



The Florida Green

Fall 2002



■ *Number Nine, East Course
Boca Lago C.C., Boca Raton
Photo by Daniel Zelazek*

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Number of Irrigation Programs	12	8
Number of Start Times Per Program	12	12
Optional Surge Protection Packages	Yes	Yes
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6 SPOTLIGHT: CHAPTER ROUNDUP, AWARDS, GOLF

All chapters were busy over the summer, reporting growth, successful fundraisers and awards. Bob Sanderson, CGCS was presented the FGCSA Distinguished Service Award at his Calusa GCSA chapter meeting; Tom Cowan was presented the Presidents Award for Lifetime Service at a NFGCSA chapter meeting. Courtney Caillavet and Jennifer Bell won Legacy scholarships from the GCSAA. Mark Henderson won the Crowfoot and a spot on the FGCSA team.

18 COVER STORY: BOCA LAGO C.C.

Boca Lago C.C. is one of the guardians of a greenbelt garden in the 12-mile coastal strip of Palm Beach County, which occupies 10 percent of its land and holds 90 percent of its population. While removing invasive plants, it still provides colorful tropical exotics in beds.

30 HANDS ON: MECHANICALLY INCLINED

Neatness, precision, well-developed and -honed skills and professionalism are all key ingredients to managing a golf course equipment maintenance operation, according to two veterans. In Super Tips, Darren Davis describes custom-made sod pluggers fashioned from bed knives.

46 INDUSTRY NEWS: RESPECT, PRESENTATION, DROUGHT

Don Benham, FTGA director of public relations, wonders why the Michigan media do not attack golf courses on water use as do the Florida media.

52 OFFICIAL BUSINESS: ARE WE GUILTY?

Dr. Charles Peacock, professor of crop science at North Carolina State and former UF professor, shows how the golf industry's BMPs do work in preventing water pollution on golf courses by using the "Treatment Train" approach.

58 STEWARDSHIP: BIRDS COUNT AS WELL AS BIRDIES

A total of 48 golf courses participated in Audubon International's annual North American Birdwatching Open. One course sighted 98 different species.

64 AFTERWORDS: JOE KONWINSKI. 1915-2002

Joe Konwinski, golf course superintendent, first president of the FTGA and an ambassador for the turfgrass industry through many civic causes, died Aug. 17 at age 87. Jim Walker notes that association service can be a harrowing ride, but the rebate is greater than the cost of the ticket.

Joel Jackson awards some birdies, a par, many bogeys and one triple bogey!

About the use of trade names: The use of trade names in this magazine is solely for the purpose of providing specific information and does not imply endorsement of the products named nor discrimination against similar unnamed products. It is the responsibility of the user to determine that product use is consistent with the directions on the label.

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

CALL FOR ARTICLES

Hands on Topics: Share your best practices and tips for these upcoming topics. Photographs or slides are encouraged. Digital images that are 5 inches wide at 300 dpi or greater accepted.

1. Winter 2003 – Pest Control Programs: Grubs, Mole Crickets and Nematodes

Now that chemicals are getting more pest specific and Nema-cur and other Organo-phosphates are being phased out, what are your evolving programs for controlling some of our worst turf pests? Share any successes with bio-control products? Deadline: Nov. 15.

2. Spring 2003 – Managing the Putting Surface: Programs and Equipment

New top dressers; brush inserts for verticut units; ultradwarf greens; Was rolling just a fad now over? Mowing heights and turf health. Share your programs and equipment arsenal. Deadline: Feb. 15.

3. Summer 2003 – Overseeding Trends & Poa Annua Control

Do new grass varieties mean less overseeding? What types, blends, and rates do you use for greens, tees, fairways? Have water restrictions changed your plans? When do you seed? What is your program for controlling Poa annua and volunteer seed germination? Deadline: May 15.

Please submit articles via email if possible. Attached articles should be saved in Microsoft Word or, if you use another word processor save it as a Text file before attaching or you may just copy and paste it into the email text box. Try to limit articles to 1500 words or less. The Florida Green pays \$100 per page and \$50 for 1-3 pictures.

Digital photos must be a minimum of 5 inches wide at 300 dpi for publication-quality reproduction.

Do not write on the back of prints. Attach a Post-it note with ID information. All slides and photographs should include identification of persons in the picture and the name of the photographer.

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It is an honor to become president of the FGCSA and follow in the footsteps of leaders who had the vision to take our association to where it is today. We cannot rest on past accomplishments and put the association on cruise control. We have some great leaders on our executive committee in Vice President Greg Pheneger, Secretary-Treasurer Dale Walters, and Immediate Past President Geoff

Changes and Challenges Ahead

Coggan to help me guide our association in the right direction. In addition Joel Jackson, director of communications and Marie Roberts, association manager are two extremely valuable people we have relied on for years.

PRESIDENT'S MESSAGE



David Court, CGCS

These volunteers take several days out of the year to attend FGCSA board meetings around the state. Please give them your attention at your chapter meetings. They will be updating you on issues important to our profession.

The South Florida Turfgrass Task Force recently made its recommendation on the relocation of the South Florida Turf Grass Research Program. The task force members included Ralph White, chairman, Jim Goins, Mark Jarrell, Steve Pearson, John Foy, Greg Pheneger, Dr. Robin Giblin-Davis, Dr. John Haydu and Joel Jackson. Their preference was to keep the program at Ft. Lauderdale.

According to Dr. Mike Martin, vice

I would like to also thank Darren Davis for his insight on the board of directors. Darren did an extra tour of duty as immediate past president after Cary Lewis had to resign last year.

The external vice presidents who serve as directors and committee chairpersons play a vital role for the association.

These volunteers

president of IFAS, two problems are keeping this from happening. First the area has become "urban bound" which would restrict the things that can be done. Hasn't all of South Florida become that way? We still manage to maintain beautiful landscapes and golf courses just the same. Ft. Lauderdale is the perfect location and that is all I will say on that subject.

The second reason for the relocation is the deferred maintenance cost to the facility of \$3,314,500. It is highly unlikely that we would see this kind of money go into this facility for repairs, but with that amount a new facility could be built. Would anyone out there like to make a donation? I'm sure that we would name the facility after you. Seriously, it looks like the relocation might be to Immokalee at the Southwest Research and Education Center as recommended by the Task Force. Consideration was also given to Belle Glade, Ft. Pierce and the Ag Reserve Land in Palm Beach County.

Dr. Martin's goal is to build the best program in the country. This will require change. Change in the long run is usually for the best. We need to accept this move to Immokalee and continue to support research in South Florida. The transition from Ft. Lauderdale to Immokalee will take time. Research is still taking place at the FLREC and will continue for a few years until the new location is established.

My vision for the FGCSA is to get more member involvement with the Audubon Cooperative Sanctuary Program. Golf course superintendents are often referred to as "Stewards of the Environment." We all need to be able to live up to this title. A few facts:

- There are 1363 golf courses in Florida
- 234 (17%) ACSP members in Florida
- 13% of U.S. courses are ACSP members
- 58 fully certified ACSP courses in Florida
- 500 certified ACSP courses nationally
- 9 Audubon Signature Sanctuary Communities in Florida

I believe we can vastly improve our numbers in Florida. Kevin Fletcher with Audubon International would like to see these numbers higher. His goal for members of AI is 50 percent of the clubs in the next five years. The first step is to become a member of the ACSP program at a cost of

My vision for the FGCSA is to get more member involvement with the Audubon Cooperative Sanctuary Program. Golf course superintendents are often referred to as "Stewards of the Environment." We all need to be able to live up to this title.... We can be good sources to set the record straight. We need to learn how to handle ourselves when the television camera is bearing down on us.

\$150 per year for your club. Certification is next. There is no time constraint or great amount of money that needs to be spent in order to become certified. Any club can do this. We will have some hands-on workshops for ACSP at several locations around the state in early December to make the process easier

I would like to see increased membership and meeting attendance for all chapters. Many of you know superintendents who aren't members. Invite them to your meetings. Introduce them around and get them involved with the education programs. Let them see that meetings can be productive as well as educational for all members and maybe they will join and become active.

Spokesperson training with Dr. Tom Morgan will be another service available to our members this year. Golf has been a target in the media. We can be good sources to set the record straight. We need to learn how to handle ourselves when the television camera is bearing down on us. We will offer three programs around the state this year.

If anyone has any comments they would like to share with me, please feel free to call, write or e-mail. I'm looking forward to a productive year.

