



The Florida Green

May/June 1992

*Number 9
The Reserve
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Fort Pierce*



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Editor Joel Jackson just happened to find blowing in the wind this letter from an unnamed golf course superintendent to a complaining country club member. He shares the unabridged contents with us for our edification.

The Florida Green

Official Voice of the Florida Golf Course Superintendents Association
Published six times a year : On the first of February, April, June, August, October and December

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Janlark Communications

Janlark Communications, Inc., publishes The Florida Green on behalf of the Florida Golf Course Superintendents Association, which sets all policies.

publisher Larry Kieffer
managing editor Philip Pettus
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Resources

photography Brian Everhart
536 Ave. A, NE
Winter Haven, FL 33880
(813) 293-2554

color separations Dimension, Inc.
1507 West Cass St.
Tampa, FL 33606
(813) 251-0244

production film Bartow Printing Company
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(813) 533-4114

printer Rinaldi Printing Co.
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Tampa, FL 33605
(813) 247-3921

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SUBSCRIPTIONS: \$20 for six issues. Contact the FGCSA office.

ADVERTISING: For rates and information, contact Janlark Communications, Inc.

EDITORIAL: All inquiries should be directed to the editor, Joel Jackson, CGCS. Unsolicited manuscripts and photographs cannot be returned.



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TURFGRASS QUIZ

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Problem: Thousands of holes on all greens.

Clue: Greens saturated, high temperatures, mid-summer.

Answer: See Page 6

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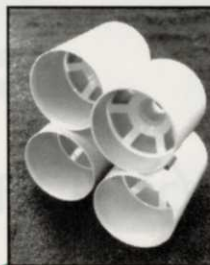
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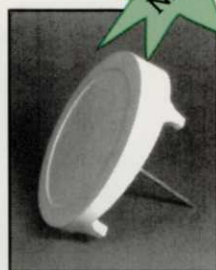
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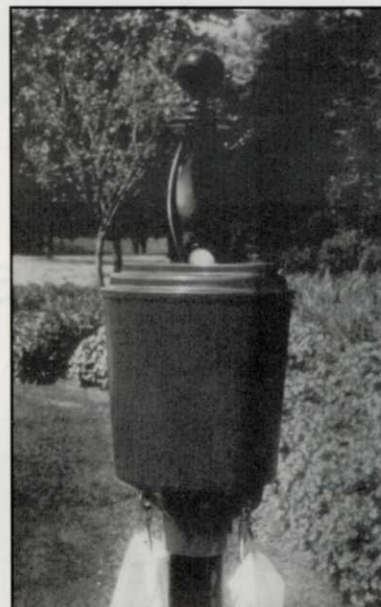
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look out
for us —
but us*



Tom Benefield, CGCSA
FGCSA President

For many years, we in the FGCSA have talked of our desire to be represented in the state capitol by someone who would be able to look out for our interests. We needed an individual who would be able to get to the right people. We wanted

someone who understood how the system worked and was ambitious enough to work with the system for the betterment of all golf courses.

Then a concept came along that we could hitch our wagon to: A single organization that was for the exclusive benefit of the entire golf course industry. It would be a vehicle

that would unite all the various golf course associations into one dynamic force, having one voice that would be heard in Tallahassee. It would help keep our six-billion-dollar industry growing and maturing into the largest economic force in this great state.

The FGCSA supported this cause from the start with state funds. We urged all our local chapters and members to support it with their own financial contributions. We asked the organization's lobbyist to attend state and local meetings. He did. We asked this lobbyist to look after our interests in Tallahassee. He did. We told this lobbyist if he would do for us, then we would do for him.

We didn't. We have dropped the ball. Our own lack of support for the most important step we have ever tried to take is placing this project in peril.

We have no one in the golfing industry to blame but ourselves. It would be easy to throw stones at some of the other golf associations that have not participated, but we

won't. People who live in glass houses should not throw stones.

We have learned from many years of experience about the great apathy which occupies the minds of the golfing public. We learned a long time ago the difficulty of raising money or awareness for issues that seem insignificant until after they are put into law — too late to do anything about. We have learned that matters such as the new style of shirts or how to get two more foursomes on the golf course or how to squeeze another nickel out of a scotch and soda are more important to owners and members than their loss of access to water and pesticides.

What we should have learned by now is that no one — and I mean *no one* — is going to support our interests but us! If we are to have a voice in Tallahassee then we will have to fund it ourselves. Not with other state golf associations and groups. No sir-ee. Purely and simply, just us.

My hat is off to all those clubs that have tried to support this effort. It is their contributions that have kept us from regressing, not only on the legislative front, but also in our research efforts. Yet it is imperative that we broaden our base of support for this effort if we are to succeed.

There has been some brainstorming among the FGCSA executive committee about this dilemma of fund-raising, not just for the underfunded project mentioned above, but for the various causes we fervently fight for each year.

We will be spelling out to the general membership what some of those ideas and ambitions are at the spring meeting of the FGCSA Board of Directors in Naples. It will succeed only if everyone will participate. The local external vice presidents will have details of this plan for their next meeting. Please seek them out and sign up for the program.

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TURF NEWS

ROUNDUP

1991 Golf Course Supply — Top 10 States

Rank	State	Daily Fee	Municipal	Private	Total
1.	Florida	459	100	473	1,032
2.	California	374	178	310	862
3.	New York	400	119	260	779
4.	Michigan	525	84	150	760
5.	Texas	234	156	359	749
6.	Ohio	425	96	192	713
7.	Pennsylvania	374	39	232	645
8.	Illinois	257	157	201	615
9.	North Carolina	257	35	192	484
10.	Wisconsin	276	70	77	423
	Nationwide	6,764	2,259	5,113	14,136

Source: National Golf Foundation

ALSO

The GCSAA is adding a new Pacific Rim office and announcing a conference and trade show for the area in 1993 8

Corporate rebates will be made to GCSAA Scholarship & Research by Lebanon Turf Products for each bag of a Country Club fertilizer sold through Dec. 31, 1993 10

The American Society of Golf Course Architects is urging developers to involve golf course superintendents in the construction phase on new courses. 14

TURF QUIZ

ANSWER

Hailstone damage on all 18 greens. Golf-ball-size hailstones created a great deal of damage.

After the storm, clean-up and repairs on top-dressings finally made greens playable again.

Florida leads nation in new golf course openings but trend unlikely to continue

Florida led the nation in new course openings in 1991 for the seventh consecutive year, according to the National Golf Foundation. But the string is likely to end.

With 35 courses added to the state's inventory last year, Florida widened its lead over California as the state with the most golf courses: 1,032 to 862. California opened 21 new courses last year.

Michigan is likely to capture top honors for 1992, however. According to the NGF, 45 courses are under construction in the Great Lakes state while Florida, which led the nation in this category in 1989 and slipped to third in 1990, dropped into a tie for seventh with Alabama and Texas in 1991. Each state had 24 courses under construction at the end of the year.

Nationally, golf course construction reached a 20-year high-water mark as 351 new layouts opened for play. That's the highest total since 1971, when 371 came on line and comes close to the goal of opening a golf course a day set at the NGF's Golf Summit 1986 at Westchester CC in Rye, N.Y. The totals for 1989 and 1990 were 289 and 290, respectively. The nation had been averaging 150 per year over the previous decade.

These and other statistical insights are contained in the 1992 edition of the NGF's annual *Golf Facilities in the U.S.* report which examines the nation's golf course supply as of Dec. 31.

While 351 openings are certainly good for the industry, NGF officials say this level of activity will be difficult to maintain in light of current development conditions, including:

- ◆ High cost of land.
- ◆ Decline of the real estate market and its impact on the number of future golf courses that will be real-estate related.
- ◆ Availability of financing that does not require a high percentage of equity participation by the borrower.
- ◆ High cost of meeting environmental regulations.

NGF research shows that it takes an average of three years for most golf course development projects to move from conception to completion.

"I seriously question whether we can sustain this level of golf course development activity throughout this decade," says Joe Bedit, NGF president. "Current conditions being what they are, I'd say a rate of 250 a year seems more likely."

The rate probably won't drop all in one year, however. NGF analysts predict that more than 300 courses will open in 1992 because 450 courses have been scheduled to open this year and, historically, about 65 percent of the courses scheduled to open actually do so.

But the number of courses in the planning stages is down 13 percent from 1990 (781 to 681),

so a further drop in openings appears likely.

Richard Norton, NGF's vice president of golf course development, also points to the current decline in the number of golf course development projects that are real estate-related.

"Three to four years ago, upwards of 50 percent of all golf course construction was associated with new housing," he said. "It was simply a reflection of the number of developers who were using golf courses to increase the value of their homesites."

At the end of 1991, however, only 34 percent of the 583 courses under construction — and only 33 percent of those that opened — were related to real estate.

Among other findings in this year's report:

- ◆ The total number of courses in the U.S. stands at 14,136 — the highest number ever.

- ◆ Many new courses have been opened or are being planned and built in the NGF's "Hot Spots" — metro areas where conditions seemed especially favorable for golf course development.

- ◆ Golf in the U.S. remains a predominately public game: 64 percent of the nation's total of 14,136 are public courses as are nearly 80 percent of the 351 that opened last year.

Golf Facilities in the U.S. is one of two major baseline research studies which the NGF conducts annually. The other is *Golf Participation in the U.S.*, which was scheduled to be released as *The Florida Green* went to press.

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GCSAA will add new Pacific Rim office; slates Conference & Trade Show for 1993

The GCSAA has announced it will open a fully-staffed extension office in Singapore to manage membership activities and services in the Pacific Rim countries. And, GCSAA has simultaneously announced that it will sponsor the Pacific Rim Golf Course Conference and Show in Singapore on March 15-21, 1993.

Services provided by GCSAA's Pacific operations will include educational training, certification, publications, conferences, trade shows and research — the same range of activities as in the United States.

The organization's Pacific operations will cover Japan, Guam, Taiwan, Hong Kong, China, Korea, The Philippines, Thailand, Malaysia, Singapore, Indone-

sia, Australia, New Zealand and India. GCSAA President William R. Roberts, CGCS, said emerging governmental interest and concern over environmental and development issues are driving the need for long-term education and quality control throughout this region.

"No other single organization exists anywhere in this area with the resources to provide the services that GCSAA does. Our long-respected position throughout the world as a leader and standard-bearer for golf course superintendents will give us a competitive edge," Roberts said. GCSAA currently has a growing number of members in this area. Nearly 4,000 golf courses are in operation, with hundreds more under construction or planned. "Because golf is booming in this area of the world, a window of opportunity exists for GCSAA to provide these services to ensure that the standards of world-class golf are being met," Roberts said.

Meeting the educational needs of Pa-

cific Rim golf course management professionals and offering manufacturers and suppliers a cost-effective way to sell their products internationally is the force behind GCSAA's new Conference and Show, said Roberts.

"The booming golf market in this area of the world presents an excellent opportunity for GCSAA. It is our intention — as it has been with our domestic activities — to produce a first-class conference and show with the highest quality level of education possible, and to make the event professionally rewarding for all," he said.

The association already sponsors the largest annual trade show in the industry — the International Golf Course Conference and Show — scheduled for Jan. 23-30, 1993, in Anaheim, Calif.

The Pacific Rim event will be sponsored and operated identically to GCSAA's U.S. conference. A full program of educational sessions, seminars, a distributor program and trade show —



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all planned with multiple-language interpreting — will be offered to exhibitors and attendees. International representatives from Toro, Jacobsen, Ransomes/Cushman, John Deere, Rain Bird, Robert Trent Jones II and Club Car have already committed to participate in the Pacific Rim event. Exhibitor information will be mailed to industry representatives in July. Attendee information will be sent in August.

Corporate rebates to add funds to GCSAA S&R foundation

An exclusive new rebate program offered by Lebanon Turf Products will bring at least \$20,000 in donations to GCSAA Scholarship & Research, the Golf Course Superintendents Association of America's non-profit foundation.

