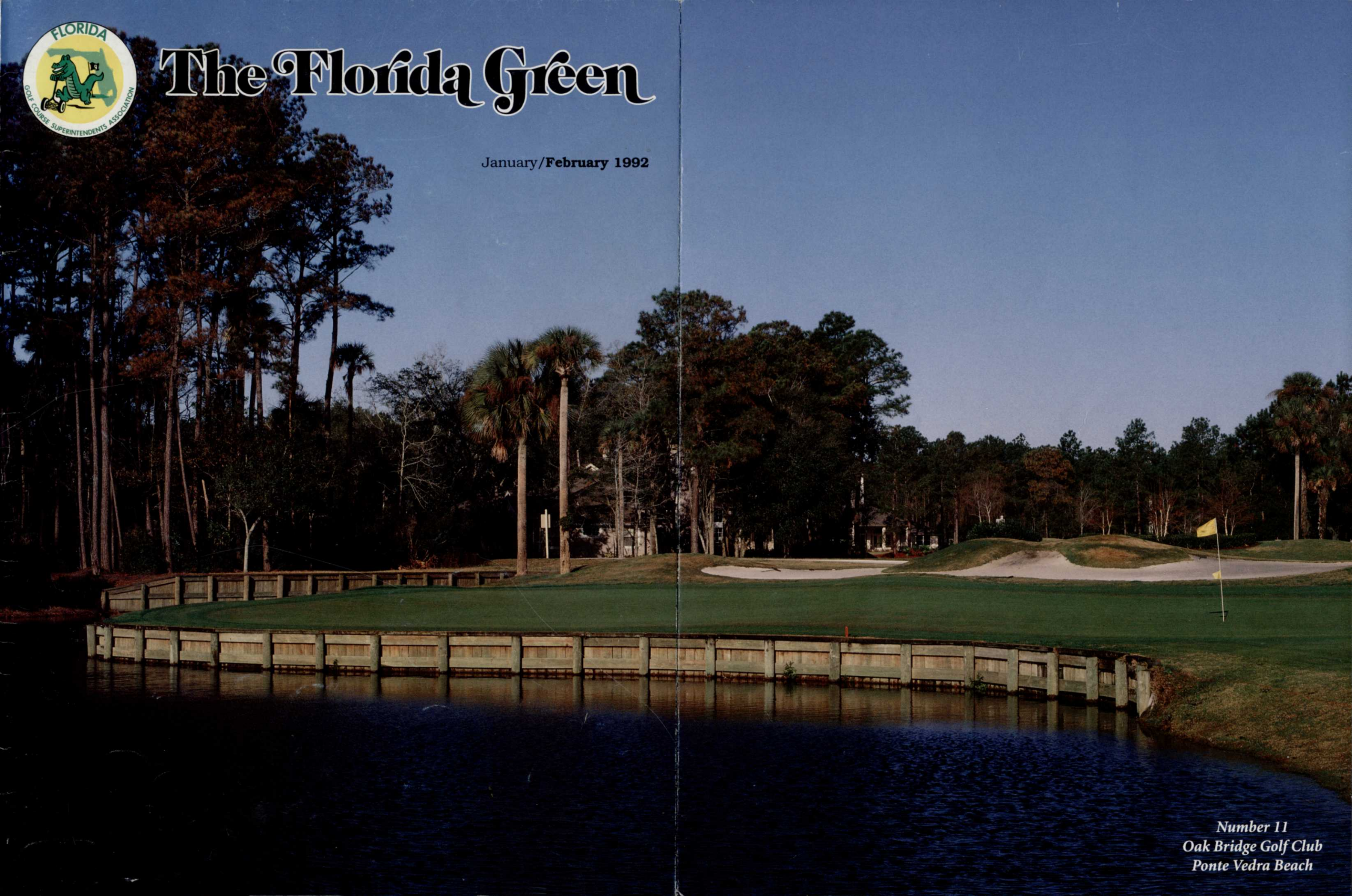




The Florida Green

January/February 1992



*Number 11
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Ponte Vedra Beach*



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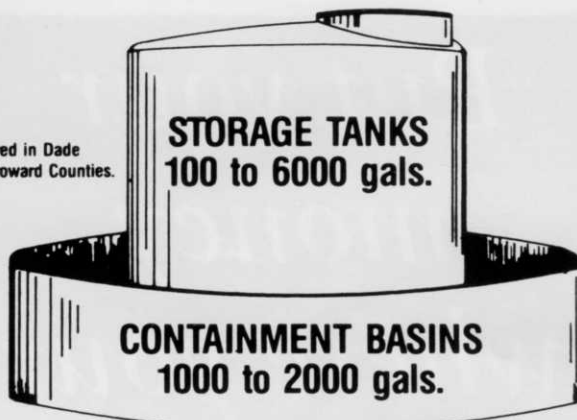
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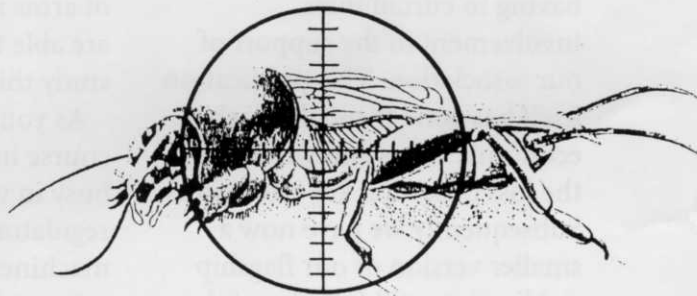
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Greetings. Here's hoping that you will have a more prosperous and productive new year than the one just completed. They say that as you get older the years get shorter. I gotta' believe, however, that last year couldn't get over soon enough.

What a miserable year. The economic downturn that politicians were eager to call a recession is getting closer every day to a depression, especially if you are the one who just lost his job.

It has had an impact on the operation of many clubs and companies in the golf industry with several of them

having to curtail their involvement in the support of our association. This publication itself has gone through tough economic times and witnessed the loss of several key advertisers. Subsequently we have now a smaller version of our flagship publication, still full of useful information for the superintendent, but not as extensive. Hopefully, the economic cycle will soon swing back the other way and things can get back to normal.

Things could be worse, however, if not for the diligent efforts of groups such as the Florida Golf Council, the FTGA and the FGCSA. Taxation of memberships, minimum spending and other aspects of normal club activities was

successfully fended off by the vigilant Bobby Brantley of the Florida Golf Council.

The end run by the utility industry through the DER to force golf clubs not only to take wastewater but to pay dearly for it has been slowed down by the work of the FGCSA. This is, however, an issue that won't go away. Pressure from the regulatory arena will intensify and much remains to be done on this subject.

The FTGA has been successful on many fronts. One of the key efforts has been working with the Florida Golf Council in securing funds for a survey for a survey of the economic status of the turfgrass industry in our state. This survey is long overdue and it is through the financial support of the FTGA and its members and through twisting of arms in Tallahassee that we are able to begin this important study this year.

As you can see, we in the golf course industry are extremely busy in working with the regulatory and political machinery in this state to create rules and implement projects we all can live with and benefit from.

We cannot do this alone. We need your support.

If you are not a member of the FGCSA, FTGA or Florida Golf Council, you should join. Even if you don't have the time to participate, your membership fees will work for your own benefit. So please do the right thing and give us a call and put your money where your needs are.

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ROUNDUP

ALSO

GCSAA's 63rd annual International Golf Course Conference and show will focus on pesticide use. 8

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Turf Quiz Answer

Replacing the turf and soil on this slope was no answer to solving the problem.

Severely compacted soil could not absorb water. Runoff was almost 100%. Aerifying the lawn five times sufficiently loosened the soil, so that it reduced runoff to zero.

Terrace was then replanted along with the lawn. Soil remained in place. Runoff can be an unseen problem on tees, fairways and greens. Check infiltration rates to guard against this hidden problem.

TPC at Sawgrass rebounds to win PGA Tour accolades

Harshly criticized a year earlier by pros unhappy with ragged playing conditions, TPC at Sawgrass rebounded to win recognition as the top-conditioned resort course on the 1991 PGA Tour in a recent *Golf Course News* survey of tour players.

A single vote was the winning margin for the Ponte Vedra course, site of The Players Championship in late March. Sawgrass edged out Callaway Gardens CC of Pine Mountain, Ga., first-year host of the Buick Southern Open.

"We accomplished our goal," said Fred Klauk, TPC superintendent. "We were on a mission to prove to the players that their flagship club was something they could be proud of."

Sawgrass was featured on the cover of the spring 1990 issue of *The Florida Green* cover just after the 1990 Players Championship. The course had been ravaged by winter storms shortly before the event and the story chronicled Klauk and his crew's efforts to bring it back in shape. Despite their best efforts, playing conditions were less than ideal and players were outspoken in voicing their displeasure.

Klauk gained widespread support from golf course superintendents around the country when he agreed to be interviewed about course conditions during the nationwide telecast of the event.

Reseeding, tree trimming and additional workers brought the course back into tournament shape. Greg Norman, one of the most vocal critics in 1990, called the 1991 edition of Sawgrass "perfect."

"It was in perfect shape, from tees



Fred Klauk, TPC superintendent

through fairways through greens," said 1990 PGA Tour Player of the Year Wayne Levi. "The practice area was immaculate, the practice area tees better than many Tour fairways."

"We got control of some of the variables that we didn't have before," said Klauk. We limited play on the course to six days a week, 150 rounds per day, closed for overseeding in October and closed for a week before the tournament. All those things contributed to the outcome and the commissioner (PGA Tour Commissioner Deane Beman) is to be commended for getting them accomplished."

FTGA will return to Jacksonville for '92 Conference & Show

The Florida Turfgrass Association will return to the Prime F. Osborn Convention Center in Jacksonville for the 40th annual convention and trade show Sept. 20-23.