David Court, CGCS
President



18th hole, Bay Hill Club & Lodge

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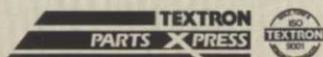
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**Calusa GCSA
FGCSA Honors
Bob Sanderson
With DSA**

The Calusa Chapter was proud to help the FGCSA honor one of its own as Bob Sanderson CGCS was presented with the 2002 Distinguished Service Award by FGCSA Vice President David Court, CGCS at our July meeting.

(See page 8)

**Central Florida GCSA
Memorial Tourney
Becomes Annual
Event in July**

In June, the CFGCSA Golf Championship was held at the new Victoria Hills GC in Deland. Hal Richburg was the host on this rolling Ron Garl design. Robert Parmer of the Lake Orlando GC walked off with low gross honors. In July, the chapter reorganized the former Danny Burgess Memorial Tournament into The CFGCSA Memorial Tournament to honor all members who have died. The scramble format Memorial Tournament will be held in conjunction with the Annual Meeting each July. This year the event raised \$2,000 for the Memorial Scholarship fund for turf students from Central Florida.

**Coastal Plains GCSA
Smallest Chapter
Enjoys Good
Vendor Support**

Chapter President Jeff Heggen's Hilaman Park Municipal Golf Course has been selected as the cover course to be featured on the Spring 2003 Florida Green. The state's smallest chapter is based in the metropolitan Tallahassee area. With good vendor support the chapter is making plans for a having a more productive 2003.

**Everglades GCSA
Hiers, Davis, Many
Fundraisers Share
Summer Spotlight**

The EGCSA capped off a successful fundraising year by hosting a tournament for Twin Eagles Equipment Technician Greg Angelovich. The event raised over

\$25,000 to help Greg in his battle against cancer. Bonita Bay properties donated use of the golf course to help defray expenses. Other groups benefiting from EGCSA efforts in 2001-02 included: FTGA (Research Foundation, Economic Impact Study and Conference Reception); FGCSA (Research Account & GCSAA reception); GCSAA Platinum Tee Club. Benevolence donations included contributions to GCSAA World Trade Center Relief, Greg Angelovich Fund, Tom Crawford and Chip Fowkes Memorial Trust Funds. EGCSA sponsored teams in events such as The Taylor Tournament, The Lake City Alumni Tourney, The Environtron Tourney, and The Royal Palm Hope Hospice Pro-Am Tourney.

This year the EGCSA nominated Tim Hiers, CGCS for the 2002 FGCSA President's Award for Lifetime Service. Tim was the first president of the unified FGCSA in 1978 and has remained a vocal advocate for the golf industry on environmental issues. And Darren Davis was named by the GCSAA as the winner of the Leo Feser Award for his article in *Golf Course Management*. Davis, who also won in 1997, is the first repeat winner of the Feser.

**North Florida GCSA
Growing Chapter
Honors Cowan,
Raises \$5,000**

Glen Klauk hosted the NFGCSA Annual Research tournament in June at the Pablo Creek Club. Thanks to all of our members who played in this tournament, and the corporate sponsors who helped with lunch. The NFGCSA raised \$5,000 which was donated to the FGCSA Turf Research Fund. At the Annual Meeting on July 29, NFGCSA Past President Tom Cowan was presented with the FGCSA President's Award for Lifetime Service *(See page 11)*. The past year has seen an increase in members, both in the superintendent and in the vendor categories, in the North Florida area. The board of directors is working hard to provide the group with quality education and a forum for sharing of ideas.

**Palm Beach GCSA
Chapter in Mourning,
Hosts Fundraiser,
Paspalum Seminar**

The Palm Beach Chapter

is mourning the loss of two of its leaders this summer. Chip Fowkes of The Fountains Club died in a motorcycle accident in June and in late July, the venerable turf master and civic leader Joe Konwinski passed away. Joe was 87 and still active until his failing health sidelined him *(See page 64)*.

The PBGCSA's annual Future of Golf Tournament, which supports Hook a Kid on Golf and turf research, was held in June at the Falls C.C. and raised \$20,000. A good portion of the proceeds this year will also go toward helping pay medical expenses of Cameron Jorgensen, son of Erik Jorgensen, assistant superintendent at the Royal Palm Y&CC.

On Oct. 2 the PBGCSA was scheduled to host the one-day GCSAA Regional Seminar, "Seashore Paspalum Management on Golf Courses" with Dr. Ronnie Duncan, U. of Georgia.

**Ridge GCSA
Chapter Honors
Founder Barnes,
Hears FTGA Report**

At the June meeting at The Club at Eaglebrook, the Ridge Chapter honored veteran turf professional David Barnes with an FGCSA President's Award for Lifetime Service. Barnes is a Gator turf graduate, former golf course superintendent and past president of the FTGA. Barnes helped found the Ridge Chapter in 1988. At the Southern Dunes August meeting, FTGA President Alan Puckett and Vice President Bobby Ellis gave a one-hour State of the FTGA presentation to the Chapter. The two plan to visit other chapters as well to improve relations and get the word out on the mission and accomplishments of the FTGA.

Bayne Caillavet, the superintendent of The Golden Ocala Golf and Country Club, reports his daughter Courtney has received her second \$1,500 Legacy Award. Courtney is studying American



Courtney Caillavet received her second Legacy Award this year.

Studies at the University of South Florida. She also received a 2000 Legacy Award. Students must sit out one year before applying again.

**Seven Rivers GCSA
Chapter Charters
Fishing Boat for
Monthly Meeting**

Buddy Keene reports that Lee Bloomcamp of Syngenta spoke at the August chapter meeting. Her topic was Pesticide Safety and Storage. After fighting a wet summer SRGCSA superintendents are looking for a break. Buddy says tentative plans are in the works for a charter boat fishing trip in lieu of a regular monthly meeting. Buddy also says the scallops are running large out on the flats off the Seven Rivers' Nature Coast. President Bob Marrino also reported great presentations this summer by Dr. Billy Crow on nematode control products beyond NemaCur and the FTGA update by Alan Puckett and Bobby Ellis.

**South Florida GCSA
Chapter Basks in
Glory of Walker's
Commentary**

The SFGCSA won the Jimmy Blackledge Trophy defeating the PBGCSA team in a Ryder Cup format at the annual South Florida -



Proud Pops David Oliver (left) with son Jason and Scott Bell (right) with daughter Jennifer pose with Treasure Coast President John Morsut after the TCGCSA awarded both students \$1,000 scholarships at the August Chapter meeting. Photo by W. Craig Weyandt.



SUPERINTENDENTS PRAISE TranXit™ GTA PERFORMANCE.



*Gary T. Snyder,
Superintendent
Harbour Town
Golf Links
Hilton Head
Island, SC*

"TranXit™ was everything I'd hoped for. *Poa annua* control was excellent. The beauty is I won't be spending any more money than I'm currently spending and I'll be getting better control. TranXit just puts me in better control of my golf course."



*Jim Currie,
Superintendent
Jekyll Island
Authority
Jekyll Island, GA*

"TranXit did a fantastic job of controlling *Poa annua*. I'll use it on all my fairways and tees this fall. Superintendents are willing to spend the money for a product that will safely and efficiently do what we want it to, and TranXit does just that."



*Jeff Dorner,
Superintendent
The Links
Jonesboro, GA*

"TranXit is an easy product to use, and you get great results with it. That makes it cost effective. The bottom line is our regular customers are talking about the fairways where we applied TranXit. They're seeing the difference and saying, 'Wow! We really like this.' And I like that."



*Jim Kernohan,
Superintendent
MetroWest
Orlando, FL*

"We pay a premium for a darker green and *Poa annua*-free seed, so it makes sense to me to put forth the effort to eliminate the unappealing look of *Poa annua*. Using TranXit in the future is a no-brainer. It may be the easiest decision I will make as a superintendent."

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Palm Beach GCSA joint meeting held at the Mizner GC Aug. 12. The next big event will be the SFGCSA Missing & Exploited Children fundraising tournament at the Colony West CC on Oct. 11. SFGCSA Past President Jim Walker has become a regular contributor to *The Florida Green* with his "no holds barred" commentary.

Suncoast GCSA Annual Maintenance Seminar to Feature Dr. James Beard

As the chapter still recovers from the loss of President Tom Crawford this past May, the Thomas Patrick Crawford Memorial Tournament held in his honor at the Bradenton C.C. in July raised nearly \$18,000 for his daughters' scholarship fund. Thanks to the sponsors and players all those who volunteered their time.

This fall will be busy with the annual Best Ball Pro-Superintendent tournament in September at the Lakewood Ranch G&CC, and the annual November Grounds Maintenance Seminar at Selby Gardens. Featured speaker will be Dr. James Beard and .35 GCSAA CEUs will be available.