According to William R. Roberts, CGCS, president of the GCSAA and its S&R board of trustees, Lebanon has agreed to donate 50 cents for each bag of its new Country Club 18-3-18 fairway fertilizer sold between April 6, 1992 and December 31, 1993 to GCSAA S&R.

Lebanon's professional group has committed a minimum of \$20,000 in donations to the 20-month program.

"It's a creative and generous way for a corporation to help us fund some important work," said Roberts. He said the unrestricted gift will be targeted for use in a planned groundwater monitoring program.

Based in Lebanon, Pa., the company supplies fertilizers, and a variety of other plant protectants for golf courses, lawn care professionals, agricultural and home uses. GCSAA Scholarship & Research is a 36-year-old foundation dedicated to providing educational and scientific advancements for the golf course industry.

ASGCA annual meeting focuses on environment, financing of new courses

The first draft of a position statement and guide on environmental impact was presented at the ASGCA's 46th annual meeting scheduled May 3-7 at the Southhampton Inn on Long Island. The other major development seminar focused on the lack of ready financing for golf course construction.

Golf Course Architect Howard Watson Dies

Howard Watson, 84, a former president of the American Society of Golf Course Architects, died on April 25 from natural causes at his home in LaChute, Quebec. Watson began designing golf courses in 1930, and designed more than 150 golf courses throughout North America. Among his projects are Carling Lake in Pine Hill, Que., LaChute Nos. 1 and 2, LaChute, Que., Pinegrove Country Club, St. Luc, Que., Toronto Board of Trade, Woodbridge, Ont., and the Players Club in Pickering, Ont. Two Canadian Opens, Canada's major championship, have been played on the Pinegrove course. The Canadian architect was elected a member of the ASGCA in 1954 and served as president in 1959. He was elected a Fellow in 1977.



Howard Watson

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GCSAA's Roberts tells Greenskeepers Assn. that education is vital

Continuing education is vital to the rapidly changing golf course management profession — not just in the U.S., but around the world — said GCSAA President William R. Roberts at the British and International Golf Greenkeepers Association national education conference in England March 27-29.

About 150 greenkeepers and golf/turf industry associations, mostly from England and Scotland, participated in the fourth annual conference at the Royal Agricultural College in Cirencester, Cotswold.

British and American golf course managers share the need to deal with environmental, human safety and land uses, Roberts said. He emphasized the importance of continuing education for golf course superintendents to keep up with changing regulations, technological advances and new research on turf management

practices.

"Participation in continuing education is a personal responsibility each of us bears to our profession," Roberts said.

"And it is our profession's responsibility to provide the kind of continuing education opportunities that golf course managers need today, and will need tomorrow."

Roberts said he learned during his trip that only a few British schools offer greenkeeper training, and that this education is more "hands-on, practical" training than the business and turf management programs that U.S. golf course management students typically undertake. He also said that some of those programs may be in danger.

In Britain, as in the United States, tighter funding for public education means the private sector will have to play a larger role in education, training and retraining, he said.

He outlined the GCSAA's education program that includes an accredited curriculum of seminars and correspondence

courses, plus a professional certification program, and environmental management program, an annual conference and trade show, and a series of publications.

Golf House fetes Spitzmiller

Golf House, the museum and library of the USGA will exhibit the paintings of Walt Spitzmiller through Aug. 30.

Touted as a "traditional look at the modern game," the exhibit includes images of such courses as Cypress Point, the Old Course at St. Andrews and Augusta National; and such players as Bob Jones, Ben Hogan, Arnold Palmer, Patty Berg, Jack Nicklaus and Nancy Lopez.

A native of St. Louis, Spitzmiller works from his country home in Connecticut. His work has appeared in Golf Journal, Golf Magazine, Golf Digest, People, and TV Guide.

The USGA exhibit includes works from the private collections of Mr. and Mrs. Robert Murphy, Melbern Glasscock, Thomas Mendell and Jack Nicklaus.



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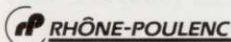
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ASGCA: Developers should involve superintendents in construction

The president of the American Society of Golf Course Architects has called on developers to involve golf course superintendents in the construction of their courses.

"We try to get a superintendent involved at the start of construction so he can act as a project liaison, help interpret plans for the contractor and make suggestions that will ease maintenance," said Clark. "For example, if we create a design that is difficult to maintain, he can bring it to our attention while changes can still be made."

With the superintendent present from the start of the project, it becomes easier to maintain the course according to its design, Clark said.

"Working together during the design and construction phase enables the superintendent to learn the intent of the original design," he said. "As the golf course evolves, the superintendent can help ensure that the layout remains true to the architect's original intent."

Education also enables a superintendent to become better acquainted with the purposes and perspectives of a golf course architect, Clark added.

"Being informed is 90 percent of understanding each other," he said. "The best ways to stay informed are through continuing education, attending conferences and exchanging information during the construction process."

Although few superintendents have the opportunity to be in on the development of a course from the beginning, they can always check the original plans to learn the architect's design strategy, Clark said.

"We must look to the superintendent to make sure we don't forget that the golf course must be maintained," said Clark. "We sometimes need to be reminded that a slope we've designed has to be mowed twice a week."

Architects also depend on the superintendent to monitor construction progress.

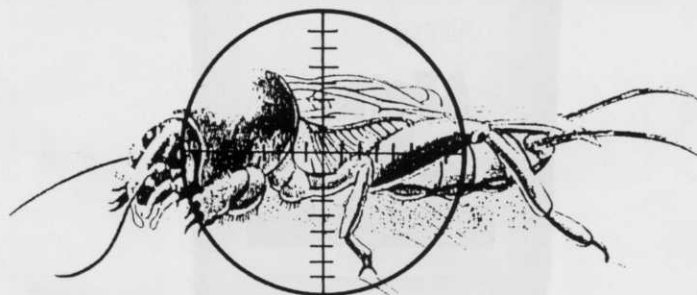
"The superintendent has a lot of authority during construction," said Clark. "The contractor has to realize that he must satisfy the superintendent."

It's also important for the superintendent to be on site so he sees what goes underground, he said. "In particular, he needs to oversee the installation of the irrigation system and confirm that the greens, for instance, have exactly four inches of gravel, two inches of barrier layer and 12 inches of mix. When we leave a course, it's in his hands."

Remodeling projects offer an ideal opportunity for superintendents and architects to work together, Clark said.

"One of the first things we do during a remodeling project is get the superintendent and pro together to ask what they would suggest be improved," said Clark. "They are the ones who are there every day, so they know the course's strengths and weaknesses. We utilize this type of input to develop the master plan which is the blueprint for the project."

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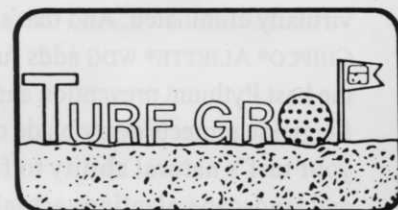


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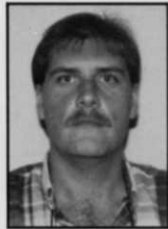
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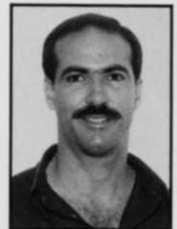
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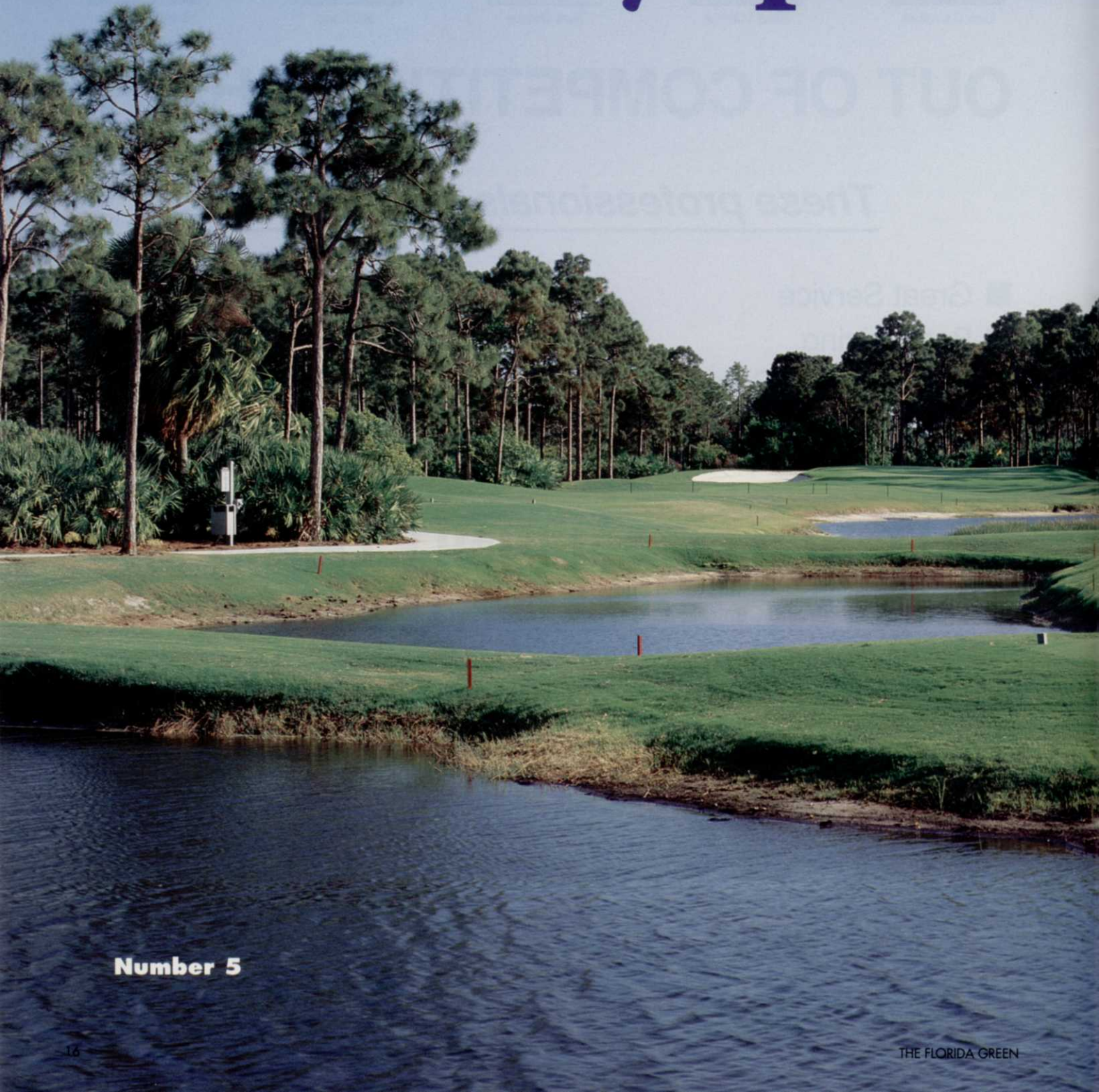
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'Bentgrass in a very special



Number 5

Florida... situation'

The Reserve *Golf and Tennis Club* Fort Pierce

BY LARRY KIEFFER

Tim Cann, CGCS, is in a class by himself. He has grown bentgrass year-around in South Florida for more than three years on greens that have no drainage tiles... and survived. And so has most of his grass.

"Our members know that we have good greens for eight months and pretty good greens for another month," says Cann, head superintendent at The Reserve G&TC in Fort Pierce.

"They know the greens are going to be bad for three months every year. They have come to accept the bad greens in summer because they know what a good surface they will have for eight months.

"Bentgrass in Florida is a very special situation. You couldn't think about having bentgrass down here if you get any play in summer. You'd have to have another 18-hole course with bermudagrass greens if you got even 30 rounds a day in summer."