Last year's meeting — the first in Jacksonville for several years — drew more than 2,000 visitors, making it the turfgrass industry's largest convention in the Southeast.

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GCSAA's 63rd will host 16,000 in New Orleans

A discussion on pesticide use on the golf course may prove to be the focal point of the GCSAA's 63rd International Golf Course Conference and Show in New Orleans Feb. 10-17.

The discussion will highlight the Environmental General Session scheduled Feb. 14, midway through the eight-day conference expected to attract a record crowd of more than 16,000 from as many as 50 countries.

Other highlights will include a keynote speech by NFL Hall of Famer Terry Bradshaw, a three-day trade show featuring nearly 600 different exhibitors, and a gala concluding banquet featuring presentation of the GCSAA's Old Tom Morris Award to golfer Tom Watson followed by entertainment by singer Kenny Rogers.

The first four days of the convention (Feb. 10-13) are filled with more than 60 seminars, workshops and other educational sessions.

Six concurrent educational sessions are scheduled for the morning of Feb. 14, three of them concluding with the Environmental General Session beginning at 9:40.

Golf courses spent \$3.4 billion in '91 for maintenance

Golf courses in the United States spent an estimated \$3.4 billion on golf course maintenance in 1991, according to a recent study released by the Center for Golf Course Management, a research subsidiary of the Golf Course Superintendents Association of America.

The study looked at total annual maintenance expenditures, including labor but excluding capital expenses, at 1,164 golf courses. The number of courses involved in the study represents about 9 percent of the 12,846 golf courses reported in the 1991 edition of the National Golf Foundation's *Golf Facilities in the United States* report.

"This information is exceptionally important," said GCSAA President Stephen G. Cadenelli, CGCS, explaining that legislators and regulators seriously consider such data when dealing with laws affecting any industry.

Based on the survey, the projected annual total maintenance expenditure estimates incurred by each facility classification group: Nine holes, \$471 million; 18 holes, \$2.4 billion; 27 holes, \$251 million; 36 holes, \$207 million; and 45 or more holes, \$72 million. The estimated expenditures total more than \$3.4 billion.

The CGCM will offer a variety of marketing research services and publications at the 63rd International Golf Course Conference and Show Feb. 10-17 in New Orleans.

All of CGCM's 1990 and 1991 marketing research reports will be available for purchase during the show.

USGA Green Section offers turfgrass advisory service to public golf courses

More than 50 public golf courses around the country already have taken advantage of the USGA Green Section's offer to provide a full-day turf advisory service visit by an expert agronomist at the half-day price of \$700.

"It actually costs the USGA \$1,500 per visit to provide this service," said Raymond Anderson, chairman of the USGA Green Section Committee. "We hope that by providing our expert agronomic advice to public courses at a reduced price, we can help to improve the quality of playing conditions for many of the nation's public golfers."

The offer is available only to public golf courses, defined as courses that accept green fees from the general public and do not have a membership that owns the course. Only public courses that have not used the TAS during 1989, 1990 or 1991 are eligible. For more information, please phone the USGA Green Section at 407-546-2620 or write to 8908 S.E. Colony St., Hobe Sound, FL 33455.

14 Florida golf courses honored for promoting public golf

Fourteen golf courses in Florida have been recognized by the National Golf Foundation for excellence in promoting public golf in their communities.

They are among 80 facilities around the country to receive the NGF's Public Golf Achievement Award for 1991. Created last year, the award program is part of an effort by the Foundation to underscore the importance of public golf.

In June, the NGF invited its members facilities to share their best educational and promotional programs in such areas as etiquette, speed of play and instruction.

Efforts to upgrade the quality of the courses themselves were recognized as well.

The recognized Florida courses: Clearwater - Airco GC; Cocoa Beach - City of Cocoa Beach GC; DeBary - DeBary Plantation GC; Delray Beach - Delray Beach GC; Jacksonville - Windsor Parke GC; Jupiter - Jupiter Dunes GC; Melbourne Beach - Spessard Holland GC; New Smyrna Beach - New Smyrna Beach GC; Orlando - Marriott's Orlando World Center; Orlando - Metro West CC; St. Petersburg - Mangrove Bay GC; St. Petersburg - Twin Brooks GC; West Palm Beach - Emerald Dunes GC and West Palm Beach - West Palm Beach CC.

Crossing the Bar

Col. Harry C. Eckhoff, who helped foster the development of more than 5,000 golf courses in a 31-year career with the National Golf Foundation, died at his home in Lake Park, Christmas Day. He was 88.

Gerald L. "Jerry" Zachariah, vice president for agriculture and natural resources at the University of Florida, died Dec. 20 at Shands Hospital in Gainesville after suffering a heart attack late that same Friday afternoon. Zachariah, 58, was responsible for the 22 research and education centers under the Institute of Food and Agricultural Sciences — better known as IFAS.

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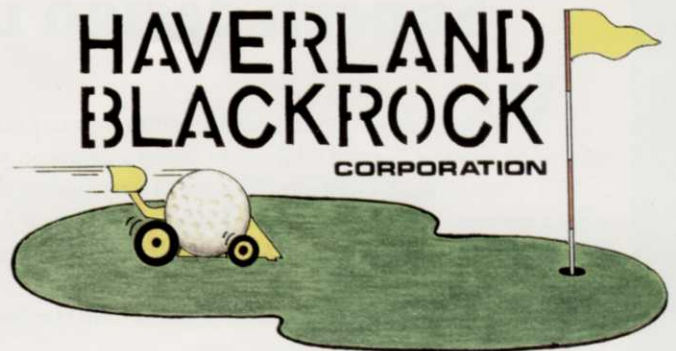
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— Eddie Snipes, CGCS



Superb design in water and sand

BY LARRY KIEFFER

When Eddie Snipes landed a \$2.50-an-hour job as a laborer with the city of Jacksonville Beach in June 1974, he just wanted to support himself while completing a degree in psychology at the University of North Florida.

“I’ll never forget my first day,” he says. “I was standing there and this guy drove up in a pickup truck and asked me if I knew what a tee was. I said I wasn’t sure. Then he asked me if I knew what a green was and I said I thought so.

“‘Then why do you want to want to work on a golf course?’ he asked. ‘I didn’t know that’s where the job was when I applied for it,’ I replied.”

That was Snipes’s introduction to golf and John Hayden, a winner of the 1991 President’s Award for lifetime achievement

Challenge —



Photos by Brian Everhart

Number 17

JANUARY/FEBRUARY 1982

as a golf course superintendent. Hayden was superintendent of the Jacksonville Beach Municipal Golf Course and he became Snipes's mentor.

"My first job was to ride around the course in the back of a '63 Dodge pickup truck with another guy and rake all the traps by hand," he recalls. "They wouldn't even let me drive the truck."

And now Eddie Snipes, CGCS, is well into his third year as superintendent of the Oak Bridge Club, one of the posh, private Arvida clubs at Sawgrass in Ponte Vedra Beach and host of the 1992 GCSAA Championship.

From hand-raking the traps, Snipes "picked up on things and sort of became the utility guy — I could do just about anything that needed to be done." He was the course mechanic when he left Jacksonville Beach Muni after four and a half years.

He'd also learned how to play golf with the help of a set of Hogan Apex clubs he bought for \$60 "from a guy who sold them out of the back seat of his car."

"I'm one of the people who enjoy golf strictly for the sake of playing a game and being out of doors," says Snipes, who lists golf as his principal leisure activity. An achilles tendon injury early this year ended a budding career in flag football.

"I guess I'll concentrate on being a good father and uncle," he says.

When Hayden became superintendent at San Jose Golf Club in Jacksonville in 1977, Snipes went with him as "utility man."

Oak Bridge Golf Club

Ownership: Arvida/JMB Partners.

Playing Policies: Private; 28,000 rounds a year (some tee times reserved for guests at Marriott Resort)

Design & Construction: Original design by Bill Amick in late 1960s. Renovated in 1987 by Ed Seay and Eighteen Construction. 6,383 yards from back tees; par 69, course rating 70.3, slope 126.

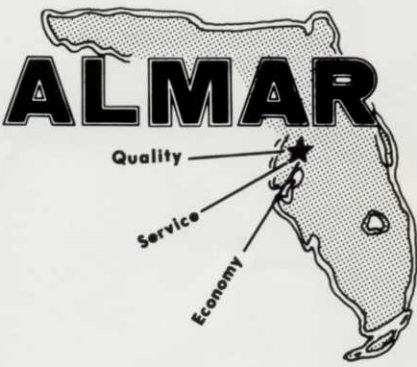
Turf: Greens average 4,000 square feet, Tifdwarf overseeded with poa trivialis and bentgrass (14:1); tees and fairways (28 acres) in Tifton 419 bermudagrass overseeded with perennial rye; roughs in Tifton 419 maintained at 1½ inch.

Hazards: 72 sand bunkers; water from one lake and meandering canal comes into play on 13 holes.

Irrigation: Toro Vari-Time II electric system with "about 600" heads. Source is treated effluent.

Maintenance crew: 14 including superintendent, assistant, mechanic, two landscape technicians, spray technician, irrigation technician.

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- Retains dark green color in winter
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- Provides a smooth spring transition
- Performs well in damp soil
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Number 6

When Snipes was graduated from UNF with a B.A. in psychology in 1978, Hayden offered him the job as assistant superintendent.

"I had thought I was going to make a career in criminal justice, possibly counseling offenders, but as I talked to people

in that field, it seemed to me that they weren't getting much accomplished. Most of their time was spent pushing papers around, documenting facts."

He accepted Hayden's offer and has never regretted the decision.

In 1983, he became superintendent at

Selva Marina CC and on July 17, 1989 — two months after earning his certification — he took over at Oak Bridge.