Treasure Coast GCSA Scholarship Winners, Blue Pearl Event Capture Attention

The chapter's attention this summer has been on organizing annual Blue Pearl Tournament Sept. 23 at the Loxahatchee Club this year. This event is the leading statewide contributor to the Audubon Cooperative Sanctuary Program and has supported several primary and secondary school environmental and turf programs.

Proud pops, David Oliver of Boynton Pump and Scott Bell, superintendent at Red Stick GC, were pleased to learn that their kids, Jason Oliver and Jennifer Bell, were the recipients of \$1,000 scholarships from the TCGCSA. Jason will be attending the University of South Florida in Tampa to study business. Jennifer also received a \$1,500 GCSAA Legacy Award and will be attending Babson College outside of Boston, also majoring in business.

The GCSAA Legacy Awards are funded by Syngenta

Professional Products and administered by the GCSAA Foundation. This year Syngenta increased its funding of this award that benefits children of superintendents that are going into careers other than turfgrass management. GCSAA is now able to award 20 students \$1,500 each.

The TCGCSA will have a joint meeting with the Palm Beach Chapter at the Boca Rio GC in Boca Raton on Oct. 16.

West Coast GCSA Past Presidents' Reunion Highlights Bud Quandt Tournament

The regular July Chapter Championship was rained out and rescheduled for September. After a busy and wet summer all hands are eagerly anticipating fall and the annual Bud Quandt Tournament on Oct. 7 at the Pasadena Y&CC. This event also serves as a Past Presidents Reunion meeting and it's great to see many of the legends of our chapter gather and reminisce about the history of the association.

Bob Sanderson Service By Distinguished Gentleman

By Joel Jackson

Bob Sanderson exemplifies many of the old school superintendents who earned their degrees in

credit department at Maas Brothers department store in Tampa. The trouble was, Sanderson figured out that he would rather be outdoors instead of indoors.

Sanderson gave up his 8-to-5 job in 1960 to join his brother-in-law, David Wallace, in building the Saints and Sinners courses at Port St. Lucie. Two years later in a company reorganization move, Sanderson found himself in charge of the Port Charlotte golf course which was in the middle of nowhere at that time. Sanderson was still learning golf course management on the job and relied on the advice and guidance of chemical and fertilizer salesmen. The relative isolation and lack of any viable associations forced Sanderson to learn through a period of trial and error.

In the 1960s, if superintendents wanted to take turf seminars they had to travel to Miami, Tampa or Jacksonville where the South Florida, West Coast and Florida-Georgia associations held meetings. As more courses came on line in the Ft. Myers and Naples area, Sanderson and others figured it was time to organize, and in 1968 the Everglades chapter was born with Sanderson as the first president. He was also intimately involved with the unification and formation of the statewide FGCSA a decade later.

Ever active in association business, Sanderson rose to the office of secretary/treasurer of the Florida Turfgrass Association. He was presented the FTGA's highest honor - the Wreath of Grass award - in 1979. He also served in the same office for the FGCSA in 1982. In 1991 the

Meanwhile, Sanderson was logging a 24-year career at Port Charlotte. Sanderson became a certified superintendent in 1978 and maintained his status until 1998, letting it lapse as he neared retirement.

Around 1985 he left Port Charlotte and managed the Del Tura and then the Del Vera (Heron's Glen) country clubs in North Fort Myers for the next 15 years until his "retirement" in 1999. At 74 years, Sanderson couldn't stand sitting around the house, so he hooked up with Roger Taylor at the Kingsway C.C. and currently works a four-day, part-time schedule.

Sanderson said, "Roger has been really great with my schedule. I can attend Calusa Chapter meeting and three or four times during the summer, my wife Mary Ann and I take off for trips to our home in Highlands, N.C. We have a small place 5,000 ft up the mountain. The daytime highs are in the 70s and the nights run in the low 60's. It's a nice break from the summer heat and humidity."

From those early days of remote isolation to the booming 1990s, southwest Florida became the per capita golf Mecca of Florida. As the Naples-area golf construction skyrocketed, superintendents in the North Fort Myers-Port Charlotte area found themselves driving south for most of the monthly Everglades meetings. The demographics and geography led the area superintendents to consider forming the Calusa Chapter and the experience of Sanderson played a key role as he once again found himself helping to start another chapter in 1999.

Sanderson's never-ending involvement and service to the profession led the Calusa Chapter to nominate him for the FGCSA Distinguished Service Award for 2002. This tireless veteran came up through the ranks the hard way, but the right way and with distinction. In July 2002 it was with great pleasure that then FGCSA Vice President David Court, CGCS presented Sanderson with the DSA Award at the Calusa Chapter's monthly meeting.

At the ceremony Sanderson said, "I would like to thank the Florida Golf Course Superintendents Association and everyone involved for selecting me for the Distinguished Service Award. This is a tremendous honor and something I will cherish for the rest of my life. These awards are possible only with the help of good employees and lots of good friends. Thank you again."



FGCSA Vice President David Court, CGCS, right, presented Bob Sanderson with the 2002 Distinguished Service Award at the Calusa Chapter meeting in July.

disciplines other than agronomy. The economics major from Hobart College in New York took his liberal arts degree and set up shop in the

Everglades Chapter nominated Sanderson to receive the FGCSA President's Award for Lifetime Service.



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**January 29th – North Florida
at Duval Extension Office**

**January 30th – Gulf Coast
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North Florida Past President Clayton Estes, CGCS, left, presents Tom Cowan with the much deserved FGCSA President's Award for Lifetime Service.

Tom Cowan-Service with a Smile

Glen Klauk

Those who know Tom Cowan would say he could have been equally successful as a stand-up comedian, karaoke singer, or impersonator. However, he chose the golf and turf industry to become his routine. Cowan started his career at San Jose Country Club like many others in the north Florida area. He started in the food and beverage side of the club business but was promptly fired from his first job by the head chef when he dropped a platter of roast beef in front of 200 members who were waiting for the Sunday Brunch to commence. He quickly found out that outside the clubhouse was the place to be.

During Cowan's career he has worked at Killearn Golf Club in Tallahassee and Rio Pinar in Orlando, helping to host two Citrus Opens (now known as The Bay Hill Classic). While attending Lake City Community College, he worked at John's Island in Vero Beach and Ponte Vedra in Jacksonville. Upon graduation he was hired as Paul Hickman's, superintendent at the Grenelefe Resort in Winter Haven. Under Hickman's tutelage he helped direct the construction and grow-in

of the South Course, completing the 54-hole, Grenelefe Project. After three years with Hickman, he moved back to Jacksonville where he became the superintendent at Deerwood Country Club for 12 years.

While at Deerwood, Cowan became very active in the North Florida chapter. He volunteered for all the positions on the board of directors and helped make the association what it is today. After leaving Deerwood he worked with Vigoro for three years and then went to work with Pike Creek Turf. His enthusiasm has helped Pike Creek become a major supplier in the turf industry today. After three years with Pike Creek, Cowan moved on to work with John Gamble at Wesco Turf Supply where he won the Rookie of the Year award.

Cowan continues to be active in the NFGCSA as an industry advisor to the board of directors. He was the chairman of the Lake City Community College Advisory Board and was the driving force behind the Action for Excellence Endowment program. He is a long-term committee member of the Florida USGA Green Section, having recently published articles in the USGA *Green Section Record*.

Cowan's career has truly touched all aspects of the golf and turf industry. Through all of his endeavors he has never missed the opportunity to help a fellow superintendent. It may be to help solve a turf problem or just to lend a sympathetic ear. We in the North Florida

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Crowfoot Open Chairman Tom Alex (left) presents Joe Ondo, CGCS with the engraved crystal Larry Kamphaus Award for 2002 at the Crowfoot Open reception. Photo by Joel Jackson.

Henderson, Ondo, CFGCSA All Winners at 26th Crowfoot Bash

Grand Cypress Golf Club hosted the 26th Annual Crowfoot Open. The North, South and East nines were ready for an 8 a.m. shotgun start Aug. 4 with 164 players hoping they had brought their A games.

Mark Henderson, Palm Beach GCSA, birdied five of his last six holes to card a fine 69 to edge out defending champion Chris Cartin by two shots in the Superintendent Division. Henderson now joins Bob Harper (Poa winner) in qualifying for FGCSA's national team. Cartin redeemed himself by taking first in the Stableford competition and leading the Central Florida team of Bruce Kosmer,

Chapter can count on Tom as we always have through his lifetime of service.