So far, summer traffic has not counted for many of the 30,000 annual rounds at the 6,980-yard,

Photos by
Brian Everhart

par-72 private course owned by Pittsburgh businessman Jack Piatt. Although about a third of the members are year-round residents, a nine-hole, par-three course with Tifdwarf greens entertains those with enough patience to work on their putting in Florida's summer heat.

Still, maintaining bentgrass in Florida on greens with no drainage is fairly remarkable, particularly when you consider the size of Cann's staff — 13 counting an assistant, two technicians, two mechanics and a crew of eight.

"I've got a part-time cup-cutter," professes the 31-year-old native of Wallingford, Conn.

"Actually, it's not as heroic as it sounds," he adds. "My assistant (Mike Strahowski) and I are working superintendents. We do most of the syringing so the others can stay with their routines.

"We sometimes put in long hours, but it's really a pretty relaxed atmosphere around here. The owner and the members accept the summer situation because they get great greens in winter and my boss (Executive Vice President Michael Dillman) understands the limitations in-

***But no
drainage
tiles?***

herent in working with nature. This is not a high-pressure job."

But no drainage tiles?

"Well, we have installed some tile ourselves on the low spots that wouldn't drain," he said. "When (father-and-nephew architects) George and Jim Fazio built this course in 1984, they thought they had good sand to work with and that they wouldn't need drains."

The attitude was prevalent among golf architects a decade ago. And the senior

Fazio, who died in 1986 with nearly 50 designs to his credit, was best known for two things — losing the U.S. Open to Ben Hogan in a three-way playoff with Lloyd Mangrum at Merion CC in 1950... and for doing things his way.

As a top-level touring pro, Fazio wanted the superior surface of bentgrass at The Reserve, which he owned. It sported greens planted in a combination of Tifgreen 2 and bentgrass when the course opened in 1984, but the Tifgreen had a lot of problems, so they took out the bermudagrass in 1986 and put in pure Penncross bent.

That was two years before Cann arrived. Since then, two of the greens in the middle of summer have been replaced by Tifdwarf.

How have the others managed to survive the summers?

"Well, the big thing is the cloud cover that rolls over from Lake Okeechobee every afternoon," says Cann. "That helps more than anything else to keep us cool.

"I have a good topdressing program with a light application every two weeks and we do a lot of spiking, but you have

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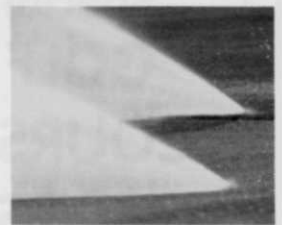
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to be careful because that damages the plant.

"The biggest thing is limiting the amount of water. You can never get them really dry, but we regulate the amount of water they get at night so we can syringe during the day and not get them too wet. Regulating the water is the real challenge of managing bentgrass greens."

Rising to challenges has been a way of life for Cann.

In high school at Wallingford, he worked at a nine-hole public course leased by a professional golfer and his brother. The pro's wife helped out in the golf shop and Cann did most of the "outside work," becoming the de facto superintendent.

He brought his six handicap to his brother's alma mater, St. Leo College in Wesley Chapel northeast of Tampa, to play on the golf team and scope out the Florida scene. He hoped to follow in his brother's footsteps and play for pay.

"I quickly learned that I didn't have the game you need to be a top-flight professional so I decided to look into

maintenance," Cann says. He got a job at the St. Leo course and, after completing one year at the small college, transferred to the University of Florida at Gainesville to begin his education in agronomy.

"After I enrolled, I started looking around for a part-time job and I ran into Jeff Hayden."

Cann pauses long enough to let anyone familiar with golf course maintenance in Florida fill in the rest of the story for himself. Cann became part of Hayden's Lake City Farm Club.

"I finished the semester at Gainesville and then worked for Jeff fulltime at Turkey Creek until classes started at Lake City in the fall." Cann and the rest of Hayden's special crew continued to work part-time at Turkey Creek, commuting from the School of Golf Course Operations at Lake City Community College on weekends and sometimes once or twice during the week.

He was graduated from LCCC with an A.S. in golf course operations in 1984 and landed at River Wilderness CC in Parrish

as assistant to Mike Miles. River Wilderness developer Lloyd Sheehan started work a year later on Imperial Lakes down the road in Palmetto and gave Cann the top job.

"I was able to bring that course to opening day from groundbreaking through grow-in and I stayed there until 1988," Cann recalls. He also became friends with golfers Andy Bean and Paul Azinger, who represented Sheehan's developments on the PGA Tour.

In 1988, Cann succeeded David Cheesman at The Reserve, at Cheesman's suggestion.

The Reserve sits lightly on an environmentally sensitive piece of property about 15 miles inland from the Atlantic Ocean. The golf course is cut out of natural wetlands — vast areas of which have been left intact — and a thick, long-needle-pine forest which shelters abundant wildlife, including bobcats, eagles, deer, fox squirrels and lots of 8-pound bass.

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The Reserve Golf and Tennis Club, Fort Pierce

Built in 1984 by George and Jim Fazio; currently owned by Pittsburgh businessman Jack Piatt.

Private, 18 holes (plus short 9-hole, par-three), 6,980 yards from back tees, 5,256 from front; 30,000 rounds annually.

Greens: Penncross bentgrass (2 in Tifdwarf, overseeded in winter with bent); average 6,500 square feet; hand-mown to .125 in season, .187 in summer.

Tees: Tifway 2, not overseeded; 60 boxes averaging 2,000 square feet; cut to .450.

Fairways: Tifway 2, not overseeded; lightweight mown to .500.

Roughs: Tifway 2 cut to 1.5 inches by ground-driven five-gang unit; some rough is pine bed cleared of palmettos.

Irrigation: double row where necessary fed by existing natural lakes.

Staff: 13 including assistant superintendent, spray technician, irrigation technician, two mechanics and crew.

Superintendent: Tim Cann, 31, single. Born Wallingford, Conn. Lake City Community College A.S. in golf course operations, 1984. Certified in 1991. **Affiliations:** Treasure Coast GCSA, Florida GCSA, FTGA, GCSAA and USGA. **Previous Employment:** Assistant superintendent River Wilderness CC (Parrish); superintendent at Imperial Lakes (Palmetto).

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to take them; hunting is prohibited.

Even though the crew maintains 130 acres of fairways (including the par-three), the course is tight with small landing areas.

Irrigation comes from the connected lakes — “half the property is lakes and the other half is wetlands and forest... mostly wetlands,” says Cann — that are fed by rain and runoff. The lakes empty into the Atlantic through one of the canals dug by the Army Corps of Engineers.

“We’re not allowed to pump any water from the ground, but they do let us transfer water between lakes so we move a lot of water from one side of the property to the other,” Cann says.

“It’s a very good golf course,” says Cann, who plays to a 10 handicap these days and is grateful to be able to play often enough to keep it there. “It’s well-laid out, challenging with carefully placed bunkers (60) and lots of water (comes

half the property is lakes and the other half is wetlands and forest... mostly wetlands

into play on 15 holes). Most holes have a tunnel effect off the tee.”

Cann has enjoyed his tenure at tending the course George Fazio intended to be his personal track. Fazio’s best-known layouts include Jupiter Hills 45 minutes

down the road and Butler National outside of Chicago. The Reserve turned out to be his next-to-last project and the last one he finished. Hawk’s Nest in Vero Beach opened after he died.

“An office job doesn’t turn me on at all,” Caan said. “Being around people and nature gives me a good feeling. If you can find a beautiful golf course that you’re happy at, it’s nice to be able to spend your day more relaxed.”

NOTE: As this story went to press, Tim Cann realized one of his career goals of managing a 36-hole course by accepting the position as superintendent at Harbour Ridge GC in Stuart, a 36-hole private facility by Joe Lee and Pete/P.B. Dye with bermudagrass greens. Tim will be succeeded at The Reserve by his assistant, Mike Strahowski. Mike has been at The Reserve for four and one-half years learning his craft from both Tim and previous superintendent, David Cheesman. ➔

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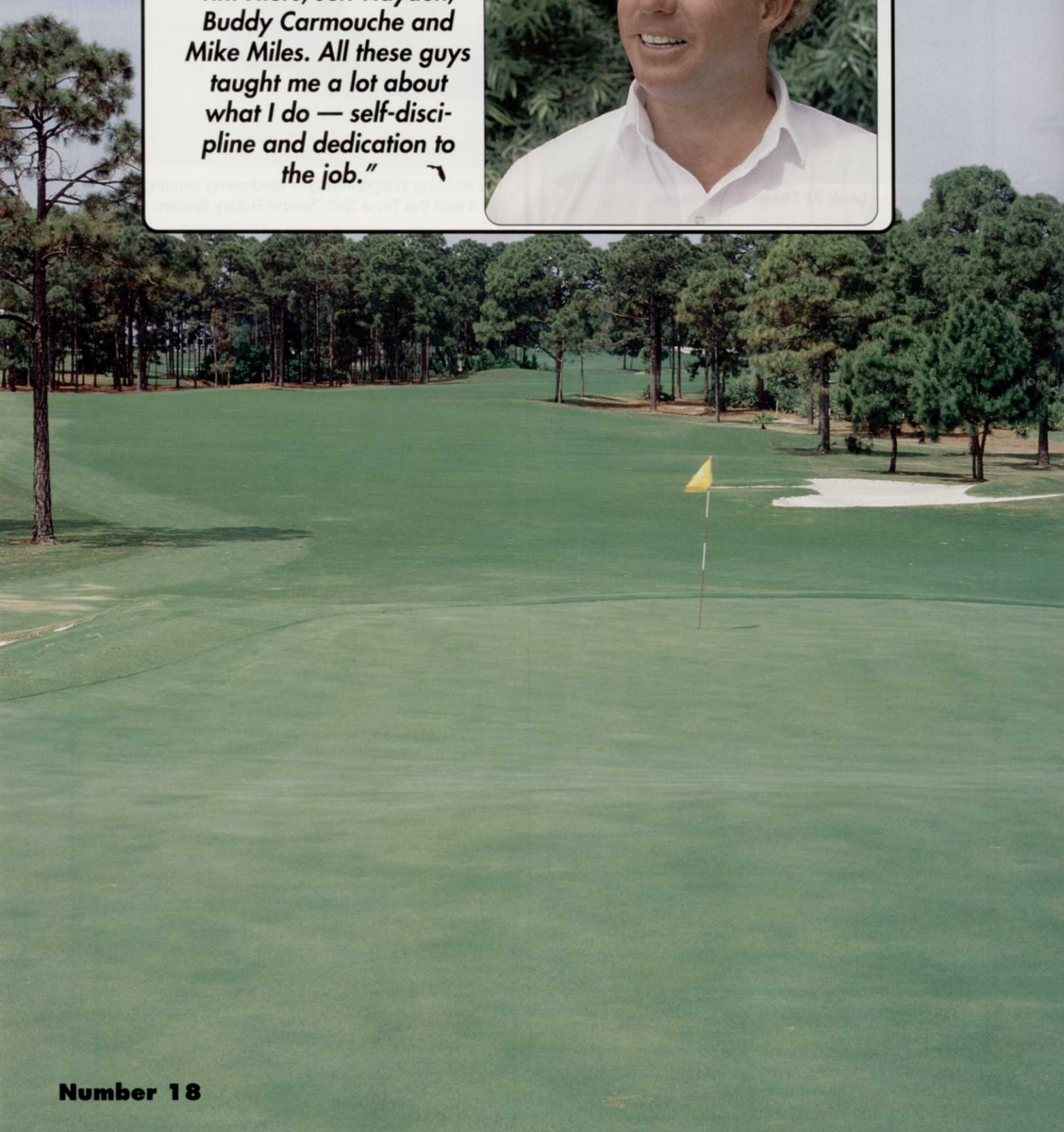
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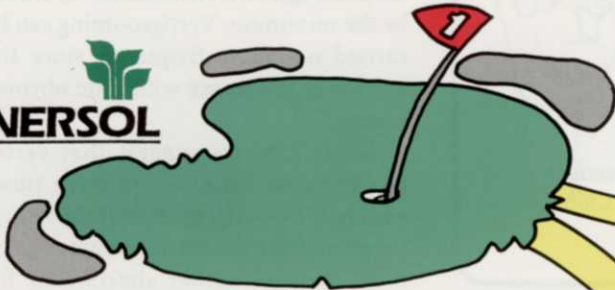
MO Tim Caan, CGCS

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Verticutting & Vertigrooming:

Verticutting (vertical mowing) is a cultivation practice involving the use of vertically oriented knives mounted on a rapidly rotating, horizontal shaft. (A. J. Turgeon. *Turfgrass Management*, third edition).