"This is a great golf course," Snipes says with unabashed pride of the course designed by Bill Amick in the late 1960s and redesigned by Ed Seay in 1987. "If



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you can score on this course, you can play the game of golf.”

Although it's short — 6,383 from the tips — the course carries a USGA course rating of 70.3 and a slope of 126.

“The front nine is pretty straightforward, but you'd better not go to sleep,” Snipes says. “You'd better be conscious when you make the turn because the back side comprises the best nine holes of golf I've ever played.”

Two holes — the par-five 11th and par-three 17th — were included in North Florida's “Dream 18” selected by the *Florida Times-Union*, Jacksonville's daily newspaper. Keep in mind that the area includes the likes of The Ravines, Amelia Island Plantation, the TPC and several other famous courses.

Speaking of the neighboring TPC, also part of the Sawgrass complex, superintendent Fred Klauk, a perennial member of the Florida team in the annual GCSAA Championship, is club champion at Oak Bridge.

The challenge at Oak Bridge comes from two factors common to Florida courses but more abundant here than at most: sand and water. The course sports 72 bunkers and water comes into play on 13 holes.

If the golf challenge is typical of Florida, the maintenance challenge isn't. The high organic clay soil of the area limits percolation.

“Water management is a real challenge,” he says. “In winter, it can become a nightmare, especially with our shady greens and fairways. It takes minimal amounts of rain to really get water moving and since seven-eighths of this place is surrounded by water, we have to be extremely careful when we spray anything.”

Even if water movement weren't a problem, however, Snipes says he is “not one to spray just for the sake of spraying. I try to use a minimum of chemicals and wait until there is something we really need to go after and can't get at it any other way.”

“Just because the label says you *can* spray every 14 days doesn't mean you *have to*,” he says. “Often a mechanical or cultural treatment will do just as well.”

To help combat the problems created



Number 12

by his unique soil conditions, Snipes double-spikes the greens weekly in winter and runs a light topdressing program through the spring.

Oak Bridge is irrigated with treated effluent it gets free from the St. Johns Utility Service. In fact, Arvida's contract with the service requires it to provide a means of disposing of all wastewater created by its developments.

“I think (FGCSA President) Tom Benefield has hit the nail on the head with his campaign against charging golf courses for using treated effluent water,” Snipes says. “It's double taxation.”

Snipes manages the golf course with a crew of 14, counting himself. He reports to General Manager David Glass, who also supervises Arvida's Jacksonville Golf and Country Club and a beach club.

Although managing Oak Bridge is

challenging, Snipes wouldn't have it any other way.

“I like the nature of this beast,” he says. “This job gives you everything you could want — challenge, responsibility, opportunity for leadership. Every day I learn something and I'm an educator at the same time.”

“This job is a life style. You give up your weekends and holidays but it makes you a more complete person.”

“Sometimes, when I'm riding the course in the afternoon before going home, a group of members — often a family — will flag me down and tell me how much they appreciate what we do.”

“To see them out there enjoying something you have helped produce — how could you have a greater reward than that?”

E.R. Jahna Industries

Sand company's golf market share growth reflects involvement with FGCSA chapters

They call him the Sand Man but you'll never see him sleeping.

Not with seven Florida GCSA chapter meetings to attend every month and 500 golf courses to keep supplied with sand.

Joe Johnson, Emil Jahna's ambassador to the golf course industry, has seen a lot of changes to the industry since he joined the Lake Wales firm in 1973.

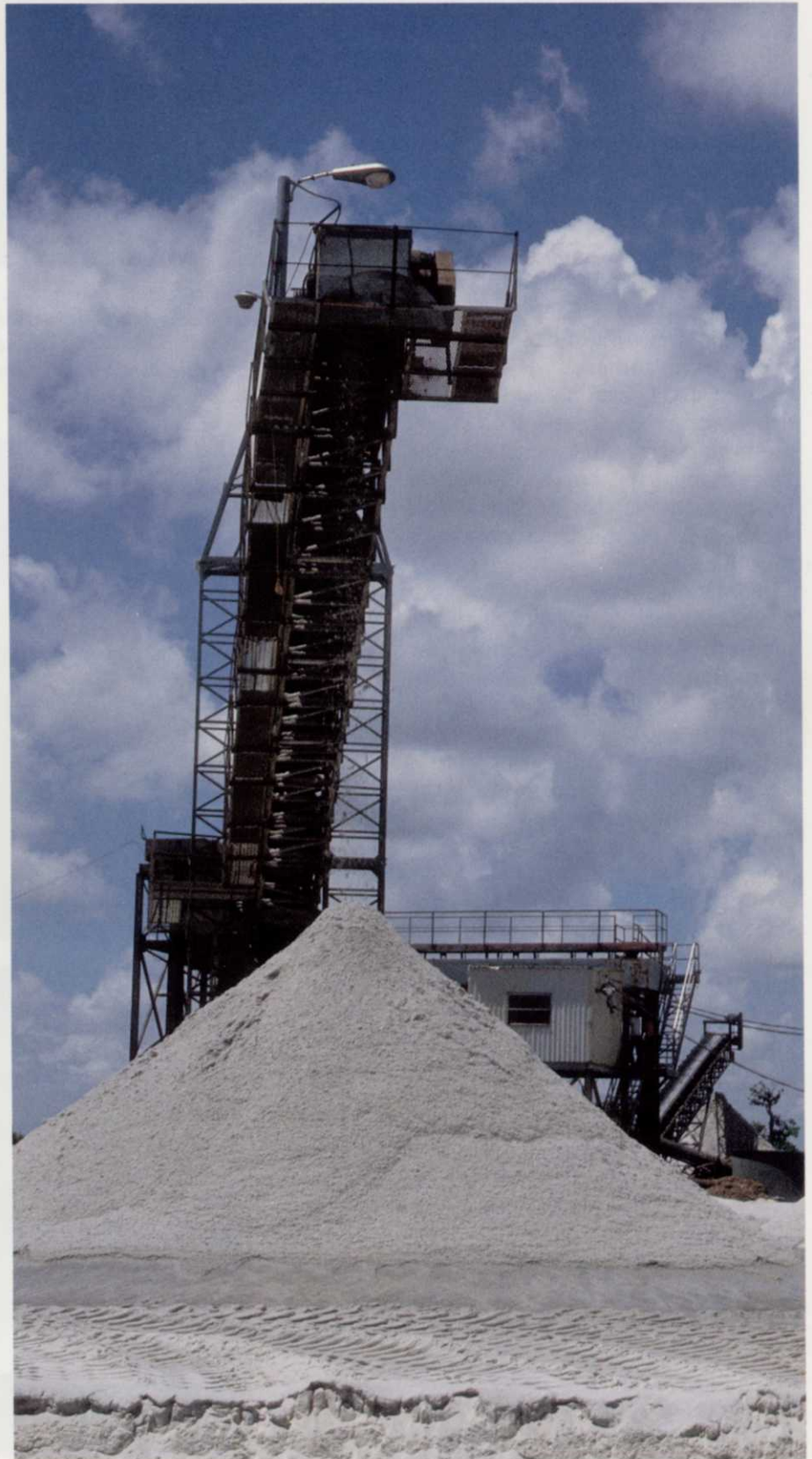
"Golf course construction is a heck of a lot more sophisticated now than it used to be," says Johnson, a retired submarine navigator. "Superintendents are much sharper — they're more dedicated and better educated. They sure are a lot smarter."

Bear's Paw CC in Naples was Johnson's first customer; Everglades GCSA, which serves the south Gulf Coast, was the first superintendents' association he joined. Soon he picked up two more Jack Nicklaus courses in Palm Beach County — Loxahatchee and Bear Lakes — and it was about that time that the Palm Beach GCSA broke off from the South Florida GCSA. Johnson joined both.

Now he also belongs to the Treasure Coast, North Florida, Central Florida and Florida West Coast associations as well. And company pilot Gene Vaadi belongs to the Suncoast GCSA.

"There were only four chapters in the whole state when I joined Everglades," he said.

With half the state's golf courses and most of its builders buying at least some of their sand from Jahna, golf accounts for "about 20 percent" of the firm's business, Johnson says. The rest is used for construction.



Freshly screened and washed sand is stockpiled for delivery.

E.R. Jahna Industries was founded by Emil R. Jahna, Jr., in 1950. Emil, Sr., had been a sand miner in Lake Wales and his son wanted to branch out. Now the company owns five sand mines, two rock mines and a trucking subsidiary with a fleet of 60 trucks for hauling his product.

Jahna has two sand mines in Clermont, one in Polk City and two more — the famous Ortona mines — in LaBelle. The rock mines are in Crystal River and Brooksville.

But it is Ortona sand — a world-renowned quartz silica sand at the south end of Florida's Ridge — that is the company's big draw.

Jahna "makes" seven different kinds of sand at its various mines: three specifically for golf courses, DOT, well point, and two grades of dried sand for sandblasting. DOT, the medium-coarse sand specified by the Florida Department of Transportation for highway construction, accounts for about 60 percent of the company's production.

The three golf course sands, sometimes called trapsand (although the medium grade is also popular for making greens mix), are all finer than DOT sand. Well point sand is slightly coarser than DOT.

One grade of sandblasting sand is finer than the finest trapsand and the other is an interesting story.

It's a very coarse sand; the grains are about 1 to 2 millimeters in diameter, almost large enough to be considered very fine gravel. Florida sand producers never made very much of it because there wasn't too much demand... until the United States Golf Association's guidelines for construction of a golf green suddenly became popular with Florida architects and builders.

The coarse grade of sandblasting sand is about the same size as the USGA's infamous "choker" sand, the two-inch layer it specifies between the topsoil and the gravel and drainage tiles.