Upon receiving the award, Cowan as all can imagine, had much to say. He started by introducing some special guests who have meant so much to his career. The gentlemen present for the ceremony were Lloyd Clifton, his son George, Paul Hickman, David Barnes, Jimmy Allen, and John Gamble. As Cowan introduced each of them, he relayed what each of these men had done for him: each one had given him an opportunity to learn and grow within the industry.

Clifton first met Cowan at Rio Pinar when Cowan was a staff member and Clifton had built the course and was acting consultant. He later became Cowan's consultant at Deerwood. Cowan recalled some of the reports and even brought copies to present back to Clifton, whom he called his lifelong mentor.

Hickman took a chance on a student fresh out of Lake City. "Paul was an incredible teacher," Cowan recalls.

David Barnes not only

gave Cowan fishing advice, but also helped him move into the sales and marketing side of the golf industry, which proved to be a perfect fit, as his knowledge, reputation, and gift for gab opened many doors that were closed to those before him.

Jimmy Allen and John Gamble also gave Cowan the opportunity to learn and grow within the industry as the leader of their sales forces.

His usual sense of humor was laced throughout each story along with moments of emo-

tional gratitude. Tom finished his acceptance speech with a poem about friendship and remembering those friends (*See sidebar*).

How soon we tend to forget, and not stay in touch with those that really mean so much to us as friends, colleagues, and mentors. We all get bound up in our own little piece of life, but it really is never too late to tell people what they mean to you and say, Thank you for what you do or have done for me. We can all take a lesson from that little poem, I know this writer did. Thanks Tom.



The Crowfoot Committee for 2002 From left, front row: Bob Lloyd, Jan Lloyd, Vilma Kamphaus and Tom Alex. Back row: Joel Jackson, Joe Ondo, Dwight Kummer and Lisa McDowell. Not pictured Stuart Leventhal.



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The Central Florida chapter nets the team trophy, thanks to players who brought their A games to Grand Cypress. From left: Bruce Kosmer, Kevin Rotti, Brett Harris and Chris Cartin. Photo by Joel Jackson.

Brett Harris and Kevin Rotti to defend the chapter team title with a 10-shot win over the Ridge and Palm Beach Chapters. In the Commercial Division, the low gross winner was Keith Nicoletta followed by Gary Wilhelm and Ken Ezell. Net Division winners, in order, were Tom Diggins, Fred Marshall and Rich Skorepa.

Special thanks to all our sponsors and especially to our presenting sponsors Harrell's Fertilizer, Howard Fertilizer, and Lesco for their extra support of the reception, tourna-

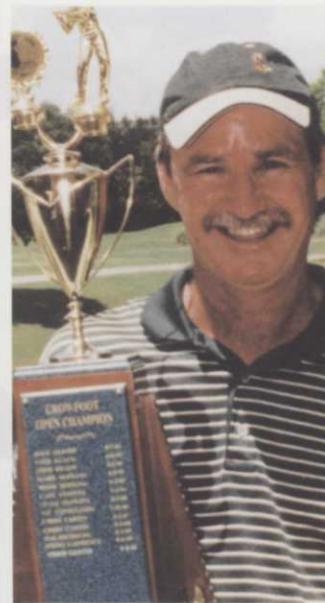
ment and after-golf luncheon. We'd also like to thank all the players and spouses who participated in this year's activities.

Tournament Chairman Tom Alex and his superintendents, Jeff Clark, Jim Sullivan and Pat Gibaratz and the golf maintenance staff had the courses in excellent condition. It's always a pleasure to play a great golf course and Grand Cypress is one of the best. If you didn't win something on the golf course or at the reception raffle, I still hope you enjoyed the fine facilities and camaraderie.

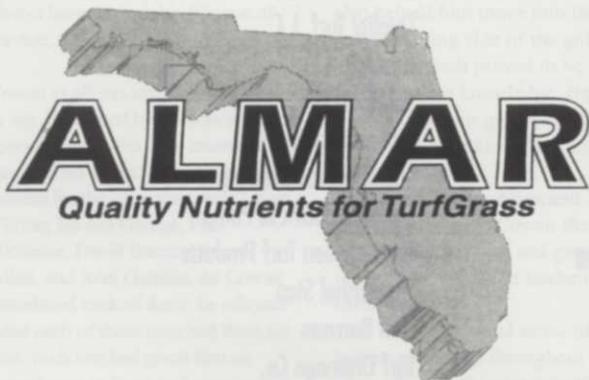
Around the corner I have a friend,
In this great city that has no end.
Yet days go by, and weeks rush on,
And ere I know it, a year has gone.
And I never see my old friend's face.
For life is a swift and terrible race.
He knows I like him just as well,
As in the days when I rang his bell,
 and he rang mine.

We were younger then,
And now we are busy and tired men.
Tired of playing a foolish game,
Tired of trying to make a name.
"Tomorrow," I say, "I'll call on Jim,
Just to show I am thinking of him."
But tomorrow comes and tomorrow goes.
 Around the corner, yet miles away.
 "Here's a telegram sir - Jim died today!"
And that's what we get and deserve in the end;
Around the corner - a vanished friend."

Tom Cowan



Perennial Palm Beach competitor and past Poa champion Mark Henderson added another title to his career "Superintendent Slam" by birdying five of his last six holes. He joins Bob Harper from South Florida on the FGCSA's 2003 national golf team. Photo by Joel Jackson.



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We can't sign off without a big thank you to Lisa McDowell, Tommy's assistant, and her parents Jan and Bob Lloyd who take care of all the invitations, registration, and sponsor details behind the scenes to make this a successful event. The remainder of the Crowfoot Committee providing sponsor contacts and follow-up were Joel Jackson, Dwight Kummer, Stuart Leventhal and yours truly.

Joe Ondo, CGCS

Editor's Note: At the Saturday night reception, Tom Alex gave an eloquent tribute to former Crowfoot Chairman and Disney Superintendent Larry Kamphaus for whom the event was renamed. Alex recounted Kamphaus's career and his contributions to the Central Florida golf industry. Since Kamphaus's death in 1997 the Crowfoot Committee has annually presented the Larry Kamphaus Award to those in the business who exemplify those traits modeled by Kamphaus, including service to the industry and the association. This year's recipient was a totally surprised and most deserving Joe Ondo, who has unselfishly given his time and service to our profession for nearly 20 years.

2002 Summer Board Meeting Highlights

DOC: GCSAA will file a Methyl Bromide Critical Use Exemption application on behalf of the U.S. golf industry. Loss of this product in 2005 will affect grass certification and require more use of conventional pesticides during grow-in.

Editor: Fall Florida Green Spotlight section will feature comprehensive chapter news that will highlight every chapter's activities.

Awards: Bob Sanderson announced as the recipient of the 2002 Distinguished Service Award.

Education: Dr. Bob Carrow will speak on "14 Ways Greens Can Fail" at the FTGA Conference Sept. 16. The Palm Beach Chapter will host Dr. Ronnie Duncan's "Seashore Paspalum Management on Golf Courses" Oct. 2. Tommy Witt will be the speaker at the 2003 Poa Annua Classic. All of these GCSAA seminars will be eligible for CEUs.



Chris Leahy, left and Dale Mitchell, right, of Golf Agronomics Supply & Handling stopped by the board meeting at Grand Cypress on their way to a Crowfoot practice round to give FGCSA President Geoff Coggan their annual donation of \$3,000 to the FGCSA Research Fund. Thanks gentlemen. Your steadfast support is appreciated.

Membership Jim Miller of the Suncoast Chapter was approved as a Lifetime FGCSA member.

Golf: The FGCSA Golf Championship will be held at Southern Dunes GC Sept. 28.



FGCSA Director of Communications Joel Jackson presents outgoing President Geoff Coggan with a framed cover of the Fall 2001 Florida Green which profiled Coggan and his course, The Great Outdoors. Photo by Darren Davis.



Newly elected FGCSA President David Court, CGCS presents the mounted gavel to Immediate Past President Geoff Coggan, CGCS, MG in recognition for his service in leading the association in 2001-02.

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2002 Summer Board Meeting Highlights

Government/Public Relations: The GR committee is going to look at possible public relations efforts associated with professional tournament site during the March golf swing.

IFAS: The South Florida Turfgrass Task Force has listed Immokalee REC as best site for relocating turf research plots from the Ft. Lauderdale REC.



North Florida GCSA President Glen Klauk (left) presents the \$5,000 from its summer fundraiser at Klauk's Pablo Creek Club to FGCSA President Coggan for the state association's turfgrass research account. Thank you, First Coasters, for your donation to the cause.

Long Range Planning: The FGCSA will fund three Spokesperson Training sessions this year. The FGCSA will partner with the USGA and Audubon International to conduct four hands-on workshops the first week of December to help new members apply and old members obtain certification.