Verticutting and vertigrooming are not the same and should not be considered equal as turf management tools. Verticutting is a necessary cultural practice probably equal to aerifying in its importance to quality turfgrass and putting surfaces. Vertigrooming is a fine-tuning of the playing surface that will enhance the ball roll and appearance of the turf.

Verticutting

The objectives and benefits of verticutting varies, depending on the depth and spacing of the knives and the turf manager doing the job.

Major objectives of verticutting are thatch removal, reduction of grain, and compaction relief. Most turf managers agree that controlling thatch and reducing grain are the primary reasons for verticutting. Others contend that stimulation produces new leaf growth, making the putting surface more manageable.

Other problems that can be solved with verticutting: breaking up algae on putting surfaces; accelerating spring transition by injuring ryegrass and promoting bermudagrass; aiding overseeding to reach the soil during fall overseeding projects and, to some extent, removal of *poa annua* seedheads, thus improving the appearance of the putting surface.

Consideration should be given to the condition of the putting surface prior to the initiation of a verticutting operation. Shallow rooted turf can be seriously damaged by verticutting. The turf should be healthy and vigorously growing at the time of the operation to speed recovery.

Another factor is the disruption of the putting surface and the negative reception from the members and golfers. Be sure to properly notify everyone concerned of the scheduled operation and its effects.

What is Vertigrooming?

A new equipment option from major manufacturers, a vertigroomer is part of a cutting unit designed to simultaneously vertigroom while the mower is cutting.

HANDS ON



By Prentis C. Knotts
Golf Course Superintendent
Eagle Creek Country Club
Naples, Florida

Generally, the depth of the knives is limited and the vertigroomer is incapable of deep verticutting. The “brush” or “comb” traditionally found on the cutting unit is replaced by the vertigroomer. It is debatable whether the same objective applies to these attachments. Brushing stands the grass blades up allowing for a smoother cut. The vertigroomer may accomplish this as well, but many feel this is a side effect of vertigrooming with the main objective being a minor reduction of leaf surface. Some believe this reduction reduces friction allowing additional speed and more consistent ball roll. In addition, the stimulation of the turf increases microbial activity at the soil surface resulting in better gas exchange and increased turf vigor.

Comparing Verticutting and Vertigrooming Operations

Verticutting usually has more visual impact to the golfer, while vertigrooming can be accomplished without the visual effect. Since vertigrooming can be done more often with less visual impact, it is not always necessary to notify anyone of the procedure.

Most turf managers prefer to lightly topdress following verticutting. This also helps decompose thatch and smooth the surface. The addition of topdressing increases the negative visual effect to the golfer. Many perceive the green speed to be reduced on topdressed greens. The opposite is generally true.

The topdressing fills irregularities in the putting surface, i. e., unrepaired ball marks, scuff marks, and minor tire depressions. This contributes to speed and “trueness” in the putting surface.

Scheduling of verticutting should be

based on the need to verticut and the turf’s ability to recover. Most superintendents agree that twice annually would be the minimum. Vertigrooming can be carried out more frequently since the process is less severe with little obvious impact.

Manufacturers suggest that vertigrooming be done two to three times weekly. Obviously, the lighter the setting the more often the vertigrooming can be done. Vertical mower attachments for triplex greensmowers are the most popular equipment because they are fast and usually trouble free. Other types include walk-behind units and tractor mounted, PTO (power take-off) versions.

Each equipment selection should be based on the suitability of that unit for the particular golf course and the function it is to perform. Vertigrooming equipment is an extra cost option on greensmower reels, walk-behind and triplex. Triplex mowers can be equipped with vertigroomers and have interchangeable verticutting units. Again, these choices should be made with consideration of the intended use and suitability for the site.

Most turf managers agree that double verticutting (two directions per operation) is more beneficial and keeps the putting surface consistent. Because vertigrooming can be accomplished several times over a one week period it only requires one direction for its effect.

The depth of cut varies from one turf manager to another, but have common criteria. For example, the major verticutting operations conducted each year should be deep enough to remove thatch and allow top dressing to be incorporated into the thatch layer, enhancing decomposition. If reducing grain is the objective, a lighter touch is recommended. Usually setting the knives at or fractionally above the bottom of the roller is sufficient to accomplish this.

When verticutting greens, a crossing pattern at 90 degrees produces a pattern that members and golfers will find tolerable.

Vertigrooming on the other hand can be done in any direction for consecutive days. Emphasis should be placed on

Different operations with similar names

straight lines to minimize negative responses from players. If baskets are used, some of the material will be collected and clean up labor will be reduced. A large vacuum/sweeper can also be used to collect debris. Generally, labor costs are minimal when light verticutting or vertigrooming is done. The more severe the procedure, the more costly the project in terms of time and labor.

Verticutting Tees and Fairways

It should be noted that verticutting is also necessary for the same reasons on tees and fairways and (if you have the luxury) even roughs. Thatch build-up in tees and fairways can be a problem. The plant vigor and appearance can be greatly enhanced with a regular program of verticutting in these areas. To date, vertigrooming equipment is not available for fairway mowers, but, verticutting equipment is.

The degrees of verticutting will regulate the amount of time and labor needed to complete the operation and clean up

the debris generated in the process. A verticutter set to enter the soil is likely to leave large amounts of material on the surface.

This material is usually a mixture of decomposing thatch, clippings, and soil. One method of clean up is to drag the this material back into the grooves created by the verticutter, effectively re-incorporating the material and accelerating the decomposition process. Another method is to mow the area with baskets to collect the material.

Remember that the benefits can easily be offset by damage if the turf cannot recover. Turf under stress from weather, insects, and/or disease has lower carbohydrate reserves and a lower tolerance to additional stress. Hot, dry weather causes rapid dessication of the grass plant following verticutting and turf loss is a real possibility. Wet, rainy weather saturates the soil, closing pore spaces and increases susceptibility to inoculation by disease organisms.

Contracting Services

Recently, contractors have begun offering verticutting and de-thatching services to golf courses. Opinions range from very positive to extremely negative about the use of contractors. A common thread running through groups of superintendents is that a turf manager that would contract spraying, aerifying, sod work, and other services would be more likely to contract verticutting.

There are some advantages in the use of a contractor. First, this is his specialty and he must be efficient if he is to make a profit. Second, hiring a contractor will free up labor, allowing golf course maintenance to continue uninterrupted. Third, there is usually recourse for the golf course if the job is not properly done or if unreasonable damages result from poor performance or materials. These questions should be asked of contractors prior to entering into any agreement about service.

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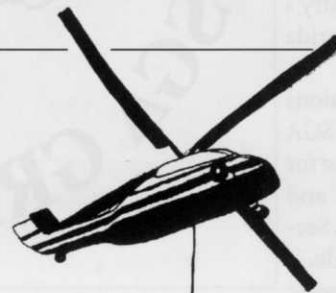
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Words of Wisdom

Green Section conferences give up-to-the-minute information on everything from how-to to ought-to

Agronomy is no longer enough, if the curriculum for the USGA's annual Green Section Conferences is any indication. Psychology, entomology, hydrology and political science are now survival skills for the modern golf course superintendent.

About 310 golf course executives, more than half of them superintendents, attended one of the two day-long Green Section conferences scheduled in Florida this year — West Palm Beach March 10 and Orlando March 12 — covering eight topics including an up-to-the-minute briefing on the golf industry's standing with the Florida Legislature.

Hosts for both sessions were Roger Harvie, USGA Regional Affairs director for the Southeastern U.S. and John Foy, USGA Green Section director for Florida.

"There are no drastic changes for 1992," said Chuck Gast, USGA agronomist who devotes about half his time to Florida. "And there won't be any special Florida modifications of our recommendations, contrary to some rumors you might have heard."

Among the Green Section's projects this year is a program to standardize procedures for conducting soil analyses. "All the major labs are cooperating," Gast said.

The USGA is funding a series of studies in an attempt to quantify the benefits of turfgrass and it is conducting a thorough review of the literature pertaining to wildlife on golf courses, he said.

As of mid-March, more than two dozen golf courses in Florida (*40 as The Florida Green goes to press-ed.*) had signed up for the USGA's wildlife sanctuary program conducted in cooperation with the New York Audubon Society. "The USGA started the program with a \$30,000 grant last year and this year added another \$100,000," Gast said.

Fees for the USGA's Turf Advisory Service, which has become very popular, have gone up to \$900 for a half-day visit and

\$1,400 for a full day, although privately owned public courses subscribing to the service for the first time can get a full-day visit for the half-day price.



Red Tee Stigma

Red tee markers are preventing two classes of golfers — women and senior men — from getting full enjoyment from the game, according to Jan Beljan, senior design consultant with Fazio Golf Course Designers in Jupiter.

Women won't play from any set of tees other than red — even though most women would benefit from a shorter course than delineated by the red tees at most courses — and senior men don't want to play from red tees because those markers have become associated exclusively with women.

Golfers — men and women — must be educated to play from whatever set of

tees gives them a fair chance of shooting par, Beljan said.

"Women must learn that they are permitted to play par golf," she said, "and they should understand that you are not taking part of the course away from them — you are trying to give them the enjoyment of playing golf the way it was meant to be played," Beljan said.

Replace the traditional marker colors of red, white and blue with a series of earth tones and give each set a name that is gender-neutral, she suggests.

Environmental Regulation

"There is no warm, fuzzy feeling toward golf in the Florida Legislature," said Dr. Tom Latta, external affairs chairman of the Florida Turfgrass Association and president of AmerAquatics, Inc. in Deerfield Beach. "When it comes to golf versus the manatee, you are going to lose; golf versus bass, you are going to lose; golf versus anything and you are going to lose. Golf is a nice, fat target because golf has no natural constituency."

Local and regional regulatory agencies have grown huge

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Give your golfers little flags to mark fire ant mounds and have your spray tech follow up the next morning.

bureaucracies that must be supported by fines and user fees.

"The public perception is that golf equates to wealth. You have a lot of money and they need to balance their budgets.

"You are going to pay user fees," Latta predicted.

He urged a three-pronged defensive strategy:

- ◆ For regulatory purposes, unite with the Florida Turfgrass Association under the turf umbrella. "Not everyone can relate to golf, but everyone can relate to turfgrass because everyone has a lawn."

- ◆ Increase research funding drastically to get accurate data. "If you can prove that golf courses are net water contributors rather than net users, you will be in a much stronger negotiating position if they try to force you to pay high rates for treated effluent."

- ◆ Organize to wield political clout. "I don't sympathize with some of the goals of the National Rifle Association, but I have to admire the way they get attention of every lawmaker in this nation."

UF's IFAS is Major League

While funding for the Envirotron has received a lot of publicity recently, Dr. John Cisar, IFAS turfgrass extension specialist at the Fort Lauderdale Research and Education Center, pointed out several other developments that have moved Florida into the big leagues of turfgrass research:

- ◆ Florida will host the 1993 International Turfgrass Society Research Conference — the organization's first visit to the United States in two decades.