"Now we can't make enough of it," says Johnson who was not convinced the choker layer was really necessary until very recently. "I think I've changed my mind on choker sand, but I don't think they need to hold to such strict specs. We sell coarse sand for septic tanks with some fines in it and it works great."

USGA specs do not permit any "fines."



Joe Johnson, right, sales rep for E.R. Jahna Industries, listens intently to a golf course superintendent, Rich Brogan, formerly at Polo Trace. Also listening are Dick Blake, second from left, former GCSAA and FGCSA president and Jim Lanier, general manager of the Ortona Mine.



A truck is loaded for delivery.



Jim Lanier, Ortona mines general manager, left, demonstrates the sand washer to Rich Brogan.



Clermont East is one of five Jahna sand mines in Florida and one of two that can produce choker sand.



Blake and Lanier examine some stockpiled sand.



Conveyer can be rotated around the washer to stockpile sand once it has been screened and washed.

To those who have known him for a long time, the Sand Man's changed attitude toward the choker layer must be put on a scale with the worst-to-first finishes of the Minnesota Twins and Atlanta Braves... or a ma-

ior religious conversion—say, atheism to Christianity.

The problem with choker sand, according to Johnson, is that it is very difficult to make. Out of a ton of high-grade Ortona sand (choker

sand is also made at Jahna's Clermont East mine), no more than 15 percent will screen out to choker size.

"It takes about 1,000 tons of choker sand to make 18 greens and

Screws force the screened sand out of the washer and onto the conveyer.

we've never been able to get more than 700 tons at any one time," Johnson says. "Right now (late November) we have 125 tons on the ground."

The rate at which the company can make choker sand is set largely by the rate at which it can sell the other grades that are left after the coarse stuff has been screened out.

A rejuvenated state highway construction program would do wonders for the availability of choker sand.

Ironically, while he'd certainly like to sell more sand, and the more of the common grades he can sell, the more choker sand will be available, Johnson says one of the most common mistakes young superintendents make is to put too much sand in their bunkers.

"I always recommend that they don't put in more than 3½ inches and then wait and see how much it settles. They can always add more, but it's hard to take it out." ■



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Superintendent for 34 years at Belleair

Workhorse member of FGCSA, chapters

BY PHILIP PETTUS

When Harvey Phillips began work as a golf course maintenance employee on Dec. 13, 1950, he thought he was taking a temporary job. Using a pick axe, shovel, rake and such, he became one of the maintenance crew at Belleair Country Club in Largo (Pinellas County).

"I grew up in the citrus business and got into golf courses by accident," he explains. "I took the job as temporary work and then fell in love with it."

Within three years he was the assistant superintendent and when drafted by the U.S. Army in 1954, he was told by his employer, Belleair owner Bernie Powell, that when he got out of the army his same job would be waiting for him.

Harvey did return two years later and has continued working at the Donald Ross-designed course ever since.

Harvey said he received a lot of encouragement from course owner Powell, superintendent Harvey Meeks and club pro Tommy Harmone in his early years. He became superintendent in 1958 after Meeks retired.

As one of the longest-tenured golf course superintendents ever in the state — about 34 years with the same golf course — Phillips has been a workhorse member of the professional organizations that served the golf and turfgrass industry through the years.

Phillips has been a hardworking member and served as president of the Florida West Coast Golf Course Superintendents Association (president two terms), the Florida Golf Course Superintendents Association and the Florida Turfgrass Association. He continues as an active member of each organization as well as the Golf Course Superintendents Association of America. He has held all offices and served on the board of directors of both the FTGA and the FWCGCSA during the years.

In addition to his recent FGCSA President's Award for Lifetime Service, Phillips was cited in 1975 for 25 years of outstanding service to the FWGCSA. And,



Harvey Phillips

Superintendent:
Belleair Country Club, Belleair
(Pinellas County)

Years on the Job: 34

Years in Profession: 41

Organizations & Awards:
FGCSA Presidents Award, 1991
FTGA Wreath of Grass, 1977
FWCGCSA Award for 25 years of
outstanding service (1975)

Military Service: U.S. Army

Family:
Married 38 years to the late Thelma
Phillips; daughter Janet Wallace,
teacher at Safety Harbor Middle
School

Relaxation: Music and camping

*President's Award
for
Lifetime Achievement*

1991

Tom Mascaro

John Hayden

Harvey Phillips

C.R. "Bud" Pearson

Carl Smith

in 1977, he received the FTGA's top award, the Wreath of Grass.

Among the people who have influenced and helped him over the years, Phillips points to Dr. Roy Bair, Dr. G.C. Horn, Harvey Meeks and Tommy Harmone.

"Dr. Bair was our consultant when I started work at Belleaire. I worked hand in hand with Dr. Bair for many years," Phillips said. "I worked with Dr. Horn on many research projects while he was at the University of Florida," Phillips said. He said that while on the FTGA board of directors he also worked on the educational video program.

One of the challenges of his career, he said, was converting two Donald Ross courses to facilitate modern equipment use. He said that was achieved without

destroying the Ross concept.

During his employment at Belleair, Phillips has worked for a private owner, corporate owners and now for a private membership club.

Asked what advice he would give an entry-level professional in golf course maintenance, Phillips said, "Always remember that you are paid to do a job. Do the job to the best of your ability. Do not depend on others to do it for you. And do not be too proud to seek help when needed."

Born in Madison, Phillips moved to the Clearwater area in 1934. He attended grade schools in the area and graduated from Clearwater High School. Except for the two years he was in the Army, he has lived in the same area for the balance of his life.

A family man, Phillips was married for 38 years to his dear wife, Thelma, who died April 3, 1991. They have a daughter, Janet Wallace, who is a school teacher in nearby Safety Harbor.

"The Army and U.S. Steel afforded me the opportunity to travel extensively. I have never found anywhere I like better than Florida," he said.

"Music and camping are what I like to do most for relaxation. I love to play golf but must admit, I do not play the game well." Even so, Phillips' skills as a golf course superintendent have meant many fine golf games for others at Belleair. 🏌️



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First report from Otto Schmeisser Research Green

By Monica L. Elliott, Marcus Prevatte
University of Florida - IFAS

Fort Lauderdale Research and Education Center

During the summer of 1990, the FGCSA in cooperation with the University of Florida built a 20,000-square-foot putting green at the Fort Lauderdale Research and Education Center. The purpose was to build a field laboratory to be used by the turf researchers at the center for their research projects and to conduct independent field testing of products that superintendents wished to evaluate on bermudagrass maintained as a putting green. The following is a summary of the construction of the green and the results of the first six months of the nitrogen source study, the first project initiated for the superintendents.

GREEN CONSTRUCTION

After the field site was scraped, trenches were cut and drainage tile was installed in a herringbone pattern according to USGA guidelines. Four inches of pea gravel ($\frac{3}{8}$ inch) was spread across the entire site. At this point, the green was divided into four different construction zones based on choke layer and hybrid bermudagrass cultivar: 1) USGA specifications exactly with 2 inches of coarse sand (choke layer) plus 12 inches of topsoil mix planted with Tifdwarf; 2) Terrabond geotextile material was installed in place of the choke layer with 14 inches of topsoil mix placed on the

Terrabond and planted with Tifdwarf. 3) no choke layer or geotextile material was added so the 14 inches of topsoil mix was placed directly on the gravel layer and planted with Tifdwarf. 4) no choke layer or geotextile material was added and the 14 inches of topsoil mix was planted with Tifgreen 328.

The topsoil mix was mixed offsite and was composed of 80% Ortona sand and 20% Canadian peat moss. The green was fumigated one week before planting with metam-sodium using a "ro-to-vate and roll" method which tilled the topsoil mix to a $5\frac{1}{2}$ -inch depth followed by a soil-packing step. Pre-plant fertilizers were applied the day before fumigation and were rototilled into the topsoil mix at the time of fumigation. The bermudagrass was planted Aug. 1, 1990. The slopes were planted with the appropriate cultivar for that section of the green. The slopes were composed of native soil from the site.

During the establishment period, the green was hand-weeded when necessary. Insecticide treatments were necessary on a regular basis for control of sod webworms. No diseases occurred, so no fungicides were applied.

NITROGEN SOURCE STUDY.

It was determined that the average amount of nitrogen applied to bermudagrass greens that are not overseeded during the winter months was 18 pounds per

1,000 square feet per year, with 1 pound per 1,000 square feet per month applied from May through October and 2 pounds per 1,000 square feet per month applied from November through April.

The FGCSA Research Committee decided that the first project to be established was an evaluation of slow-release nitrogen fertilizers. The fertilizers evaluated are listed in Table 1. There were four sources of slow-release nitrogen with all products using urea as the nitrogen base. First, let us examine what a slow-release nitrogen product is relative to ammonium sulfate, a quick-release nitrogen product.

Two primary reasons for using a slow-release nitrogen product are 1) to provide uniform nitrogen release for plant uptake for a specific period of time; and 2) prevent nitrogen leaching as it is the nitrate form of nitrogen that is readily leachable. In warm, moist soils, ammonium sulfate is rather quickly converted to nitrate through the bacterial process of nitrification. The urea in the slow-release nitrogen products will be hydrolyzed to ammonium and then converted to nitrate via nitrification also. However, this process will not take place until the urea, which is completely water-soluble, comes into contact with water. In other words, the urea must be "released" into the soil before the other steps can take place.