In recognition for serving two terms as past president, Geoff Coggan presents Darren Davis with a bound collection of all of Davis's Super Tip articles for The Florida Green. Davis will also be honored in Atlanta at the GCSAA Conference with his second Leo Feser Award for his writing in Golf Course Management. He's the first repeat winner. Photo by Joel Jackson.



FGCSA officers for 2002-03 from left: Dale Walters, CGCS secretary/treasurer; Greg Pheneger, vice president; Geoff Coggan, CGCS, MG past president and David Court, CGCS president. Photo by Joel Jackson.



Local chapter external vice presidents make up the board of directors for the FGCSA. Directors for 2002-03 from left; front row: Mark Henderson, Mike McCulloch, Chris Ansley, and Glen Klauk; back row: Jeff Brown, John Lammrish, GCSS, Darren Davis, and Joe Pantaleo. Not pictured: Doug Abbuhl, Clayton Estes, CGCS and Buddy Keene. Photo by Joel Jackson.

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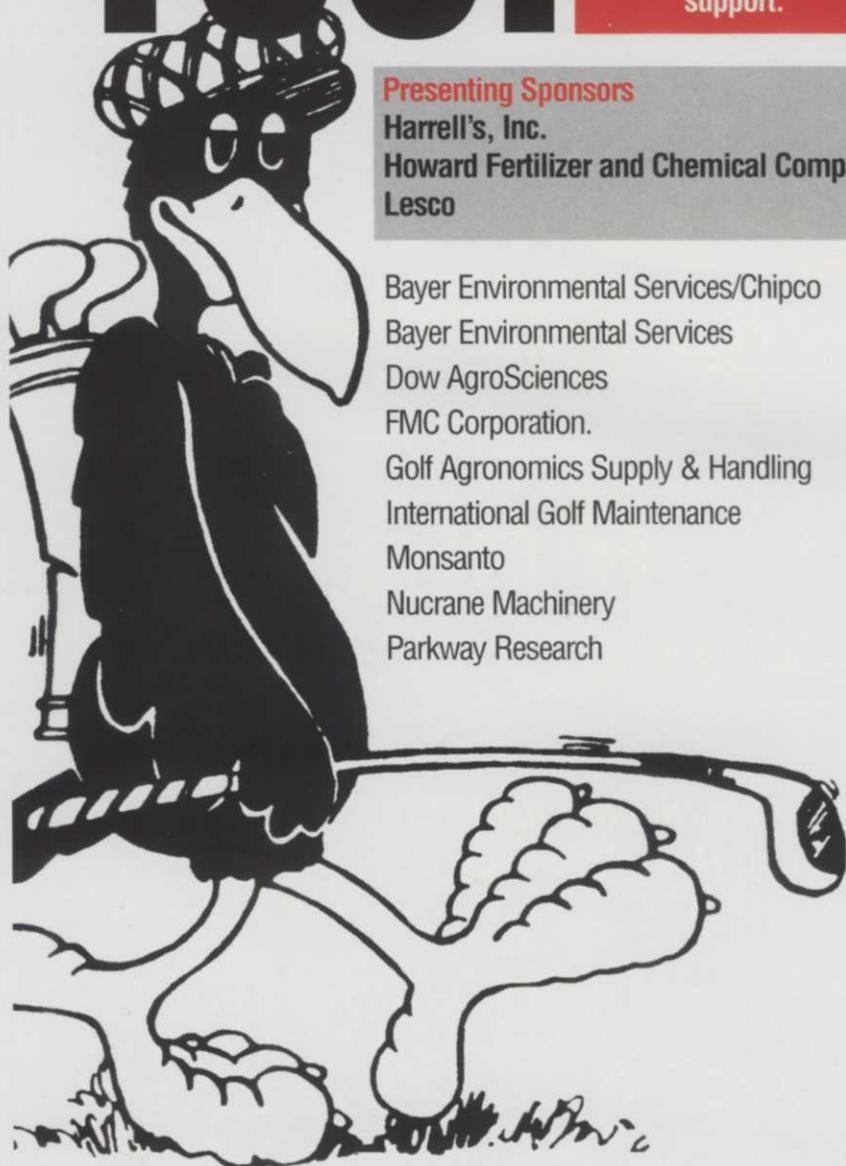
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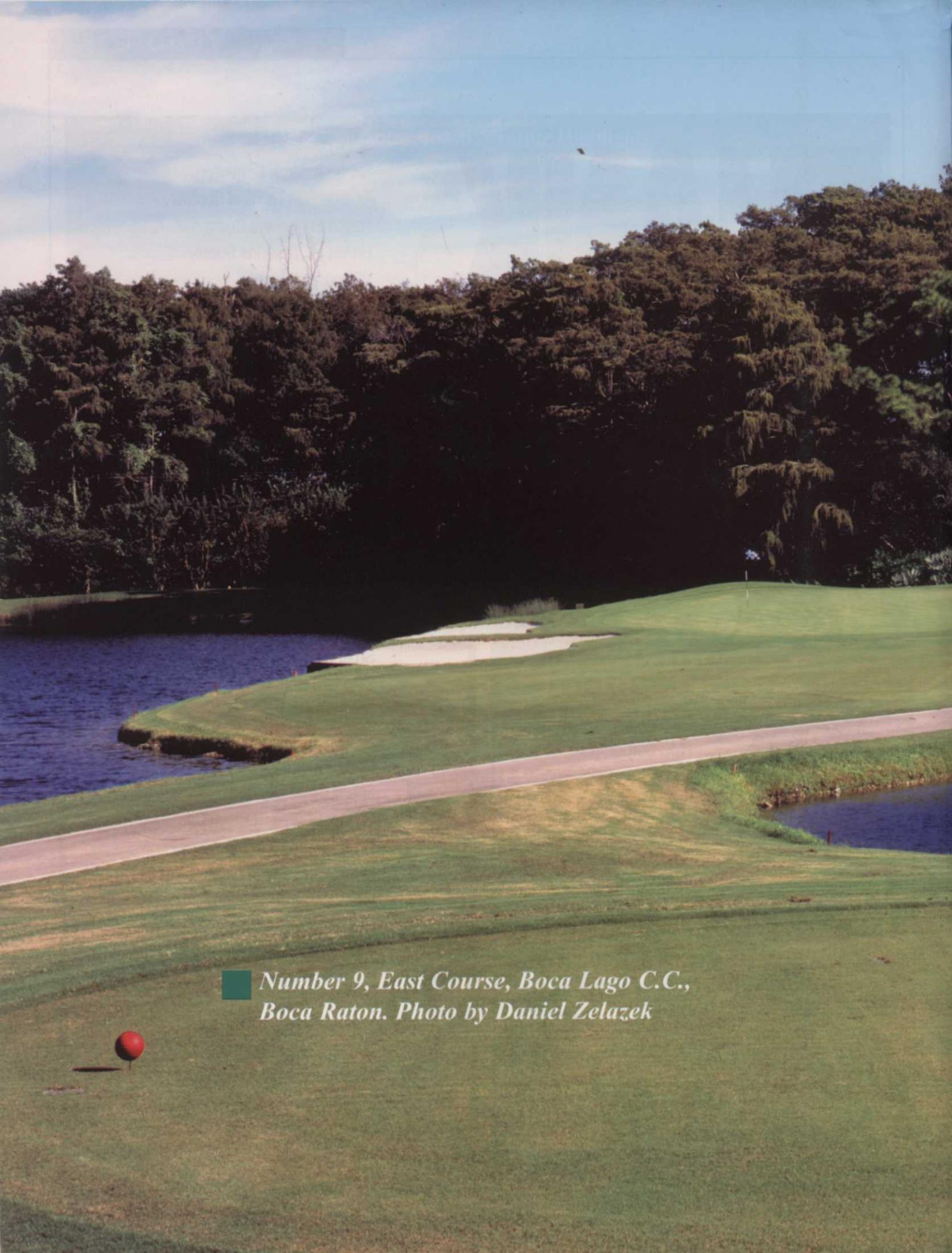
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■ *Number 9, East Course, Boca Lago C.C.,
Boca Raton. Photo by Daniel Zelazek*



BOCA LAGO COUNTRY CLUB

Golf in a Greenbelt Garden

By Joel Jackson, CGCS

"Thank goodness for the golf course green spaces in Palm Beach County!" says David Court, CGCS as we ride the 36-hole Boca Lago golf course complex in Boca Raton. Court has been at the 28-year-old course since 1981, and has watched the area grow exponentially since his family moved to Plantation when he was 9 years old. Court continues, "On our course alone we maintain 21 county-owned conservation/preservation areas

covering 30 acres and 50 acres of lakes and ponds."