- ◆ The Otto Schmeisser Research Green built by the FGCSA at the Fort Lauderdale REC will give the university a strong selling point in attracting grants for golf-related research.

- ◆ Of the five universities picked by the USGA to conduct pesticide fate studies, UF is the only one that can conduct all

phases of the soil analysis in house.

Mole Crickets

"They're here to stay and we're just going to have to learn to live with them," said Dr. Leon Stacey, entomologist in charge of an extensive mole cricket control program on St. Simon's Island, Ga.

Any pesticide labeled for mole crickets can be effective under the right conditions, he said. The trick "is to get the product down to the mole crickets or get the crickets up to the product. A lot of the material gets caught up in the thatch layer."

Timing, he notes, is everything. Get a residual pesticide down before the eggs hatch.

Stacey spent a year in research before launching his all-out campaign on the mole crickets. Among his findings:

- ◆ Except during the brief mating period, males and females segregate themselves in different areas of the golf course.

- ◆ Females lay 3-11 clutches of 50 eggs each during their life cycle.

- ◆ Eggs take 6-11 days to develop in the female and 21-31 days to hatch in the soil.

From these observations, he devised three ways of using a soap flush (which drives mole crickets to the surface) to determine the "hatch-out period," which may last three or four weeks.

- ◆ Examine the females. If they are full of eggs, you have at least 21 days before hatching begins.

- ◆ If the ratio of males to females is about 50-50, that means mating has begun and you have 27-42 days before hatching begins.

- ◆ If you have nymphs in the flush, hatching has begun.

Fire Ants

Like mole crickets, fire ants will be a perpetual problem on golf courses for the foreseeable future, according to Lee Bloomkamp, former director of pest con-

rol services for the University of Florida. She now represents Mobay Chemical Co.

"Each little ant is relatively easy to kill," she says. "The problem is, there are so darn many of them — and no more than five percent are ever on the surface where you can knock them down easily.

"They are fierce predators and they all bite at once," Bloomkamp reports. "They have adapted this behavior that lets them kill quite large animals. They all crawl onto the prey but nobody bites until the first one gets disturbed. She (all workers are sterile females) releases a pheromone that alerts the others and they all dig in."

What makes the fire-ant sting so painful is that each ant inflicts a double wound: first it takes a hunk of flesh with its jaws and then it injects venom with its stinger.

Although only about six people in a thousand are allergic to fire-ant venom, about seven or eight people die every year from the shock of multiple bites.

Other useful facts about fire ants:

- ◆ If you control aphids, scale and mealy bugs in ornamentals, you will keep down fire ant populations because that deprives them of a food source and also makes them more susceptible to baits.

- ◆ They cannot swallow solids. To ingest the active ingredient in a bait, they must chew the carrier and mix it with their saliva.

- ◆ They will eat anything and can live anywhere. She once found a huge colony on a seventh-floor balcony of Shands Hospital.

- ◆ They don't always build mounds. If their mounds get knocked down by daily mowing, the ants can adapt; they'll live in the thatch layer without bothering to drag up the dirt.

- ◆ They are attracted to electrical fields, irrigation lines, water coolers and pond margins.

- ◆ More than half the colonies in Florida now have more than one queen, which makes them much harder to wipe out.

- ◆ A typical mature colony is 6 feet

deep and 24 feet in diameter.

◆ Drenches are effective on single-queen mounds. Give your golfers little flags to mark fire ant mounds and have your spray tech follow up the next morning.

◆ Baits are most effective but follow the directions carefully, since some break down quickly when they get wet or are exposed to ultraviolet light. Do not use the same spreader used for fertilizer or pesticides: the ants can detect even the slightest contamination and won't take the bait.

Course Marking

"Keep the difficulty of your course the same each day of a tournament," said Harvie, who also is responsible for marking courses for USGA championships. "We assign levels of difficulty to various pin placements and try to keep it balanced each day."

For regular play, he offered the following tips:

◆ The teeing ground must be two club lengths deep.

◆ Out of bounds must be marked so the golfer can see from one stake to the next.

◆ Be careful when staking a lateral hazard that the drop area doesn't penalize the golfer a second time. Landing in the hazard was penalty enough.

◆ There is *nothing* wrong with putting the cup in the middle of the green. Most golfers will thank you for doing so.

1001 Excuses

"Are you going to make me fire my secretary?" is a typical tactic used by golfers trying to get around the USGA's unconditional refusal to accept late entries into its championships, according to Larry Adamson, director of championship administration.

In addition to the 6,400± U.S. Open entries that arrive on time (70% within a day or two of the deadline), another 250-

300 will arrive late and almost always with an excuse.

Weeping wives, sobbing secretaries and bulging-veined bullies every year try to talk Adamson into granting exceptions to the policy that entries must be received at the USGA office by 5 p.m. on deadline day.

The USGA won't accept postmarks as proof of mailing because many golfers have access to meters, including one irate entrant who calmed down in a hurry once Adamson pointed out that, while his envelope may have been postmarked 10 days prior to the deadline, the accompanying check was dated three days after the deadline!

"They threaten, but nobody has sued us yet," he said, pointing out that the association's best defense is absolute enforcement of the policy with no exceptions — not even for a member of the USGA executive committee whose entry form really did get delayed for a few days by the U.S. Postal Service.



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Activities around the state

Successful seminars

The Everglades and South Florida Chapters have every right to be proud of their successful seminars that took place last April 9. The attendees at both seminars were treated to some outstanding education and they also have the satisfaction of knowing their registration fees went for funding the Otto Schmeisser Research Green in Fort Lauderdale and the FTGA sponsored Envirotron at the University of Florida in Gainesville.

Ridgerunners rejoice

The Ridge Chapter began its fund raising efforts on an equally successful note as a full field of superintendents and suppliers plied their skills against the new Grasslands course in Lakeland on April 27. Host superintendent Bobby Ellis had the course in superb condition. The golfers had to contend with near gale force winds as the wide-open layout proved to be a stern test — not for the faint of heart. The post-tournament barbecue and awards ceremony was highlighted by an impromptu appearance and door prize gift donation by PGA Tour player, Andy Bean, who represents the Grasslands C.C.

Building bridges and mending fences

On April 28, the president of the Central Florida GCSA, Stuart Leventhal, was assisted by three former CFC presidents, Joel Jackson, Joe Ondo and Steve Wright, at a turf management presentation for the North Florida Section of the PGA. The superintendents spoke on the roles and responsibilities of a superintendent, overseeding, renovation and pro-superintendent communications. The panel avidly solicited the aid and support of the golf professionals in helping to educate the golfing public about benefits of turf-grass and the challenges the industry is facing. The seminar took place at the Isleworth G & CC and was hosted by Bob Yount of the FTGA. Also on the program in the morning session was Ralph White, turf consultant, and Naomi Whitney of the St. John's River Water Management District. It was refreshing to see members

Creative Fundraising



The Central Florida Chapter worked the Nestle Invitational Tournament at Bay Hill for NBC during the telecast last March. The 24 volunteers worked Saturday and Sunday afternoons on the spotting and scoring lines to the production trailer.

of the audience go up to the dais after the seminar concluded and thank the superintendents for their presentation and ask additional questions.

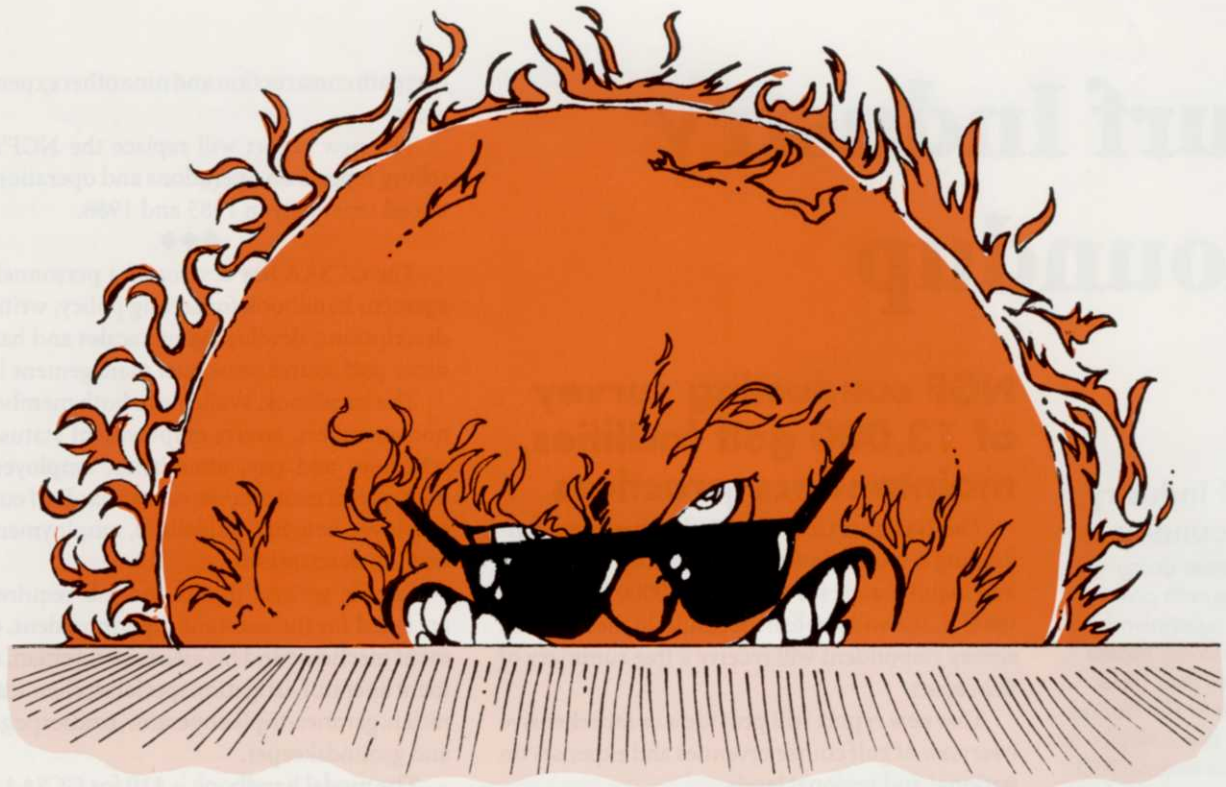
'Who's Away' revisited

Taking a page from the Palm Beach Chapter's fund raising notebook, members of the Central Florida Chapter with an assist from Alan Puckett of the Ridge Chapter worked the Nestle Invitational Tournament at Bay Hill for NBC during the telecast last March. The 24 volunteers worked Saturday and Sunday afternoons on the spotting and scoring lines to the production trailer. It was fun being "inside the ropes" and hearing the tournament unfold on your headset as the leaders approached your green. The Central Florida Chapter netted \$1,200 for a couple of hours work each day, and

each person got an NBC sports cap that was drawing \$25 and \$30 dollar offers from people in the gallery.

Earlier in the month, I was contacted by a Texas superintendent who had heard about the "Who's Away" story in *The Florida Green*. He was looking for our NBC contact, Lou Safrin, so the Texas GCSA could participate on the PGA swing through the Longhorn State and raise a little money of their own. I hope all the chapters around the state and nation are taking advantage of this interesting way to raise scholarship and research funds and have fun. Just a tip if you do participate. They would like to have your association's TIN number and some logo stationery handy so they can cut your check on Sunday.

— Joel Jackson



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Turf Industry Roundup

Turf Industry Roundup

Companies doing business with golf course superintendents in Florida are invited to submit their news releases to The Florida Green, c/o Janlark Communications, P.O. Box 336, Auburndale, FL 33823.

Books & Videos

Jacobsen is offering a video training guide for its triplex greensmower in English and Spanish. Designed for use with the operator's manual, the video covers operation from startup to cleanup and includes tips on inspecting, mowing and maintaining the mower. Contact the local Jacobsen distributor.

