at Indian Hills Country Club in Marietta, Ga. Though he's a native of Columbia, S.C., Crouch is not a fan of University of South Carolina Gamecock red & black. He greatly prefers the bright orange of Clemson University, where he earned his B.S. in plant sci-

Things to look for: "The biggest difference in the course is we just reconstructed the 18th green this past fall. Architect Clyde Johnston handled it with Fuzzy Zoeller consulting. We tried to do

several things. We wanted to pick up more pin placements, and we lowered the green 3 feet to give players the feeling they were Continued on page 20



## Of putting greens and reel grinders

By TERRY BUCHEN

One of the more "fun" aspects of being a golf course superintendent is to modify equipment to suit personal tastes, sharing tricks of the trade with our peers, and the art of time/motion studies

With these thoughts in mind, I'd like to share a few new ideas in golf course management.

#### PUTTING GREEN CONSTRUCTION

One easy way to be able to locate the delineation of the native soil and USGA greens construction profile is to lay a 14-gauge irrigation wire completely around the green subsurface and attach both ends to the left-front irrigation head. Whenever the greens/collar edge is needed to be located, attach a wire-locator instrument to the wires and the exact edge can be found fast and easy, instead of using a soil probe to try and find the greens soil mix. We did this at Double Eagle Club on all of our greens during construction two years ago and it works great. In years to come, as any mowed edge gets

Editor's note: This is the first installment of a new monthly column we will print to provide helpful hints to golf course superintendents.

Continued on page 16

**MIKE LINK** TPC at the Woodlands The Woodlands, Texas **Shell Houston Open** April 29-May 2, ABC

Mike Link, a 34-year-old native of Ponca City, Okla., came to the Woodlands after

serving as assistant superintendent at the 27hole River Plantation Country Club in Conroe, Texas. He is a 1980 graduate of Oklahoma State University with a B.S. agronomy.



Things to look

for: "It's been awfully wet here the last three years. I've been trying to apply a pre-emergent herbicide this week (March 5-9) and the rain has delayed that. Weather is the biggest headache for us. I have a game plan that I go by and, if the weather cooperates, everything goes like clockwork. If it doesn't you go to plan B, which can be pretty hectic. I've worked 12 events, so I've gotten to know the Tour officials pretty Continued on page 20

ence.

ment are closely related. "The best thing is everyone coming together to do the job right. The worst thing is the letdown afterwards. Everybody works so hard, and when it's over, we all get the post-tournament blues."

Things to look for: "We just went through a three-month renovation project, installing a new irrigation system and cart Continued on page 20



Hilton Head Island, S.C. **MCI Heritage Classic** April 15-18, CBS Ricky Wideman was familiar with the nooks and crannies of Harbor Town long

before he arrived in Hilton Head two years ago from Palmetto Dunes. Wideman used to crew at Harbor Town during the Heritage Classic while a student in the turf program at Horry Georgetown College in Myrtle Beach.



# **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, GolfDigest 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 upgrading. The drainage system was nearly 60 years old, and the 40year-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 200foot 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-rownetwork 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-



cided 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 bentorass

· 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

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at three quarts per acre with a 15foot 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 lightweight 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 Continued from page 13

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 rootzone 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 nematicides.

· 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 Agriculturefunded 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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