Considering that 90 percent of Palm Beach County's population lives in a 12- to 15-mile-wide strip along the coastline and takes up only 10 percent of the land space in the county, residents are lucky that there are so many golf courses to provide urban greenbelts to balance all the concrete and asphalt. Boca Lago is located halfway between the coast and the eastern edge of the Everglades, just west of



The green on No. 7 East guarded by three of the 110 bunkers on the course. Photo by Daniel Zelazek.

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If You're Looking



Steep rocky shorelines like No. 18 West make grooming lake banks more time consuming. Photo by Daniel Zelazek.

downtown Boca Raton. The 1700-unit community of condominiums and villas borders the 36 holes of the East and West courses, which, in most cases, are the back yards for the residents.

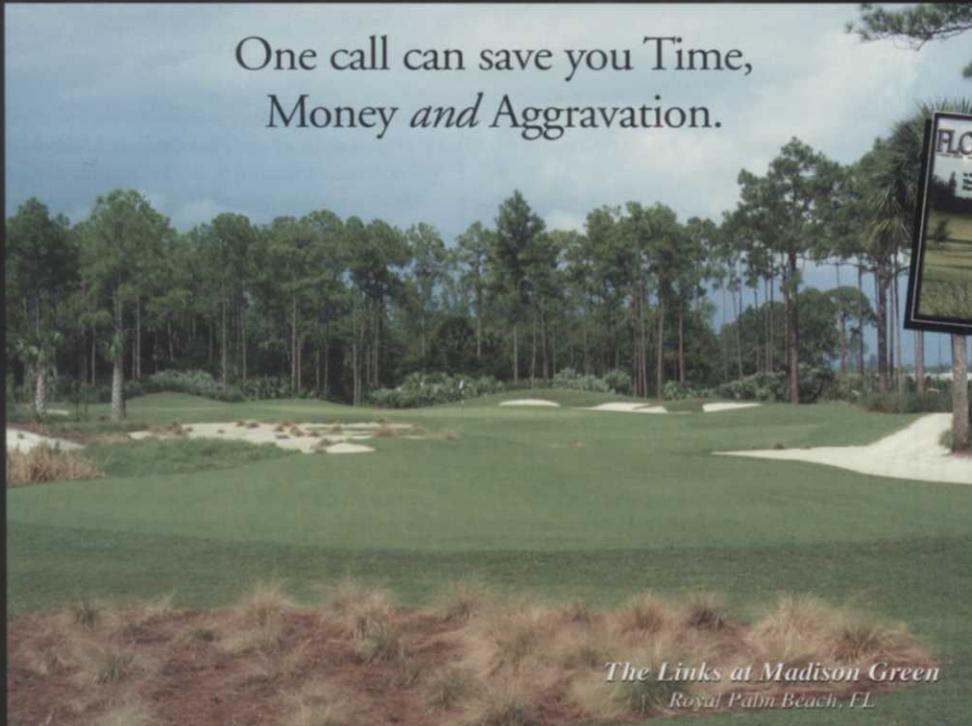
So, in addition to grooming the courses for the golf members, Court and staff also attend to the cultivation and manicuring of the views of the garden setting that has been created over the years. Court says, "The members and residents love color and we try to provide a variety of perennial shrubs and flowering trees to give them what they want. We've even got impatiens growing out of our palm trees."

Court shows off beds of exotic plants like tropical snowball, Yang-Yang, and golden dew-drops to make his point. He also noted that the master gardner with the Palm Beach County Extension Office has marveled at the success Court has had with his colorful landscaping program. Court says luck has a lot to do with it.

The maintenance department is also responsible for removing invasive plants like Australian pine, melaluca, and Brazilian pepper from the county conservation areas to revive the populations of native slash pine and cypress trees. Low-growing saw palmetto plants are introduced to fill in the gaps to prevent re-emergence of the invasive plants. A side benefit to this ongoing program is to allow more air movement and sunlight to penetrate to the turf areas, making maintenance a little easier.

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Bullrush and bulkhead on No. 6 West are just two of the ongoing projects at Boca Lago. Photo by Daniel Zelazek.



The lake guarding No. 4 East is just part of the 50 acres of lakes at Boca Lago. Photo by Daniel Zelazek.

Because it is a residential setting, trees and shade are inevitable. Court says one of the biggest challenges is managing turf around Ficus trees. "The Ficus is a favorite South Florida tree, but when they get big, the shade is so dense, the grass just won't grow. In the shadier areas we have been experimenting with several varieties of zoysiagrass. Over the past six years we've planted Cashmere, El Toro and Greg Norman zoysia. So far Cashmere has worked the best for us."

Court is now experiencing another turf change. In 2000, the push-up East Course greens were replanted with TifEagle. He is looking at the ultradwarf management research being done by Dr. John Cisar on the FGCSA's Otto Schmeisser Research Green in Ft. Lauderdale for guidance, along with calls to his peers with TifEagle, to develop a site-specific management program for his new greens. The greens renovation project also included the rehabilitation of 52 greenside bunkers with drainage, reshaping and the addition of new sand. Court hopes the West Course greens will get a facelift in the near future.

Meanwhile Court and company also renovate and rebuild four to six tee complexes each year. "We are trying to get away from the old runway or loaf-of-bread style tee to create multiple teeing areas to compliment the various handicap groups of the members. When we rebuild a tee complex, we also install a variety of native and ornamental plants to provide contrast, interest and color for the enjoyment of the members."

Court has been trying to introduce as many colorful native perennials as possible and reduce the number of formal annual plants. "With the recent drought cycle and water restrictions, it is imperative we look at more practical plantings that make more sense environmentally as well as economically."

Making sense environmentally has been on Court's mind since Boca Lago joined the Audubon Cooperative Sanctuary Program (ASCP) in 1993. Court says, "We have installed 33 nesting boxes on the course over the years, but the biggest boost to wildlife has been all these native and perennial plantings we have been doing. The plants pro-

vide cover and the blooms are attracting a wide variety of butterflies and the birds love all the berries and seeds on the plants. Our members and staff also enjoy recreational fishing in the lakes stocked with largemouth bass, peacock bass and bream.

As the new president of the Florida Golf Course Superintendents Association, Court says he would like to use his position to encourage more Florida golf courses to get involved in the ACSP. "Golf courses take a lot of unwarranted shots in the media. We need to *show* not just *tell* our side of the story. The fact that Audubon International, an environmentally focused organization, is willing to work with the golf industry to provide expertise on how we can be more environmentally sound is a no-brainer to me. We have around 260 courses in Florida as members of the ACSP, and of those only 59 are certified Audubon Sanctuaries. We can do better. We need to do better. It's important that we document and demonstrate that we are indeed good stewards of the environment. This program is a very user-friendly way to accomplish that goal."

As Court and his staff go about the business of maintaining the Boca Lago "Garden of Golf," they must deal with the site-specific challenges that come with every golf course. One of those challenges is dealing with the limestone bedrock near the surface. Court says, "Our job is to accommodate the members and provide good playing conditions. To do that we have to add drainage lines and repair or modify the irrigation system, these are routine jobs made more difficult by having to trench through the rock. It's time consuming and tough on the men and equipment. With rock outcrops near the surface, the turfgrass roots don't have much soil to grow in to maintain a good healthy stand of turf."

Another disadvantage of the rocky ground is the difficulty in maintaining the lake banks. Court says, "Practically all our lake banks have to be trimmed by hand since they are not smoothly tapered slopes. The craggy rough look due to the rock outcrops is picturesque, but it is also labor intensive. Since there is not much soil along the lake edges, it has been difficult to establish as much aquatic shoreline vegetation as I would like. But you have to work with what nature and the site gives you. Overall, I think we do a pretty good job."

With all the focus on the landscape to complement the golf experience, Court is blessed

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with a veteran staff that knows what's expected and how to get it down efficiently. For example, the three full-time and one part-time equipment technicians have 59 years of experience among them, which is a huge plus in meeting the demands placed on equipment that is used virtually year round in this subtropical environment. "When former head equipment technician Danny DeStephano wanted to semi-retire, he went to work part time for us maintaining the mower reels," Court said.

The two spray technicians are also veterans, which takes a load off Court's mind as he goes about his management duties. "Our head tech is Armand Ausserlechner, who has been here for eight years, but we were also lucky to have Vince Latour join the staff. Vince has 35 years in the business and was formerly the assistant superintendent at Broken Sound GC." Court says he adheres to IPM principles and stresses spot treatment applications versus wall-to-wall treatments.