Excel Industries has released a full-color brochure covering its entire line of commercial turf and grounds equipment. Call 800-835-3260.

NGF conducting survey of 13,000 golf facilities, maintenance practices

The National Golf Foundation has been conducting a major national golf facility operations and maintenance survey of all 13,000 facilities in the U.S. and will publish the results in the fall. Each survey respondent will receive a free summary of the report.

This new report will provide a comprehensive overview of golf course revenues and expenses on national and regional levels.

Data will be gathered in seven areas:

- ◆ Facility characteristics: length of season, estimated rounds played, availability of practice range.
- ◆ Course Maintenance: average size of greens and fairways, source and amount of water used per year, type of irrigation system.
- ◆ Rates and Fees: 1991 weekend/weekday and other greens fees; initiation fees and dues; number of golf cars and related fees, range ball rates.
- ◆ Staff: Number of full or part-time employees by job description.
- ◆ Revenues: Gross revenues broken out in terms of dues/fees, merchandise sales, lessons, club repair, food and beverage.
- ◆ Expenses: Broken out in terms of maintenance, major facility, pro shop, cart rental, range, food and beverage and general/administrative.
- ◆ Capital Expenditures: Amount spent from 1988-1990 on golf cars, maintenance equipment,

cart path construction and nine other expenditure areas.

The new report will replace the NGF's best-selling reports on operations and operations produced separately in 1985 and 1986.



The GCSAA has developed a personnel management handbook for setting policy, writing job descriptions, developing pay scales and handling other golf course personnel management issues.

The handbook, available to both members and non-members, covers employment status, work schedules and pay, attendance, employee conduct, performance reviews, standards of conduct, employee benefits, guidelines, employment laws and job descriptions.

Sample general duties and job requirements are listed for the assistant superintendent, equipment mechanic and his assistant, foreman, equipment operator, irrigation specialist, chemical technician, gardner-triplex operator, landscape gardner and groundskeeper.

The model handbook is \$10 for GCSAA members and \$15 for non-members. Call 913-832-4480 for more information.



"Back to Basics" will be the theme of the **Florida Foliage Association's Annual Convention** July 16-19 at the Jupiter Beach Hilton. Among the programs scheduled: Developing profitable marketing strategies, Changing world of commercial plant tissue culture, keeping the critters out, New ideas in motivation — secrets of outstanding leaders, IFAS research highlights, Financial management: a common-sense approach to business success.



Agri-Diagnostics, manufacturer of Reveal turf disease detection kit, and **Ciba-Geigy**, manufacturer of plant protection products including the larvacide exhibit, are co-sponsoring an advertising program to raise awareness among golfers



Steve Krug



Jean Hughes



James A. Fields



Lawrence L. Courter

about how golf course superintendents are applying sound environmental practices to golf course maintenance.

The ad, titled "Caring for the Earth," highlights the environmental stewardship and professionalism of superintendents and will be placed in publications targeted at golfers, greens committees and club members.

For each superintendent who buys at least three Reveal kits by Aug. 30, Agri-Diagnostics will make a donation toward placement of the ad. Ciba-Geigy's contributions will be based on the sale of cases of Exhibit.

Participating superintendents will receive promotional kits containing posters, copies of the ad and a press release for use in club mailings and other promotions.



James F. Petta is ICI Professional Products' product manager for turf and ornamentals. Richard J. Gouger, national technical manager, has retired from the firm after 18 years.

James A. Fields has been named national sales manager for DuraGreen Marketing of Mount Dora. **Mark Maurais**, of Apopka has been named southeastern sales manager for the Nexus Greenhouse Corp. **Steve Krug** of Redding, Calif., is the firm's new western sales manager.

Lawrence L. Courter is the new plant manager of TH Molding for Rain Bird Sprinkler Mfg. Corp. **Jean Hughes** has been appointed manager of corporate accounting for the manufacturer of irrigation systems based in Glendora, Calif.

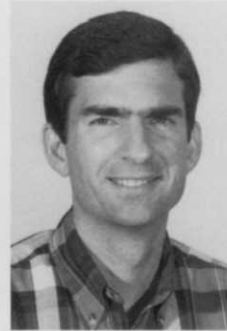
The GCSAA has promoted **David M. Bishop** to director of education and **Teri Harris** to marketing manager and hired **Ben Marshall** as director of communications. **Mary Nowell** has been appointed marketing services manager for the LPGA.

Koala Blooms, an Australian floraculture network, will begin distributing a range of Australian flowering plants developed especially for North American gardens. Nurseries in Miami, West Palm Beach and Naples will take part in the program.

Grace-Sierra Horticultural Products Company has announced four new appointments to the company's management team. **Robert Holton** was named vice president of manufacturing and will be responsible for all United States manufacturing operations and will be the company's manufacturing representative to subsidiaries, joint ventures, and raw material suppliers. **John Neal** is the new vice president of research and development and will be responsible for supporting the



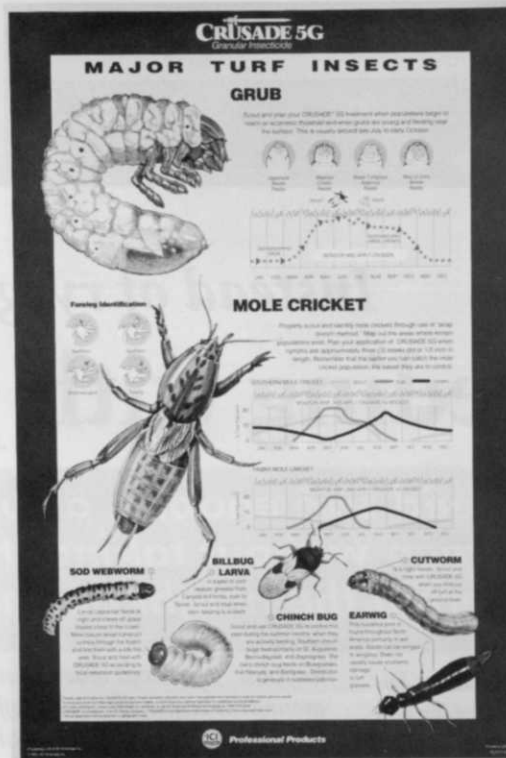
James F. Petta



Mark Maurais

company's long-term business objectives. **Lisle Smith** was promoted to vice president and chief financial officer. **Michael Thurlow** is the new vice president of sales and marketing.

Century Rain Aid and the irrigation division of Banks Supply have recently merged their Florida operations, creating a network of 10 branches across the state's west coast.



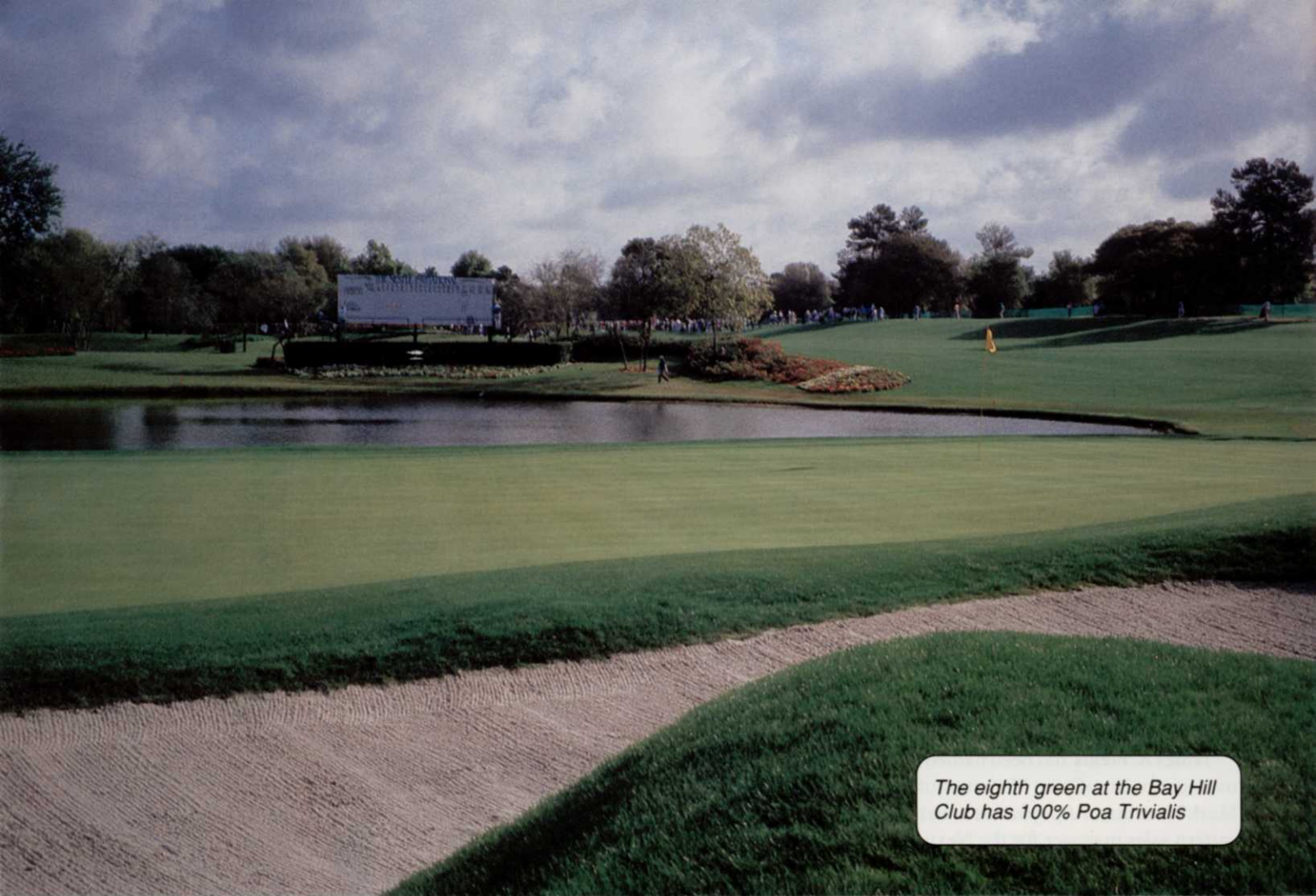
FREE POSTER

ICI Professional Products is offering a free four-color CRUSADE turf insect poster that can help golf course employees identify major pests in turfgrass. Detailed illustrations of seven major turf insects and information and charts on the optimal time to scout and treat for each pest. To receive your free poster, phone 800-759-2500.

NEW PRODUCTS



Hunter Industries has introduced the ETC, a programmable electronic irrigation controller for golf courses. The ETC calculates and schedules the precise daily water needs for up to 24 stations, based on historical ET (Evapotranspiration) rates for the locality. Historical ET rates are stored in the controller memory, along with average high temperature rates. The user selects operating parameters for each station, such as soil and plant type, relative slope and precipitation rate. The controller then determines the precise amount of water required and schedules and controls its application. Software updates can be automatically downloaded into the unit with a "flashbox." The ETC can operate as a stand-alone or as part of a network.



The eighth green at the Bay Hill Club has 100% *Poa Trivialis*

Instead of ryegrass –
Overseeding with *poa trivialis*

This small seed size enables a superintendent to winter overseed a green without taking it out of play in the fall or altering the height during overseeding

Editor's Note: Dr. Richard Hurley, Director of Research and Agronomy for Loft Seed, Inc., is the developer of the successful *poa trivialis* variety, Laser. I ran into Dr. Hurley at the Nestle Invitational at Bay Hill last March. We were discussing the growing trend of *Poa trivialis* overseeding replacing ryegrass overseeding, and Dr. Hurley relayed his concerns over the ability of suppliers to meet the increasing demand for seed. He also wanted to alert superintendents to the possible use by some suppliers of uncertified European varieties of *Poa*

trivialis. With seed ordering season just around the corner, Dr. Hurley offered to do an article on current *poa trivialis* seeding techniques and alternatives.