Sulfur-coated urea is made by spray-

Table 1. Nitrogen analysis of products in nitrogen source study on the FGCSA Research Green

Company	Formulation	Total Nitrogen	Nitrate Nitrogen	Ammoniacal Nitrogen	Percentage			Source of Slow-Release Nitrogen
					Water Soluble Org. Nitrogen	Urea Nitrogen	Water insoluble Nitrogen	
O.M Scott	40-0-0	40.2	0	0	10.9	12.1	17.2	Methylene Ureas ¹
Vigoro	25-0-12 ⁴	25.0	3.5	1.8	0	2.0	17.7	IBDU ² , SCU ³
Vigoro	25-0-14 ⁴	25.0	4.3	0	0	10.2	10.5	IBDU, SCU
Vigoro	30-0-0	30.0	0	0	0	15.5	14.5	IBDU, SCU
LESCO	29-0-0	29.0	0	0	21.75	7.25	0	SCU
Nor-Am	40-0-0	40.0	0	0	20.5	5.0	14.5	Methylene Ureas
Nor-Am	38-0-0	38.0	0	0	7.0	4.0	27.0	Methylene Ureas
Howard	40-0-0	40.0	0	0	28.0	0	12.0	Methylene Ureas
Cleary	18-0-0(L)	18.0	0	0	7.2	6.3	4.5	Methylene Ureas
Traylor/ Arcadian	18-0-0(L)	18.0	0	0	9.0	9.0	0	Triazone
Grensmiths ⁵	28-0-0(L)	28.0	0	0	0	28.0	0	None

Footnotes:

1 Urea-formaldehyde reaction products

2 Isobutylidene diurea, IBDUTM

3 Sulfur-coated Urea

4 Also contains potassium nitrate as nitrogen source.

5 Dicarbamide dihydrogensulfate (Combination product of urea and sulfuric acid)

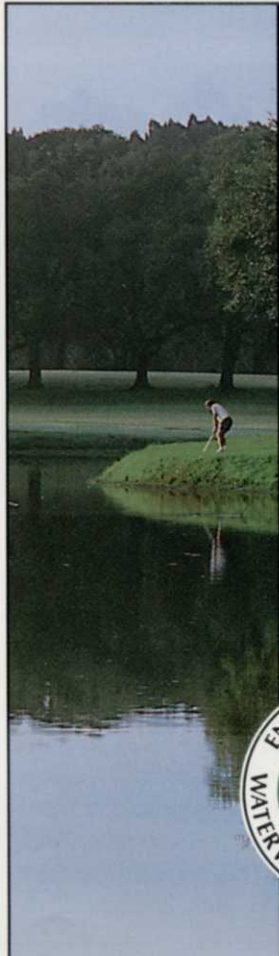
ing granular urea with molten sulfur followed by a clayfilm coating. The urea is released as microorganisms decompose the sulfur coating, water penetrates cracks in the coating or the particles break apart. Again, once the urea is released, it will be converted to ammonium and then to nitrate.

The methylene ureas are products resulting from polymerization of urea with formaldehyde. The formaldehyde derivative is basically a chain of urea molecules linked together. The number of urea molecules linked together (a maximum of five) determines the polymer product with each fertilizer having a different composition of these polymer products. The urea is released by microbial decomposition of the polymers. Common names are ureaform, methylene diurea and methylene urea. Four products in the study are dry formulations. One product is a liquid suspension of methylene urea.

Isobutylidene diurea (IBDU™) results from polymerization of urea with isobutylaldehyde. The urea is released by hydrolysis of the particles in water. Therefore, the process of putting the urea into solution is dependent on particle size (small means faster release) and amount of soil water (dry soil means slower release).

The fourth material, triazone, is produced by reacting liquid urea, formaldehyde and ammonia. The solution resulting is water soluble and is a source of slowly available nitrogen. Please note that this product is a solution and not a suspension. In other words, it is a clear liquid whereas a suspension (Cleary's 18-0-0) is more like milk of magnesia and the particles are simply suspended in the carrier.

One product evaluated is *not* a slow-release source of nitrogen: Greensmith's N-pHURIC™ liquid 28-0-0. It was included in the study because it is a new and unique product to lower the pH of irrigation water. It was used in this study simply as a nitrogen source. It combines urea and sulfuric acid in a carefully controlled process. In other words, don't try this yourself. Why? it is extremely dangerous to mix these products together and, more importantly, the correct procedure for mixing these products is patented. The



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Table 2. Soil pH values associated with nitrogen fertilizer treatments evaluated on FGCSA Research Green

Company	Formulation	July 2	July 17	July 30	Aug. 14	Aug. 27	Sept. 10	Sept. 24
O.M. Scott	40-0-0	7.0 ¹	7.0	7.0	7.0	7.1	7.0	6.7
Vigoro	25-0-12	6.9	7.1	6.8	7.0	7.1	7.1	7.0
Vigoro	25-0-14	7.0	6.9	7.1	6.9	7.1	7.0	6.9
Vigoro	30-0-0	7.0	6.9	7.1	7.0	7.1	7.1	7.0
LESCO	29-0-0	6.9	7.0	6.8	6.7	7.0	7.0	6.4
Nor-Am	40-0-0	7.1	7.1	6.9	7.0	7.1	7.0	6.5
Nor-Am	38-0-0	7.2	7.1	7.0	7.0	7.0	7.1	6.7
Howard	40-0-0	7.1	7.2	7.1	7.0	7.0	7.1	7.0
Cleary	18-0-0(L)	7.0	7.0	6.8	6.8	7.1	7.1	6.7
Traylor/ Arcadian	18-0-0(L)	7.1	6.9	6.8	6.9	7.2	7.2	6.8
Greensmiths	28-0-0(L)	7.0	7.0	7.0	6.9	7.3	7.0	6.8

¹ Values represent results of pooled samples from all four replicate plots of each treatment. Therefore no statistical analysis was performed.

product evaluated, N-pHURIC™ 28/27 contains 28% urea nitrogen and 27% equivalent sulfuric acid. There is 9% sulfur from the sulfuric acid equivalent.

Pre-experiment Management. The section of the green containing the Terrabond layer and planted with Tifdwarf was used for this study. From Jan. 1, 1991, to March 1, 1991, the experimental area was fertilized every two weeks with 1 pound of nitrogen per 1,000 square feet using Vigoro's Par Ex 8-0-8 fertilizer with micronutrients. The nitrogen

sources in this material are sludge and IBDU™. The area was not fertilized from March 1 through March 25 to remove as much nitrogen as possible from the system. All other maintenance practices remained the same, including a mowing height of 3/16 inch.

Experimental Design. Each plot was 8 feet by 10 feet with four replicate plots per treatment. The 11 treatments are listed in Table 1. The design was a randomized complete block. This means there were four rows with 11 plots per row. Each

treatment was represented once in each row to reduce any variability naturally associated with the green.

Application Rate and Methods. Each treatment material in the Nitrogen Source Study was applied at the rate of 1 pound of nitrogen per 1,000 square feet on March 26, April 9 and April 23. Potassium was applied at 1 pound per 1,000 square feet as potassium sulfate (0-0-50) on April 23. No quality scores or dry clipping weights were obtained during this period.

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Table 3. Quality scores for nitrogen fertilizers evaluated on FGCSA Research Green.

Company	Formulation	May 14	June 27	July 11	July 23	Aug. 6	Aug. 20	Sept. 5	Sept. 17	Oct. 2
O.M. Scott	40-0-0	8.0 bc1	6.8bc	6.9 ab	7.6 ab	7.2 a	7.0 a	7.5 ab	6.5 a	5.9 a
Vigoro	25-0-12	8.5 ab	7.2 ab	7.1 a	7.6 ab	7.4 a	7.0 a	7.5 ab	6.6 a	6.4 a
Vigoro	25-0-14	8.6 a	7.2 ab	7.1 a	7.7 ab	7.4 a	7.0 a	7.5 ab	6.7 a	6.3 a
Vigoro	30-0-0	8.4 abc	7.0 abc	7.1 a	7.8 ab	7.4 a	7.1 a	7.4 ab	6.7 a	6.3 a
LESCO	29-0-0	8.6 a	7.1 ab	7.1 a	7.7 ab	7.4 a	7.0 a	7.1 ab	6.8 a	6.1 a
Nor-Am	40-0-0	8.4 abc	7.1 ab	7.1 a	7.6 ab	7.5 a	7.0 a	7.8 a	6.6 a	6.2 a
Nor-Am	38-0-0	6.2 d	6.1 d	6.5 c	6.9 c	6.8 a	6.3 b	7.5 ab	6.4 a	6.0 a
Howard	40-0-0	8.3 abc	7.0 abc	7.1 a	7.7 ab	7.5 a	7.0 a	7.6 ab	6.7 a	6.1 a
Cleary	18-0-0(L)	7.9 c	6.7 c	6.8 b	7.3 bc	7.1 a	7.0 a	7.8 a	6.7 a	6.3 a
Traylor/ Arcadian	18-0-0(L)	8.0 bc	6.8 bc	6.8 b	7.4 bc	7.1 a	7.0 a	7.6 ab	6.7 a	6.3 a
Greensmiths	28-0-0(L)	8.2 abc	6.7 c	7.0 ab	7.9 a	7.4 a	7.1 a	7.0 b	6.4 a	5.9 a
LSD		0.5	0.3	0.2	0.5	0.7	0.3	0.7	0.5	0.7

May 7, 1991. Beginning on this date, 0.5 pounds of nitrogen per 1,000 square feet was applied every two weeks until Oct. 15. This coincides with the average summer application rate of 1 pound per 1,000 square feet per month. The dry materials were spread by hand in two directions over the plots and the area immediately irrigated with 0.12 to 0.14 inches of water. Liquid formulations were applied next.

These materials were mixed with water and applied with a fine-nozzle water-

ing can so that the equivalent of 10 gallons of water per 1,000 square feet was applied.

Potassium was applied as potassium sulfate (0-0-50) at the same rate as the nitrogen, 0.5 pounds per 1,000 square feet, every time the nitrogen was applied. Since two of the Vigoro materials (25-0-12 and 25-0-14) had potassium nitrate as one of their nitrogen sources, the potassium sulfate applied to these plots was reduced accordingly to achieve the 0.5 pound potassium rate.