He added, "Our biggest pest-control challenges are nematodes, fairy ring and tropical signalgrass. Pro-Star seems to work on the fairy rings but the nematodes and signalgrass can give us fits. I had tried to manage the nematodes with spot treatments of the worst areas for the past six or seven years, but we had to do a large-scale Nematicur treatment last year to get them under control again. We also experimented with Curfew injection on the greens. I will be interested to see how Dr. Crow's alternative nematicide research progresses now that

EPA has ordered the phase out of Nematicur. The signalgrass is a case of perseverance with follow-up applications of MSMA and Sencor. It's been tough during the drought cycle because the heat hindered the turf recovery."

To communicate with his crew Court says, "I like to spend 95 percent of my time out on the course, keeping my hand in, and checking with our crew members in person to see how they're doing personally and on the job. I am fortunate to have my wife Janet as my administrative assistant, so the lines of communication are open 24/7. Plus the club provides superintendent housing on site, so it's convenient to catch up on paper work when I have to. We have bimonthly staff meetings on safety issues. I use Todd Miller's company, Risk Compliance Inc., for presentations on Hazard Communications and safety issues. Todd's service keeps us up to date and in compliance with OSHA and Department of Labor requirements.

"We check in daily with the pro shop to review weather, course and traffic control conditions. Traffic control is very important to managing wear and tear on the turf. Our layout is relatively narrow being surrounded by residences, so carts have limited options on where they can drive. I adopted a traffic management plan from a presentation by James Moncrief of the USGA Green Section. Monty's plan established four traffic conditions which can be posted at the first and 10th tees. Condition 1: Driving on fairways permitted.

Condition 2: Use 90 Degree Rule. Condition 3: Keep Carts in Roughs. Condition 4: Cart Paths Only. I'm happy to say most of the members comply and do their part to help minimize cart damage."

Court likes to check the playing conditions for himself by playing his own courses three times a month, usually on Saturdays. He sees the course Monday through Friday from the maintenance viewpoint, and the golf round helps him appreciate the player's viewpoint. On the fourth Saturday, he tries to play another comparable course in the area to see how his peers are doing things. Court says these outings give him a chance to get new ideas instead of focusing on the punch list of things to do at his own course.

That punch list includes closing nine holes a day Monday through Thursday on a rotating basis during the summer months, assuming there are no special events booked. This schedule allows the maintenance staff to perform the necessary grooming that comes with new TifEagle greens. Court administers frequent light top dressing applications to deal with the aggressive thatch production of the new grass. Like others learning how to manage the new variety, Court is not overseeding the TifEagle greens and noted its relatively quick green-up after a cold snap. However, shady areas can still be a problem for any grass, so Court maintains a 4,000 square foot nursery green split 50-50 with Tifdwarf and TifEagle for the inevitable thin spot repairs.

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vided some unwanted shade relief when it took down 70 trees on the property when it made landfall some 70 miles to the south. Boca Lago's recovery was relatively easy compared to the devastation in south Miami. Court was proud to be part of the club's relief effort for the storm victims. Court said,

"A group of volunteers gathered up water and supplies and took them down and distributed them to those in need. We returned at Christmas and brought presents for the kids in the elementary schools." Boca Lago is a good neighbor year round as it provides access for golf team practice for Olympic

Heights High School, Florida Atlantic University and Lynn University and hosts a variety of charity fundraisers.

From green space to good neighbor, Boca Lago C.C. is an example that urban golf courses can be very definite assets to a community

David Court, CGCS



David Court, CGCS. Photo by Joel Jackson.

Originally from: Philadelphia, Pa., moved to Plantation at age 9.

Family: Married to Janet, two sons: Tibe (30) and Christopher (27).

Education: AS degrees from Lake City and Broward Community colleges.

Employment history: 1972-76, crew member and

OJT student at Ft. Lauderdale CC, Colony West CC and Inverrary CC. 1977-79 assistant superintendent Presidents CC. 1979-81 superintendent Colony West CC. 1981 to present director of grounds and greens Boca Lago CC.

Professional affiliation and awards: Palm Beach GCSA - all offices, two terms. Chapter president in 1988 and 2000. External VP for three years. FGCSA Education chairman 1992-95. Rotating through FGCSA officer positions since 2000.

Mentors: My parents get the top vote along with some key superintendents. My dad was a doctor. He was a great example of someone who was dedicated to his profession. As members of the Ft. Lauderdale CC, our family was a regular foursome, which allowed my brothers and me the opportunity to learn the game of golf.

Accomplishments: I've been a certified superintendent for 12 years and employed at Boca Lago for 21 years as of September, and I love being able to say it's been many good years of relationships with members and staff.

Advice for aspiring superintendents: Don't be in too big a hurry to become a superintendent. Get as

much different experience as you can. I have no regrets, but my first position at the age of 24 may have been a bit early as I look back now.

Memorable moments: Playing in the John Deere Classic Pro-Am two years ago with my general manager Gene Paul Stifter and pro golfer Barry "The Cheese" Cheeseman. Although it was a small part of the overall event, it was still exciting being "inside the ropes." I birdied the first hole along with the pro. We played with fellow Florida GCSA members Bob Klitz and Alan Weitzel from South Florida. Bob wrote about our escapades in the 2001 *Florida Green* winter issue. Gene Paul has a way with people and we really had a great time. I also got to play in the LPGA 50th Anniversary Founders Tournament held at the Palm Beach Par 3 course with LPGA pro Shirley Furlong and actor Jamie Farr (Klinger from the hit TV show M.A.S.H.). I helped represent the GCSAA at the previous night's banquet along with CEO Steve Mona, Past President George Renault and Darren Davis. I went without my wife and I've been taking a beating for that boo-boo ever since. I won't make that mistake again!

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Boca Lago Country Club



Boca Lago Country Club

Location: Boca Raton

Ownership: Member Owned

Playing policy: Private. 36 holes: East Course 6,454 yards, par 72; West Course 6,000 yards, par 70.

Designed by: Bruce Devlin and Robert Von Hagge; opened in 1974.

Management: Club Manager Gene Paul Stifter, COO; Club President Harry Epstein; Green Chairman Harold Sattenspiel; Head Golf Professional Mike McLellan; Director of Grounds & Greens David Court, CGCS.

Major Renovations/Ongoing Projects: In 2000 renovated East Course greens and bunkers.

Replaced Tifdwarf putting surfaces with TifEagle. Push-up greens. So far so good.

Total acreage under maintenance: 210 acres turf

Greens: East: avg. 6500 sq. ft. - 3.5 acres. Turf type: TifEagle. HOC 0.125 - 0.140; Stimpmeter: 9 - 9.5; no overseeding. **West:** avg. 5000 sq. ft. - 2.5 acres. Turf type: Tifdwarf. HOC 0.150 - 0.180; Stimpmeter: 8 - 8.5. overseeding: *Poa trivialis* @ 18 lbs/1000 sq. ft.

Tees: 5 acres total of Tifway 419 bermudagrass; HOC 0.375 - 0.5; overseeding: *Poa trivialis* @ 20 lbs/1000 sq. ft.

Fairways: 50 acres total of Tifway 419 bermudagrass; HOC 0.5; overseeding: *Lolium perenne* @ 400 lbs/acre

Roughs: 130 acres total. Tifway 419 bermudagrass; HOC 1.75; overseeding: None

Grounds: St. Augustine turf and shrubs and annuals around clubhouse and tennis club grounds.

Bunkers: 110 bunkers with FSS 100 size sand. Mechanically rake all w/ Toro Sand Pro 2000 with standard tines and flaps and brush finish.

Natural areas: 20 acres of preserved slash pine and cypress areas. On a 10-year plan to eliminate invasive Brazilian peppers and melaluccas.

Waterways/Lakes: 50 acres. Maintained by outside contractor. Well stocked with triploid grass carp and largemouth and peacock bass and bream.

Irrigation: Surface water from SFWMD L-47 Canal. Equipment: Converted to Rain Bird Maxi controls in 1993, upgraded to Nimbus II system in 2002. Hydraulic system with mostly Toro 690 heads. Fertigation capability.

Total staff including superintendent: 35 full time and 4 part time working 40 hours straight time. We have had 9 OJT students work for us. It is getting harder to entice them lately. We can't afford to provide housing for them.