BY DR. RICHARD HURLEY

Poa trivialis is commonly known by its scientific name, but is also referred to as rough bluegrass or rough-stalked bluegrass. *Poa trivialis* produces moderately fine-textured, medium-dense attractive turf that has recently become a very popular choice as a winter overseeding grass. It has the ability to germinate and grow at

low temperatures, displays good color retention in cool winter months, germinates rapidly with good seedling vigor, and has excellent winter hardiness.

With a small seed size that provides approximately 2,000,000 seeds per pound, *poa trivialis* has an 8-to-1 advantage in number seeds per pound compared to perennial ryegrasses. This small seed size enables a superintendent to winter overseed a green without taking it out of play in the fall or altering the height during overseeding. ➔

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PATRIOT II maintains the fine texture exhibited by its parent. Its turf forms an attractive, clean mowing dense sward.

PATRIOT II is adapted to the cool moderate climate areas of the U.S. But, most importantly, this new variety possesses characteristics that adapt so perfectly to the unique problems of overseeding dormant Bermuda greens in the south.

In fact, PATRIOT II was the top named variety at trials at Gainesville, Florida, and ranked third at Mississippi State!

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Table 6. Biweekly and seasonal means for turf quality of winter overseeded entries grown on 'Tifway II' bermudagrass from October 1990 through May 1991 at Gainesville, Fl.

Entry	Nov		Dec		Jan		Feb		Mar		Apr		May		Season Mean	CV	%
	16-30	1-15	16-31	1-15	16-31	1-15	16-28	1-15	16-31	1-15	16-30	1-15					
** Patriot II	7.2	8.2	8.3	8.3	7.8	8.2	7.4	8.2	8.2	7.8	8.1	7.9	7.9	8.0	7.86 a	9.9	7.8
LDRF	7.6	8.4	8.4	8.4	8.0	8.0	7.3	7.9	7.3	7.8	7.9	7.6	7.6	7.8	7.86 a*	7.8	6.7
Futura 2000	7.8	8.2	8.2	8.1	7.9	7.8	7.1	7.7	7.4	7.7	7.5	7.6	7.9	8.0	7.82 ab	7.1	7.1
LDRD	7.9	8.4	7.9	8.1	8.1	7.8	8.1	7.6	7.9	8.1	7.6	7.9	8.0	8.0	7.77 ac	8.3	8.2
Calypto	7.8	8.1	7.9	7.8	7.6	7.8	7.4	7.7	7.4	7.7	7.5	7.6	7.9	8.0	7.71 ad	9.1	8.2
Pleasure	7.4	8.2	8.2	8.1	8.1	8.0	7.4	7.7	7.4	7.5	7.6	7.6	7.9	8.0	7.69 a-d	6.8	7.4
Del. Dwarf	7.3	8.1	7.7	8.0	7.9	7.8	7.9	7.7	7.7	7.5	7.7	7.5	7.9	7.7	7.69 a-d	8.8	8.1
Medalist 8	7.7	8.3	7.7	8.0	7.9	7.9	7.4	7.7	7.4	7.7	7.5	7.6	7.9	8.0	7.67 ad	9.2	9.2
Blend I	7.5	8.1	7.9	8.0	8.0	8.1	7.9	7.7	7.5	7.7	7.5	7.6	7.9	8.0	7.65 a-d	8.1	8.1
** Rodeo II	7.0	8.0	7.9	8.0	7.9	7.9	7.9	7.9	7.9	8.0	7.9	7.9	7.9	8.0	7.62 a-d	7.2	7.2
Competitor	6.7	7.8	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.62 a-d	6.8	6.8
Pennant	6.8	7.7	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.62 a-d	7.2	7.2
Double Eagle	6.9	7.7	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.62 a-d	7.2	7.2
Pebble Beach	7.0	7.7	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.62 a-d	7.2	7.2
Accolade	6.6	7.8	7.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.62 a-d	7.2	7.2
Fiesta II	6.9	7.8	7.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.62 a-d	7.2	7.2
Sunrise Primo	5.7	7.5	7.9	7.8	7.7	7.9	7.8	7.9	7.8	7.9	7.8	7.9	7.8	7.9	7.62 a-d	7.2	7.2
Advent	6.9	7.8	7.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.62 a-d	7.2	7.2
APM	7.2	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.62 a-d	7.2	7.2
Mix 4	7.8	8.1	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.62 a-d	7.2	7.2
Triple Play	7.6	7.8	7.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.62 a-d	7.2	7.2
Seville	6.6	7.5	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.62 a-d	7.2	7.2
Calliente	7.4	7.7	7.5	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.62 a-d	7.2	7.2
alliance	7.3	7.9	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.62 a-d	7.2	7.2



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As long as thatch has been kept under control a superintendent simply distributes the seed over the putting surface uniformly. This seed will germinate and mature into an impressive winter overseeding. One of the most significant factors that superintendents have learned is that after the initial fall application of *poa trivialis* it is easy to add additional seed to increase plant density. This factor alone allows a superintendent a second or third chance to reseed heavy wear areas or turfs that have developed insufficient stand density.

One common winter overseeding program is to apply 100% *poa trivialis* at the rate of 10-13 pounds/1,000 square feet to putting greens in the mid-fall and supplement with with an additional 2 pounds/1,000 square feet on a weekly basis in late December through the month of January. This program has been successfully used by Dwight Kummer and Jim Ellison at the Bay Hill Club in Orlando. The Bay Hill Lodge is very active in keeping the course full of golfers during the winter months with 250 or more golfers per day on weekdays and up to 350 on weekends. Additionally, Bay Hill hosts the Nestle Invitational PGA Tour stop in mid-March. In all, this adds to the challenge of providing an excellent putting surface for the pros.

Dwight and Jimmy have found that applying "supplemental light applications of Laser *poa trivialis* at 2 pounds/1,000 square feet weekly during January provides excellent density on the greens" for tournament preparation. Light frequent grooming of a *poa trivialis* overseeding in January, February, and March has been found to provide the most desirable, smoothest and truest putting surface for winter overseeding.

Throughout the southern states some superintendents are mixing bentgrass with *poa trivialis* for winter overseeding and reporting excellent results. Actually this combination will normally produce an 80% *poa trivialis* overseeding due to a slow establishment period for bentgrass. It is often said that greens are overseeded with bent when in reality *poa trivialis* is the grass providing the excellent performance.

Table 1

1. For a quality *Poa trivialis*, buy only Oregon certified blue tag seed.

For 1992 the only varieties eligible for Oregon seed certification are Laser, Sabre, and Colt. There have been reports that inferior European produced varieties (i.e. *Dasas*, *Ino*, or *Polis*) have been used as an unauthorized substitute in mixtures with subsequent mislabeling of seed tags.

2. *Poa trivialis* can be used for winter overseeding in the following ways:

Recommended Seeding Rates in pounds/1,000 square feet			
Grass Varieties	Greens	Tees	Fairways*
100% <i>Poa trivialis</i> OR	10-13**	10-15	125-175
85% perennial ryegrass 15% <i>Poa trivialis</i> OR	25-30	10-15	200-300
60% perennial ryegrass 25% Chewings Fescue 15% <i>Poa trivialis</i> OR	25-30	10-15	200-300
60% <i>Poa trivialis</i>	5-7N/R***	N/R	40% bentgrass

All percentages are by seed weight.
***Fairway rates are in pounds per acre.**
**** Additional mid-winter touch-up seeding (2-3 times) at 2 pounds/1,000 square feet may be desirable.**
*****Not Recommended**

3. Don't consider purchasing the European varieties *Dasas*, *Ino*, or *Polis* at any cost. Possible *Poa annua* contamination and poor performance will result.

4. Touch-up reseeding or spot seeding with *Poa trivialis* can be an effective tool to improve damaged surfaces or thicken weak spots. Touch-up seeding at the rate of 2 pounds/1,000 square feet can be practiced anytime throughout the winter simply by depositing seed uniformly to the surface.

5. After establishing a *Poa trivialis* winter overseeding, light weekly "grooming" or brushing will help stand the plants upright and reduce grain.

6. If you are on a Rubigan *Poa annua* control program, provide a 30-plus day interval between the last Rubigan application and overseeding with *Poa trivialis*. On some heavy soils the interval should be extended to 40 plus days. Be sure to read the product label prior to Rubigan applications in conjunction with *Poa trivialis* winter overseedings. Contact your Dow Elanco representative for more information.

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Greenward

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

The brief items on Page 44 and Page 46 are reprinted from Briefing, a government relations monthly news report of the Golf Course Superintendents Association of America

GCSAA trains local chapter government relations workers

By Don Brethhauer

GCSAA Government Relations Manager

GCSAA's government relations program is working to increase dialogue with the affiliated chapters, government relations liaison network. As part of this effort GCSAA sponsored a Chapter Government Relations Liaison Training Conference in late January, which attracted more than 30 participants representing 25 chapters.

"We really felt there was a need to pull together those individuals who are responsible for participating in government relations activities at the state and local level," said Robert Ochs, GCSAA general counsel.

"We wanted the opportunity to present a forum to share ideas and ongoing efforts, coupled with training to help these individuals become more successful in their efforts."

To accomplish this goal, the conference included several training presentations, as well as ample time for discussion and exchanging ideas. Shirley Fulton of Capital Communicators, Madison, Wis., explained how to handle and use the media to get your message across.

Kathleen Sebelius, a Kansas state legislator, gave a rundown on state governments and how they work. She emphasized the importance of educating legislative committee members about golf course management.

Jerry Johnson, a former city manager who is now with the Menninger Foundation in Topeka, spoke about how city and county governments work. He explained that the ability to recognize who has the power in a local government is crucial.

"In many cities, the mayor has the power. In most, the city council has the power, and in some, the city manager has the power," said Johnson. "In addition, more and more county governments are becoming more organized and more powerful."

Paul Mechling, CGCS, led the group discussion concerning government relations chapter efforts. Mechling, who is GR liaison for the Northern Ohio GCSA, talked about efforts in his state to secure workable pesticide regulations. Several other chapter liaisons briefed their fellow participants on recent activities within their specific states or regions.

For several years now, GCSAA headquarters has been obtaining input from local chapters, through the government relations liaisons, to develop the comments we submit to regu-

latory agencies on proposed rules.

As of last October, only 73 local chapters had designated a representative to serve as GR liaison, so the headquarters staff contacted all chapter presidents and asked them to designate a representative to serve as government relations liaison. Now, 90 of the 113 chapters have designated GR liaisons.

As GCSAA government relations manager, I would like to have 113 GR liaisons. If you know that your chapter has not named a GR liaison, please urge your association to do so.

GCSAA's goal is to improve upon the present network system so that GR liaisons can contact each other on government and environmental issues that affect local chapters.

GCSAA will be sending out a directory of all chapter GR representatives to the liaison network to encourage direct liaison-to-liaison contact concerning potential problems with proposed legislation and regulations. GCSAA headquarters is also serving as a clearinghouse, coordinating contacts between GR liaisons to promote more involvement in state and regional government relations efforts. ↴

EPA unveils second phase to drinking water pesticide study

Phase II of the National Survey of Pesticides in Drinking Water Wells, recently released by EPA, concluded that there is no imminent health threat. The report confirmed the Phase I findings, but concluded that further research is needed in localized areas.

The study suggested that DCPA acid metabolites from non-farm use of pesticides are responsible for numerous detections. Because of the frequency of pesticide metabolite detection, EPA will likely adjust future studies so that pesticide metabolites are included in sample analysis. ↴

California EPA to suspend pesticide active ingredients

The California Environmental Protection Agency will suspend 57 active ingredients now used in about 3,000 pesticide formulations in that state — if chemical companies do not perform additional health studies.