General Maintenance. Phosphorous was applied as triple superphosphate (0-46-0) at 1.5 pounds phosphorous per 1,000 square feet when the green was aerified on June 5 with $\frac{5}{8}$ -inch hollow tines. The cores were removed and the area topdressed with an 80/20 topsoil mix. The area was lightly verticut in May, June, July and August and topdressed accordingly. Micronutrients were applied in May (Vigoro's F-169G with boron, copper, manganese and zinc) and July (manganese sulfate only) at the rate of 0.5

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pound manganese per 1,000 square feet. Height was maintained at $\frac{3}{16}$ inch using a Jacobsen green mower with groomer attachments. Plots were cut six days each week.

Pests and Pesticides. No herbicides were used during the six-month period. Crusade (fonofos) insecticide was sprayed once on June 15 for control of sod webworms. No other insect problems occurred. Symptoms of bermudagrass declines, a root rot disease, first appeared in early to mid-August. The disease progressed very slowly in the Tifdwarf area, as compared with the Tifgreen area, and did not thin out completely. Banner (propiconazole) was applied at the rate of 4 fluid ounces per 1,000 square feet on Sept. 20. A slight adverse color response did occur as a result of this application. All treatments were equally affected by the disease and the fungicide application as demonstrated by the decline in the quality scores.

Soil pH. Beginning in July, soil pH was obtained before each nitrogen application. Soil samples (four 1-inch cores of 6 inches depth) were obtained from all four plots (replications) of the same treatment, pooled together and the soil pH determined for each treatment. This was done to determine if any general changes in soil pH were observed. For all sampling dates, the soil pH did not vary by more than 0.5 units between any two nitrogen treatments. Since no replicate samples were obtained, no statistical analysis was performed. This was simply a general survey of pH values. The soil pH averages for all sampling dates are listed in Table 2.

Evaluation. Quality scores were de-

termined using color and density of the grass in each plot. Scores were based on a scale of 1 to 10 with 10 being a *perfect* score. Two people rated the plots each time and those scores were averaged. Plots were rated one week after each nitrogen application with two exceptions. On May 28, we simply forgot. This was our first day of clipping weights, and we forgot the quality scores. No quality scores were obtained June 13 due to the aerification on June 5 as density could not be evaluated fairly. The summary of quality scores is shown in Table 3.

Dry weight of collected clippings from each plot were determined once each month. Again, clipping weights were obtained approximately one week after a nitrogen application. A strip of turfgrass that was 22 inches wide (width of mower) and 9 feet long was cut from each plot. The clippings were collected and dried at 60°C for 96 hours at which time the weight was determined. Values are listed in Table 4.

When comparing quality and quantity scores for each date, please note that values in the column for that date that are followed by the same letter are *not* statistically different from each other. You will note that at the end of each column in Tables 3 and 4, there is a value called LSD which means "Least Significant Difference." The LSD value is a value that the treatment means must equal or exceed to be considered significantly different. In the footnote for these tables, it is indicated that "P-0.05." This indicates we are 95% confident that means exceeding the LSD value for each column are in fact different and that the observed variation is not due to random chance. The best

explanation of statistical analysis and reasons for replications, test design, etc. can be found in the December 1990 issue of *Golf Course Management*. The article is titled "Developing a Test Program on the Golf Course" and was written by Nick Christians. This should be read by every superintendent. It will help you understand research reports from the university and help you to design your own experiments.

In summary, although there were significant differences early in the summer, there were few differences in quality by the end of the six-month period. To make your own decisions, compare quality scores to quantity scores. Each golf course situation is unique and you must decide what is most appropriate for your situation. The reduction in clipping weights beginning in August is probably a reflection of stress due to the bermudagrass decline root rot disease and the summer weather patterns. When disease symptoms were most severe in late September and early October, there were no significant differences in quality scores between any of the treatments which implies that none of the nitrogen sources prevented disease development. No quality scores were obtained after Oct. 2 so that an intensive cultural program could be initiated to reduce the disease symptoms.

This study will continue to be conducted until next May using the winter rates of nitrogen: 2 pounds per 1,000 square feet per month. The research green will not be overseeded so evaluation will be for bermudagrass only.

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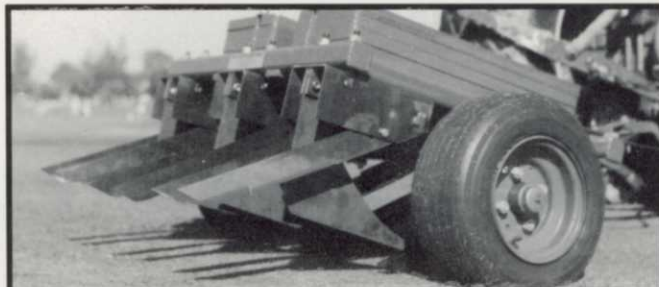
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The following companies have donated material and services for maintenance of the research green: Golf Agronomics; Vigoro Industries; Golf Course Services, Inc.; DeBra Turf; Liqua-Tech; and Woodbury Chemicals.

Table 4. Clipping weights (grams) for nitrogen fertilizers evaluated on FGCSA Research Green

Company	Formulation	May 28	July 5	Aug. 6	Sept. 6	Oct. 1
O.M. Scott	40-0-0	8.6 ab ¹	11.1 cde	5.2 bc	3.8 a	4.5 bc
Vigoro	25-0-12	11.7 a	13.2 ab	6.2 ab	4.1 a	4.4 bc
Vigoro	25-0-14	8.2 ab	13.0 b	6.5 a	4.3 a	5.2 ab
Vigoro	30-0-0	9.4 ab	12.0 bcd	6.0 ab	4.2 a	5.2 ab
LESCO	29-0-0	9.5 ab	15.0 a	6.1 ab	4.4 a	5.7 a
Nor-Am	40-0-0	10.1 ab	12.2 bc	6.8 a	4.4 a	4.3 bcd
Nor-Am	38-0-0	8.4 ab	8.1 g	3.6 d	3.0 a	3.4 e
Howard	40-0-0	10.3 ab	10.5 def	5.7 ab	3.8 a	4.1 cde
Cleary	18-0-0(L)	7.5 b	9.6 efg	4.3 cd	3.9 a	4.0 cde
Traylor/ Arcadian	18-0-0(L)	9.0 ab	9.2 fg	4.3 cd	3.6 a	3.8 cde
Greensmiths	28-0-0(L)	9.5 ab	11.3 cd	5.0 bc	2.8 a	3.5 de
LSD		4.1	1.6	1.2	1.7	0.9

¹ Values are the mean dry weights of clippings collected from four replicate plots. Means within a column followed by the same letter are not significantly different (P=0.05) according to Waller-Duncan k-ratio t-test.



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The 30th edition of **Lesco's catalog** lists more than 4,000 items and is available from any service center or sales rep or by calling 800-321-5325.

The Public Golf Management Association has released the first issue of its **Golf Course Management Journal**. Each issue will be devoted to a single topic and will combine to form a management manual for public golf courses. Contact the PGMA at 8030 Cedar Ave. South, #228, Minneapolis, MN 55425; phone 612-854-7272.

Golf Course News taps Fazio, Wadsworth, Landmark for honors

Golf course architect Tom Fazio of Jupiter was named best in the nation by his peers for the third straight year in the annual poll conducted by *Golf Course News*. Pete Dye, of Delray Beach, finished third in the annual survey of 250 architects.

Wadsworth Constuction Co. of Plainfield, Ill. was named the nation's top builder by the architects, also for the third straight year. Guettler & Sons, Inc., of Fort Pierce, finished fourth.

Landmark Land Co., which operates Palm Beach Polo & CC, took the top spot as resort developer, despite last October's Chapter 11 bankruptcy filing. Marriott Corp., which operates golf resorts in Orlando and Naples, finished second in the national balloting.

"The courses I did this year are the best I've ever done," said Fazio, whose work includes three of *Golf Digest* magazine's Best New Private Courses over the past four years and eight listings among the publication's listings of America's top 100 courses. Osprey Ridge at Walt Disney World, which opened last month, is Fazio's most recent Florida work. Black Diamond Ranch near Lecanto, one of the private courses honored by *Golf Digest*, is perhaps his best known Florida work.

Wadsworth's lead over its competitors has grown each year. This year the firm pulled 36 percent of the vote.

Landmark, whose financial woes stem from the failure of its subsidiary thrift — Oak Tree Savings Bank — to meet stricter federal requirements, is best known as the operator of resorts at PGA West

at Laquinta, Calif., Kiawah Island, S.C., and Oak Tree GC in Edmond Okla.

Tracy D. Moore is the new president of Aquatrols, manufacturer of water management products, which recently moved from Pennsauken, N.J. to larger quarters in Cherry Hill, N.J. She succeeds founder Robert A. Moore, who will remain with the company as a consultant to the R&C and technical service departments. Jim Turner of Sarasota has joined the company as technical sales rep for the southeastern U.S. Chuck Doll of Pittsburgh and Ken Mauser of Bakersfield, Calif., also have become Aquatrols sales reps.

Atlanta investor **J. Rex Fuqua** has acquired 50 percent interest in Bio-Plus, Inc., a producer of granularized and pelletized peanut hulls based in Ashburn, Ga. Fuqua purchased the stock owned by Steve Ivie, who remains as president. The remaining stock is held by members of the Pennington family, which owns the parent company of Pennington Seed.

John M. Licht is the new president and CEO of Duraco Products, a manufacturer of decorative plastic planterware based in Streamwood, Ill. He succeeds Willis R. Barrett, who remains with the company as chairman.

Mike Catalano is a new technical support engineer for the golf division of Rain Bird Sales, Inc. manufacturer of irrigation products based in Glendora, Calif.