Chemical companies may file for extensions to complete the required health studies. The California EPA will have the final authority to determine whether extensions are necessary.

Golf course chemicals that may be affected include 2,4-D; 2,4-D dimethylamine salt; carbaryl, chloroneb, chlorothalonil, iprodione, maneb, oryzalin, thiophanatemethyl, trifluralin and vinclozolin. ↴

Show edition of Briefing available

A special edition of *Government Relations Briefing* printed for the annual GCSAA Conference and Show is available upon request. The conference and show edition contains the top 10 government relations stories of 1991 as well as a summary of comments submitted to EPA this past year. Call the GCSAA communications department at 913-832-4470. Quantities are limited. ↴

If you had to defend golf, courses and your profession – could you?

Here's the case every superintendent should know well

As someone involved with the game of golf, you may already be aware that golf courses are sometimes criticized for "damaging the environment."

The use of turf chemicals, the impact on water and soil quality, and the amount of irrigation water used are cited most often as public concerns about the golf industry.

Although most authorities agree that the maintenance of golf courses has comparatively little negative impact on the environment, we at the Golf Course Superintendents Association of America (GCSAA) believe that these issues must be addressed. And, through a comprehensive effort combining research, education and communications, GCSAA is leading the golf community's effort to minimize the potential for ecological harm resulting from course maintenance.

However, the biggest problem we have is public perception — or, more accurately, public misperception — about the environmental impact of courses. These inaccuracies, if left uncorrected, could pose a serious threat to the vitality and integrity of the game.

You can help GCSAA change perceptions about our industry by reviewing the following overview and sharing this information with elected officials, decision-makers and others with whom you have contact. Please do not hesitate to pass this information to others who share our belief that golf is good for the environment.

1 Research has shown that golf courses do not contribute significantly to groundwater contamination. Several university and government studies (in Massachusetts, New York and Florida) indicate that when properly applied, pesticides and fertilizers used today on golf courses do not leach into groundwater in any significant amounts.

2 Modern turfgrass management practices (such as the use of slow-release nitrogen formulations) can greatly reduce the potential for nitrogen leaching or runoff into water supplies. The organic (thatch) layer in healthy turfgrass also significantly reduces the potential for nutrient "movement."

3 An 18-hole golf course averages 140 acres. Pesticides and fertilizers are used only on certain portions of the golf course. The majority of the property often consists of natural areas that are not maintained with chemicals. These low-maintenance areas usually provide a home for wildlife, and include a diverse variety of native plants and large stands of trees.

4 Golf course superintendents are among the best-educated and most judicious users of chemical management tools. Today, most superintendents have university degrees in agronomy, horticulture or a related field. More than 3,500

superintendents also pursued continuing professional education through GCSAA last year. Although most golf courses do not apply "restricted-use" pesticides, virtually all courses with GCSAA members have at least one staff person who is state-certified in the safe handling and use of these chemicals.

5 Because turf chemicals are often expensive, golf course superintendents have an economic incentive not to apply them. What's more, many superintendents entered the profession because of a love of nature and the outdoors and are strongly committed to conservation. In a recent survey, superintendents said they give extremely high priority to selecting maintenance practices that do not have a negative impact on the environment.

6 Golf courses typically compost grass clippings, thus reducing unnecessary contributions to America's landfills. Grass clippings and leaves are usually composted in low-maintenance areas of the course. In some cases, the compost is recycled for use as a natural soil amendment. Composting is a growing and recommended practice for golf course operations.

7 The water used on golf courses can be an excellent investment in both economic and environmental terms. Irrigated golf courses generate billions of tourist and property tax dollars for state economies. (America's golf courses are also bringing an increasing number of international tourists to the United States.) When effectively irrigated, healthy turf provides numerous environmental benefits.

Properly maintained turfgrass:

- ◆ produces oxygen (carbon dioxide exchange)
- ◆ removes pollutants from the air
- ◆ cools the atmosphere (acts as a heat-sink)
- ◆ absorbs sound and glare
- ◆ prevents erosion
- ◆ filters natural and synthetic contaminants from rainfall and irrigation
- ◆ recharges critical groundwater supplies
- ◆ provides crucial "greenspace" in urban settings.

Beyond these benefits, computerized irrigation systems and improved turfgrass varieties now allow courses to use less water more efficiently to achieve the same level of conditioning.

Continuing research will provide even more "low-water" turfgrass varieties in the future.

8 GCSAA and the entire golf community are firmly committed to seeking answers through research. The United States Golf Association is funding a three-year \$3 million research that will provide a number of those answers. ➔

9 In addition to turf-related benefits, courses provide other important ecological and community assets.

Golf courses are:

- ◆ key sanctuaries for birds and other wildlife.
- ◆ disposal and treatment sites for (effluent) wastewater.
- ◆ attractive and environmentally sound "covers" for closed landfills and other ecologically damaged sites.
- ◆ places for non-golf recreational activities such as jogging, walking, birdwatching, cross-country skiing and fishing.
- ◆ businesses that provide hundreds of thousands of skilled and semi-skilled jobs.
- ◆ places for social interaction and community events.
- ◆ civic benefactors that give major contributions to charities.
- ◆ the keystone of a multi-billion-dollar industry nationwide.
- ◆ community improvements that add value to land, thus increasing local tax bases.

10 On golf's behalf, GCSAA has developed a strong and cooperative relationship with the U.S Environmental Protection Agency and other major regulatory groups. Though governmental affairs, professional education and public information, the association strives to make environmental responsibility a basic precept for its members.

Golf has the motivation, the resources and the willingness to address the issues now, before environmental questions seriously impede the growth of the game. By pursuing this enlightened path, it is hoped that golf will be increasingly perceived as a model environmental industry of the 1990s.

Endangered Species Act to be implemented

The Endangered Species Act will be implemented this fall and enforcement will follow at the end or next year," said Steve Johnson, director of field operations for EPA's office of Pesticide Programs. EPA has not explained how the potential areas of habitation and lists of specific endangered species will be communicated to end-users of pesticides. States are also having a tough time mapping areas and marking buffer zones for pesticide restrictions. Look for more information about the Endangered Species Programs in the month ahead. GCSAA is staying in close contact with EPA on this issue.

U.S. government now favors stopping local pesticide laws

The Bush Administration now favors amending FIFRA to prohibit local governments from regulating the sale and use of pesticides, according to Victor Kimm, deputy assistant administrator for EPA's office of prevention, pesticides and toxic substances. This reversal of opinion was presented as testimony to the House Subcommittee on Department Operations, Research and Foreign Agriculture, Committee on Agriculture, on March 4.

Kimm said that EPA had weighed the competing policies, and the administration now believes that a political subdivision of a state should be prohibited from regulating pesticide sale and

use — unless the state has acted affirmatively to allow local regulation. Kimm added that any local regulations that went into effect before Jan. 1, 1992, should remain in effect unless the state acts affirmatively to pre-empt them.

"We wish to make it clear that such an amendment would not affect the exercise of local authority pursuant to any other federal laws. Similarly, due change would not affect current federal authority under FIFRA or statutes regarding pest control and eradication," Kimm said.

EPA wants to wipe out 'gray language' in pesticide labels

EPA is reviewing several pesticide labeling issues that topped the concerns reported on a survey of state and regional EPA offices. "Gray language" is one of the major concerns, according to the survey.

State regulators said they prefer requirements like "do not" and "shall not" over unenforceable advisory statements like "should not" or "avoid drift." Another leading concern is whether hazard statements apply to both the concentrate and the diluted product, or only to the concentrate.

Superintendents should continually look for changes in labels, especially in the language concerning safety precautions and re-entry requirements.

FIFRA panel says re-entry label requirements apply to everyone

The State FIFRA Issues and Research and Evaluation Group's (SFIREG) working committee on enforcement and certification has decided that re-entry requirements on pesticide labels prohibit all persons from re-entering an applied area.

"If the label states, 'Do not enter treated area within 24 hours,' we interpret that as saying no one, including golfers, can enter that area within 24 hours," said John Longnecker, committee chair and chief of Pennsylvania's Division of Agronomic Services.

The statement was made as part of the SFIREG report to the American Association of Pesticide Control Officers annual meeting in Arlington, Va.

Longnecker also said his committee has asked EPA for proposed rules to clarify the label wording. Superintendents concerned about label warnings should contact their state pesticide control official.

Steve Johnson, director of field operations for EPA's Office of Pesticide Programs, has issued a plea for more information from state pesticide officials. Johnson says his office not only needs to know the number of violations and amount of fines, but also more specific information about the violations themselves — the types of violations and whether they were determined to be willful.

"We need this information to determine the direction and help fulfill the intent of our regulations," Johnson said. "The more we know, the better decisions federal regulators can make."



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A fictitious letter to an imaginary golfer from an average superintendent

Dear Member,

The other day you were complaining to me about the condition of the golf course. You said our fairways were hard and weren't as green or as beautifully manicured as Bay Hill or the TPC that you saw on television. You're right, of course. Anyone can see it. But do you understand why?

Don't you understand that those courses get revenue from television that they use to insure they are green and beautiful for the tournament? Our maintenance budget was cut this year to avoid raising dues to the members.

As I recall the emphasis was on redecorating the clubhouse. It does look gorgeous doesn't it?

Do you know that these courses spend tens of thousands of dollars to oversee the courses so you can see those pretty stripes and checkerboard patterns from the blimp? Authorize me to spend \$40,000 to \$50,000 on overseeding and extra fertilizer and I can give you stripes too! Even so, we'd be mowing with those eight- and nine-year-old mowers that I've been trying to replace for the past two years.

Unfortunately, the committee keeps slashing my capital equipment budget. If we did oversee the entire golf course, it would also be necessary to upgrade the irrigation system to guarantee that we could water all that ryegrass during late winter warm spells. Those courses on TV have computer controller systems!

Do you also know that those tournament sites often have loaner equipment to help

manicure the course for that week? In some cases it is not unusual for the equipment distributor to supply a technician to help keep the equipment serviced and adjusted. They also have volunteers and extra temporary help for tournament week.

The point is, it takes more than the 12 people we have to produce that kind of result.

Do you know that those courses restrict play and golf cart traffic to keep from wearing out those beautiful striped mowing patterns? We allow carts on the fairways all winter to speed up play and the bermuda turf takes a beating. Bermudagrass doesn't do well in cool weather and those recent 40 degree nights have sapped its reserves and made it look a little ragged. I have tried to get carts restricted to cart paths in the winter, but I get voted down each year. I have applied liquid fertilizer, but we need warm weather for the grass to use it!

I would like to aerify the fairways to soften them up for you. But since we have the member-guest tournament the first week in April, I can't gamble that the fairways will recover in time when we have the possibility of a late season cold snap like this year.

As I write this letter the weather has warmed up and we have had some rain. The fertilizer is kicking in and the turf is greening up. With the turf actively growing we will be able to conduct some of our seasonal cultural practices that will improve the appearance and playing conditions. As usual for this time of year that means we will be verticutting, aerifying, and top dressing. Please don't bring your guests over for a round of golf for a couple of weeks until the turf has recovered.

Just remember, I'm doing the best I can with the resources at hand trying to balance the health, appearance and playability of the turf against the special events calendar and the special interests of each and every member.

Sincerely,

Your Golf Course Superintendent

**To some,
grass always
seems greener
elsewhere**

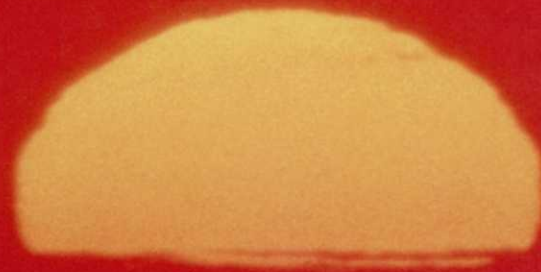
Green Side Up



Joel D. Jackson

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Editor

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