As we went to press, **Stuart F. Bloch** of Wheeling, W. Va., was expected to become the 52nd President of the United States Golf Association at USGA Annual Meeting in Palm Beach Feb. 1. He is the only nominee and, if elected, will succeed C. Grant Spaeth of Palo Alto, Calif. F. Morgan Taylor of Hobe Sound, a veteran member of the USGA Turfgrass Research Committee, was the only nominee for treasurer.

William J. McMillan, assistant general manager of the John's Island Club in Vero Beach, became the 5,000th member of the Club Managers's Association of America in November.



Tracy Moore



Chuck Doll



Ken Mauser



Jim Turner

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Report to FGCSA Board of Directors from the FTGA Committee

BY MARK JARRELL, CGCS

As a Director of the FTGA for the past 5 years, I have heard many complaints and criticisms from superintendents about what FTGA does or doesn't do. In that period of time the FTGA has taken gigantic strides because of the effort, dedication, vision, and leadership of a number of people who recognized the viability and practicality of this vehicle for advancing the needs of the turf industry.

Many of these people are golf course superintendents or in golf related industries. Curiously, when I came on the board, the perception by many was, and still is, that the FTGA is a golf-dominated association. I recently counted the members of FGCSA who were also members of FTGA and came up with 245 — about a fourth of the total FTGA membership. These numbers, of course, do not reflect commercial members in golf-related industries, but with more than 700 superintendents or assistants in FGCSA, it also means that only about a third of our members feel FTGA significant enough to join.

This is very disturbing. I have always felt that membership in the superintendents' associations and membership in FTGA went hand-in-hand. I can't believe that cost is a factor, even if a superintendent had to pay the dues out of his own pocket, which most don't. The cost to belong to all the superintendents' associations, plus FTGA, is still less than most individual professional organizations. The problem has got to be perception and attitude.

Those of you with a negative attitude about FTGA need to honestly evaluate the source of your feelings. Do you harbor prejudices or animosities toward individuals or particular programs associated with FTGA? Are past problems or

failings getting in your way of objectively evaluating the current programs and goals. Is the aim and direction of FTGA consistent with your vision of the challenges you face now and will face in the future in growing quality turfgrass? There is great danger in reacting to perception, rather than reality, as we know from viewing the circus that has come to be known as the "environmental arena".

Unless they just fell off a turnip truck as it passed by a golf course, no one in the golf industry is ignorant of the public's negative perception of golf's environmental image and the regulatory hoops we've been made to jump through in recent years. This war is just beginning, and the only chance we have is to muster all our resources and fight the misconceptions, ignorance, and prejudice with openness, honesty, and facts. Even then we can only expect a draw, but this is far preferable to the crushing defeat we will assuredly suffer if we stick our heads in the sand and pretend nothing is happening. Read the latest *Green Sheet* if you need reminding of some of the issues we are facing. This is just the tip of the iceberg.

Facts, the only ammunition available to us in this conflict, are in short supply, and the only way to get more is to produce irrefutable, accredited research. This is the sole function and mission of the Florida Turfgrass Research Foundation.

Superintendents can take pride in the prominent role we have taken and the leadership shown by many in our ranks in the support of this quest for research, but this is a dubious distinction. The fact is that the participation and support by superintendents and assistants is abysmal — less than half the potential members belong to FGCSA and only one out of eight belong to FTGA. This is much better than the other segments of the golf industry, but nothing to be proud of. The one thing this industry — if it can legitimately be called an industry — isn't short of, is apathy. One out of ten Ameri-

cans play golf, but we have less influence on policies and regulations affecting us than a boatload of Haitian refugees has on immigration policy. A perfect example is the Florida Golf Council, which was founded on the hope of uniting the various factions within the golf industry for lobbying strength. This organization is faltering due to lack of support, despite the fact that Bobby Brantley is the best possible leader we could hope to find.

Apathy will be our downfall. The 90% of the population that does not play golf is not necessarily our enemy and doesn't care about our problems one way or another. But non-golfers will, without a doubt, support environmental issues. Not only do we have to prove that golf courses do not hurt the environment, I think we have to prove to the public that golf courses have environmentally positive benefits for everyone, whether he plays golf or not. I think it fair to say that when the race started, we were left in the starting blocks. To catch up, we need the support of everyone whose livelihood depends on golf.

I also think it fair to say that if you are not part of the solution, then you are part of the problem. Is it fair for others to fight your battles for you? The efforts and resources committed to this endeavor are as much for your benefit as for those who make the sacrifices. If you cannot commit your time and energies to serve on the board or committees of FGCSA or FTGA, the very least you can do is join these organizations and support their efforts with your membership dues, and try your best to commit your club to an annual contribution to the Florida Turfgrass Research Foundation.

Don't stand by the tracks and throw rocks at the train as it goes by. If you do not agree with some of the decisions or programs, volunteer to serve on a committee if you have the time, and, if you don't, pick up the phone and offer your ideas and opinions. Do something — anything — other than sit alone on your

FTGA's record of recent years is unsurpassed by any comparable organization.

little island of a golf course and complain about the rising tide. A lot of little islands make a formidable continent if they stand united.

For those who still have reservations about the validity of the FTGA, you need to take a closer look at FTGA's performance over the past few years. FTGA has come a long, long way since Ruth Shepherd was its only employee in 1983.

◆ Membership has more than doubled since then and FTGA now has seven full-time staff members.

◆ Since 1987, the Florida Turfgrass Research Foundation has collected \$904,153 and dispersed \$709,599 through June 1991. This includes \$350,000 allocated for the Envirotron early in 1991. I don't have figures to make comparisons with various state turfgrass associations, but the number of calls and inquiries to the FTGA office indicates the rest of the country is impressed with what we are doing and interested in our methods and structures. The list of projects funded by FTGA is too extensive to name here, but can be found in an annual IFAS publication available to all members of FTGA.

◆ The quantity and quality of all the FTGA publications has vastly improved. The Member Services Committee has had no less than seven helpful manuals published in the past few years; the *Florida Turf Digest* has become an outstanding newsletter this year under Mike Swanson's direction, as has the FTGA Member Directory; and the proceedings continue to provide complete coverage on the annual conference's educational program.

◆ The Conference and Show is the biggest of its kind in the country. Past complaints about the quality of speakers were admirably addressed this year with the likes of Dr. James Beard and will continue to be a priority for future conferences.

◆ Recent and pending changes in the turf program at the University of Florida, coupled with the establishment of the Dr.

G. C. Horn Endowment and the Envirotron, promise to elevate this program to the highest standard in the country, if not the world. Those who have been disappointed with the performance of the University of Florida's turf program over the years need to realize that this is the dawning of a new day, and that our dollars cannot stretch as far by going to other sources because of the infrastructure already in place with the University. It should be remembered that FTGA has a unique agreement with IFAS which exempts us from the usual overhead expenses — 100% of our money goes to the designated research project.

The Dec. 13 FTGA board meeting in Orlando was extremely productive and shows the continuing progress of the Association:

◆ The Board agreed to fund the cost of collecting groundwater samples from the pesticide monitoring wells at Palm Beach National and Boca Lago. DER had informed us of their willingness to do the analytical work, which is the most costly part of this project, if we would pay for the sampling. Dr. Ed Freeman is securing cost estimates for the sampling. This project is important to help show that golf courses do not pollute groundwater supplies.

◆ The Funding and Endowment Committee is working on a complete MSDS manual to be offered for sale in a three-ring binder for updates.

◆ The architect for the Envirotron was selected in November. Ground-breaking is scheduled for April or May, with the completion expected by early 1993. The site selected behind Fifield Hall was our number one choice, and, unexpectedly, approval was granted for three acres, which gives room for future turf plots on the same site. IFAS has promised a full-time position (engineer) will be appointed to manage the Envirotron, although its formula for that size facility called for only three-fourths of a position. Without yet being built, the Envirotron has

attracted a lot of attention. The PGA Tour has plans to build two "environmentally correct" golf courses in St. John's County and has expressed a desire to build a "satellite" Envirotron on the site.

◆ The Board approved a Pesticide Dislodgeability study by Drs. John Cisar and George Snyder at a cost of \$15,000 over a two-year period. This study will yield information about safe reentry after application of pesticides. A preliminary test on Namacur 10G showed promising results.

◆ The Member Services Committee is working on a safety program and drug-free workplace package, consisting of posters, videos, etc.

◆ This year's First Coast Feast and Golf Tournament raised \$16,000 for research.

◆ And for the big news, FTGA got tired of waiting for the Department of Agriculture to do the right thing and approved funding for the long-awaited turf survey. It will be the most comprehensive turf survey ever done and will cost \$344,830. FTGA is being asked to fund \$139,286 of this total — providing \$70,000 in the first six months and the remainder in quarterly installments for the remaining year of this 18-month project.

FTGA's record of recent years is unsurpassed by any comparable organization. Much has been accomplished by a dedicated minority, but the time has come for all those in the business of growing turfgrass to put away past prejudices and help with the battles affecting us all. The resources available to FTGA are stretched thin and your support is needed to continue the progress. If you are not yet a member of FTGA, join today! If you are a member, but haven't gotten your club to contribute to research, try your best to get one. If your assistant isn't a member, sign him or her up. If you can influence someone new to join, please do so. We're all in this together, and together we can make a difference.

Greenward

A compendium of news and opinions about government, golf and the environment

The following items have been excerpted from GCSAA Government Relations Briefing, January, 1992, for Greenward section of Florida Green

GCSAA board approves four position papers

BY DON BRETTHAUER

The GCSAA board of directors recently approved four position papers that will further solidify GCSAA's environmental stance. The papers, which contain definitions, information and positions of four critical environmental issues, were drafted by Board Government Relations Liaisons Randall P. Zidik, CGCS, and Charles T. Passios, CGCS, and the government relations staff at GCSAA headquarters.

"I think these papers will help educate others on our attitude toward these issues and will help strengthen the association's entire environmental image," said Zidik.

paper the strong language that summarizes what we've been talking about for several years. Now the next task is to make sure these papers are put into the right hands."

Applicator certification

The applicator certification paper stresses the importance of training for pesticide applicators. The statement of position specifically states, "In the interests of safety and en-

vironmental protection, the Golf Course Superintendents Association of America strongly supports the precept that only properly trained and educated personnel should be allowed to purchase and apply restricted-use or general-use chemicals. Furthermore, there should be appropriate controls placed on the consumer use of pesticides by untrained persons."

Endangered Species

The federal endangered species program is designed to protect threatened animal and plant species. In some cases, golf courses may be asked to restrict the use of certain pesticides in areas where endangered species are known to exist. The position paper reads, "The Golf Course Superintendents Association of America fully supports efforts to implement a successful endangered species program and encourages cooperation with the Environmental Protection Agency in order to protect and preserve endangered animal and plant life."

Wetlands and Other Aquatic Habitats

Wetlands protection has become an extremely controversial subject in recent legislative and regulatory debates. Efforts are under way to redefine what constitutes a protected wetland area. GCSAA's position on wetlands and other aquatic habitats is as

follows: "The Golf Course Superintendents Association of America recognizes the need to protect wetlands and other aquatic habitat. GCSAA strongly encourages protective measures in order to ensure an ecological balance of our natural resources."

Wetland definitions, how golf courses can enhance and protect urban wetlands, and major causes of wetland loss are also covered in the paper.

Posting and Notification

Posting and notification requirements have become law in more than 20 states. In many areas, superintendents already post on a voluntary basis. The official position reads, "The Golf Course Superintendents Association of America supports reasonable efforts to notify the public about pesticide applications. GCSAA is committed to all reasonable methods to ensure the health and safety of workers, golfers and the neighboring community."

These position papers will be distributed upon request. They are currently being distributed to media outlets and other interested parties. The GCSAA government relations staff would like members to think of the position statements as tools to help educate interested parties about these issues and to inform the golfing and non-golfing public about GCSAA's stance on these subjects. Copies of the papers will be available at the Membership Services Booth (820) at the New Orleans Conference and Show.

Additional position papers are planned on subjects such as storage and handling of pesticides, disposal of pesticide containers, child labor

laws and local ordinances concerning pesticide use.

Don Bretthauer is the Government Relations Director for GCSAA

EPA sets record for environment protection cases

The Environmental Protection Agency referred a record number of civil and criminal enforcement actions stemming from environmental crimes last year. For the fiscal year ending Sept. 30, EPA referred 474 cases to the Justice Department—almost four times the number referred 10 years ago. Aggregate penalties also increased considerably from previous years. Courts ordered individuals and corporations to pay \$14.1 million in fines and ordered polluters to serve a combined total of 550 months in prison.

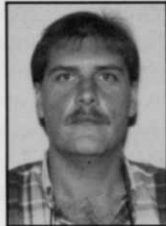
Commenting on the increases, EPA Administrator William K. Reilly said, "Without the expectation of sure, consistent and strict enforcement, the laws will be flouted, their health benefits lost, and law-abiding firms will be victimized by outlaw competitors."

However, some say the determination of who serves jail time for pollution convictions is unfairly distributed. Those from small companies who are indicted and convicted seem more likely to serve jail time than those from large companies, according to a report in the Dec. 9 *Wall Street Journal*. The *Journal* article reported that Earl Devaney, EPA's director of criminal enforcement, said many judges "don't feel as comfortable" sending a Fortune 500 executive to jail.

WANTED



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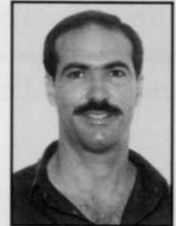
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Woodbury
A TURF TRADITION



Golfers discover that half the pleasure of being on the golf course is leaving it better than they find it.

Blue sky for all

Green Side Up



Joel D. Jackson

Joel D. Jackson, CGCS
Editor

At this time of year it is often customary in these columns to review the previous year's high and low points and talk of what might have been.

While I still believe in "auld lang syne," the 90s are proving to be the decade of change. And so, I give you the "Jean Dixon" approach to the new year with a handful of "J. D.'s Blue Sky Predictions for 1992."

◆ The news media, after a centuries of spreading negative and sensational news using the slogan "the public has a right to know," finds the original quotation by Gutenberg which actually says "the public has a right to know the facts."

◆ Environmental activists finally realize that not everyone who manufactures something or tills the soil is out to destroy the earth. They work with industry to help manage resources, and businesses stay open and people keep their jobs.

◆ Legislators and bureaucrats discover true meaning of "...of the people, for the people, by the people..." and use common sense instead of political expediency in formulating or enforcing regulations.

◆ Golf course owners, developers and architects begin to feel the financial pinch from stiffer permitting regulations,

higher water costs and new and higher taxes. They decide an annual membership in the Florida Golf Council is really an inexpensive way to help provide a voice that will lobby for the golf industry.

◆ The PGA Tour, PGA of America, PGA Senior Tour, and LPGA finally admit that the golf industry is under siege and they pledge to use their highly visible positions and large bank accounts to spread the word that golf courses are a beneficial commodity in the community. In a real act of faith, they donate large sums of money to turf research to help find better ways to manage our resources, and still keep golf green.

◆ Golf course owners and club members who always persist in wanting ideal conditions at their clubs realize that they must have a superintendent who is well trained and highly motivated. They require their superintendents to join the Florida Golf Course Superintendents Association, the Florida Turfgrass Association, and the Golf Course Superintendents Association of America. In addition, they pay all of their expenses to attend the major trade shows and educational conferences. They also require him to attend local superintendent meetings so he can stay abreast of

changing management practices and regulations. Finally, they make sure the superintendent hires a responsible assistant so he can lead a normal life and have days off like the members and owners.

◆ Golf course superintendents, realizing that in order to stay employed they must be well trained and highly motivated, do all of the above. They even volunteer to serve on committees in their local associations to help their profession grow and prosper.

◆ Golf course employees realize that there's a lot of people looking for work right now. Jobs are competitive. They come to work on time. They work in harmony with co-workers. They take pride in their work. Some even express a desire to become superintendents and go to school to accomplish that goal.

◆ Golfers discover that half the pleasure of being on the golf course is leaving it better than they find it. They fix their divots and ball marks, rake out their tracks in the bunkers, and don't drive their golf carts in wet or worn areas.

If any part of these "blue sky" predictions come true, we might just have a good 1992. I send each and every one of you my best wishes for a happy and prosperous new year!

In these challenging, changing times when we seem to be battered nationally by negative news and wayward environmentalists, and locally by insensitive greens committees or budget committees, it's nice to know there's someone out there who appreciates us. That someone is Mr. Richard Morey, publisher of Southern Golf magazine. In the November/December 1991 issue, Mr. Morey takes the current trends in the golf industry to task in an editorial titled, "Who Killed Cock Robin?" I would like to share with you the last section of the article:

So, Who Did It?

"So who killed Cock Robin? Not I said Deane Beman. Not I said the PGA. Not I said Perry Dye. Not I said the LPGA. Not I said the EPA. Not I said the IRS. Not I said the local tax assessor. Not I said the big fat developer. Not I said Mitsubishi. Not I said Pete Dye. Not I said Karsten Solheim. Not any of us said the ASCCA. Surely not I said the club 'pro.' Then who did kill Cock Robin?! Well, we aren't really sure he's dead; perhaps just wounded. One thing we can be sure of, the good old 'life saver' superintendent is still out there keeping the 'greens' green and playable. He is still out there from dawn to dusk keeping the game going in spite of all the 'other' problems. He's still there managing all the problems bestowed upon him when he took the job. One thing is for sure, our friend the 'super' didn't kill Cock Robin nor anything else above or below the turf beneficial to the good old game of golf. Thanks to him it can still be enjoyed without lawsuits, wagers or competitions. Thank God for that man who keeps the green!"

ONE GOOD
THING...



LEADS TO
ANOTHER



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Brad Kocher, Director of Golf Course Maintenance at Pinehurst Resort and Country Club, and LESCO PRE-M go back to the beginning. That was in 1986 when PRE-M first became available. Brad had joined Pinehurst in 1984 and started a battle with goosegrass in fairways and roughs. He began winning in 1986 when he added LESCO PRE-M 60DG to his arsenal of control products.

Now, after five years, he's well satisfied that LESCO PRE-M has passed every test and has proven its effectiveness. "My assistant Bob Farren and I watch what the market has to offer and we continue to use PRE-M," he said. "Based on the results of university testing, we use the split application method with the first application in late March or early April and the second during the first two weeks of May.



Bob Farren

Brad Kocher

"This is the first year we've used it as a band around the overseeded fairways," he said.

"We don't see any problems

in the area where we spray PRE-M but I see a lot of germination outside of that band. We spray right up to the collar of the green without any problems. This gives us an instant edge and looks neat right off the bat.

"PRE-M enables us to realize a

clean delineation between overseeded fairway and rough at the time of germination. We do not have to wait for bermuda dormancy followed by non-selective post emergence spraying".

Brad uses PRE-M on all seven courses at Pinehurst, which is more than 500 acres. "We haven't found any negative effects or visual evidence of root inhibition as far as devel-

oped bermudagrass is concerned," Brad said.

"Because of the effectiveness of PRE-M and the fact that we don't have to worry about its short or long-term use on ryegrass, we can guarantee the best rye on the fairways during March, April and May, our busiest months of the year," Brad said.

"I kind of wish PRE-M had been available when I was in Florida," he concluded.

To find out more about PRE-M, contact your LESCO sales representative, visit a nearby LESCO Service Center, or call (800) 321-5325. In Cleveland, 333-9250.



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