Leadership: Superintendent Art Helm. Assistant Superintendent Chris McNellis. Head Equipment Technician Brian Schrider with assistants Edmond Luchner and Luis Ubarry and former Head Technician Danny DeStefano now a part timer in

charge of reel maintenance. Pest Control Technicians Amand Ausserlechner and Vince LaTour. Irrigation Technician Nelson Ramos. Office Manager Janet Court

Communications: Monthly safety meetings with the staff. The crew knows that I like to be involved daily with a "hands-on" management style so I'm out there with them all the time for one-on-one time as needed.

Unusual/Interesting notes: Our tennis director, Len Simard, is the past president of the Florida US Professional Tennis Association and Mike McLellan, our golf director, is the current president of the South Florida PGA chapter. (And now David is the president of the FGCSA.)

IPM programs/Wildlife: We definitely follow an IPM program. Spot treating problem areas only is the practice of choice. We make no blanket applications of pesticides. For being a golf course in a densely populated area surrounded by condos, villas and townhouses, our courses are great for wildlife. Along with occasional alligator sightings, we have fox, raccoon and opossum. Our bird-watching list includes: anhinga, blue heron, blue jay, cardinal, cormorant, ducks, egrets, green heron, limpkin, mockingbird, osprey, purple martin, warblers, woodpeckers, wood stork and wrens. We also have freshwater game fish stocked in our lakes.



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Fun Facts



David and Cosmo Kramer. Photo by Joel Jackson.

Here are some things you might not know about our cover story superintendent.

1. **Car:** 2002 Jeep Cherokee
2. **The last good movie I saw:** A Beautiful Mind
3. **I stay home to watch:** Good movies, Seinfeld and Everybody Loves Raymond
4. **The book I've been reading:** Hannibal
5. **Favorite meal:** Jack Daniels Manhattan up, Caesar salad, veal chop, sweet potato, asparagus and dessert or almost anything Italian.
6. **Favorite performers:** Barry Manilow & Paul McCartney. I saw both in concerts recently.
7. **Prized possession:** My dog, Cosmo Kramer, a Golden Retriever/Chow mix.
8. **Personal heroes:** My father.
9. **Nobody knows that I:** Like to watch old TV shows - Father Knows Best, The Three Stooges and Leave It to Beaver.
10. **I'm better than anyone else when it comes to:** Three putting.
11. **If I could do it over:** I'd make better grades in high school.
12. **I'd give anything to meet:** Arnold Palmer and Tiger Woods.
13. **My fantasy is:** Win the lottery, travel and play golf.
14. **The one thing I can't stand:** Drivers on the road who think they are the only thing that matters.
15. **If I could change one thing about myself:** I'd be better organized.
16. **My most irrational act:** Driving 140 mph to see how fast my Dad's Plymouth GTX would go.
17. **The words that best describe me:** Conservative, rational.



There's 59 years of experience in the Boca Lago equipment shop. From left: Luis Ubarry, equipment technician (15 years); Edmond Luckner, reel technician (8 years); Brian Schrider, head equipment technician (12 years); Daniel DeStefano, "retired" head technician (22 years). Photo by David Court, CGCS.



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There's been a lot of discussion over the job title of golf course superintendent, greenkeeper, turf manager or director of grounds. What best describes the role and responsibilities of the position? Well, it doesn't stop there. The professionals who keep the golf course equipment running so superintendents can apply all that agronomic wizardry are called mechanics, equipment technicians, equipment managers or shop managers. Whatever the title, you may be the head of the outfit but they are your right hand. There are several equipment technician associations around the state seeking to organize and professionalize the position. Check out the following articles for a look into the role of the equipment manager.

Joel Jackson

HAWK'S NEST

Neatness Counts... From Procedures to Record-Keeping

By Tom Trammel, CGCS

Hawk's Nest is an 18-hole, private golf course in Vero Beach with a maintenance staff of 23. Head mechanic Bruce Raitzel has one full-time assistant, Jacob Watson, and occasionally a part-timer as a second helper. Raitzel, a Lake City CC turf equipment management grad, is in his 13th year as head mechanic, starting his fifth year at Hawk's Nest. He is recognized as one of the leaders in his field.

Daily operations for the upcoming week are on a master schedule board located in the break room. Our goal is to stay as balanced as possible with

mechanic and crew schedules so that it keeps them all in a forward-moving focus.

The shop is swept daily and is kept neat; it's accessed only by the assistant and head mechanic. It is a separate building thus there is no need for staff members to enter. All shop tools are bought and owned by the club. A separate tool box of lesser-value, miscellaneous tools is kept for the rest of the staff.

All the carts and maintenance

equipment items have the operators' names printed on them, making each operator responsible to clean and check the oil on his assigned equipment. A board in the break room allows operators to write down any



Top quality and specialized tools are bought and owned by Hawk's Nest. Photo by Tom Trammel.

issues and problems with the equipment if the mechanics are not available in the shop or if a problem occurs falls over a weekend. For emergencies there is with a radio to call the mechanics if they are out in the field.

All equipment costs, expenses and servicing records are accounted for on Microsoft Excel spreadsheets. The head mechanic has a monthly maintenance and repair budget allotment and performs his own purchasing and invoicing through the golf course office manager.

The head mechanic is responsible for lubricating all pieces of equipment that are driven on the greens. Operators of rough-, slope- and fairway-mowing equipment lubricate their units daily. Time is allocated at the end of the day for each operator to do the servicing and detailed cleaning. The operators are required to report any equipment issues or safety problems to the head mechanic as soon after it occurs as possible.

The superintendent and head mechanic meet at least once a week formally to go over the existing and future status of mowing heights, cultural practices, ideas, needed services and operator performance. Greens mower reels are ground weekly, tee mowers biweekly, slope and rough mowers three times a year. Hydraulic hoses are typically changed out

Hawk's Nest head mechanic David Raitzel has been at Hawk's Nest for five years. David is a graduate of the Lake City Community College golf operations turf equipment management program. Photo by Tom Trammel.



The shop work areas are kept neat and clean. Access is limited to the mechanics. Photo by Tom Trammel.

annually and biodegradable fluid is used.

Innovations

Instead of throwing out a 250 gallon, mini-bulk fertilization tank after it was emptied out, Bruce turned it into a gravity-feed water wagon. This wagon is used wet our native cart paths, keeping the dust level down. It is also used for watering our newly planted trees and foliage and any hot spots throughout the golf course.

In the winter months, the shop is open for a monthly tour. The head mechanic gives a 45-minute behind-the-scenes tour; grinding of reels, backlapping, mower-height adjustment and the differences among slicing, aerifying, verticutting, grooming and more.

Equipment Inventory

2 fairway units, 2 rough units, 2 slope mowers, 8 walk greens mowers (new Toro Flex 21), 6 walk tee mowers, 12 utility carts, Terra Topper top-dresser for light applications, Meter-Matic for heavier applications.

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It Starts With Skills and Ends With Professionalism

By Corby Coggins

What is the role of a golf course equipment manager? Depending on where this question is

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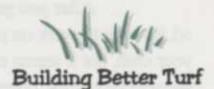
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asked, I'm sure you're bound to get different answers. As we all know, there are many different types of clubs out there with different styles management. While the Equipment manager's primary reason for being hired is to manage and maintain a rather expensive fleet of equipment, a low course maintenance budget may require him to do other jobs besides his traditional one.

I've seen and even experienced for myself the responsibility of mowing greens, course set up, mowing fairways etc., then coming in and doing the maintenance on the equipment. Sometimes the equipment manager has the assistant superintendent's responsibilities of getting the whole crew started in the morning, and then making sure that their quality of work is acceptable. Job requirements all depend on where you're employed.

I've been in the golf course business now for nine years. I completed the turf equipment management program at Lake City Community College, and have had the chance to work at low- and high-end golf clubs. From that experience I've developed my perception of what the role of the equipment manager should be. There are many quality equipment managers who already operate their shops in a very smooth and efficient manner. The sole purpose for writing this article is to share some insights with current and possible future equipment managers to provide a solid foundation for a successful career.

Personal Skills

Before we discuss the technical skills and tasks of the equipment manager, there are other things that are just as important. A positive attitude is a must to be successful in this business. Think about it. If I got mad every time someone brought in a broken piece of equipment to the shop, my tenure in the golf course industry would be short lived.

For those who get mad and fly off the handle easily, I'll say it again: You have to keep a positive attitude. Fixing broken things is your job. That's what you were hired to do.

Besides, the more equipment you get to work on simply means more experience and more knowledge you gain.

After you get the positive attitude perfected, it's time to work on patience. I don't know about your club, but it seems everywhere I've been, there is always one maniac operator who consistently breaks



The Red Stick equipment manager's office. Having strong communications and computer and skills can help the shop operate in a more efficient manner. Photo by Corby Coggins.

things. That maniac will certainly bend fenders and sometimes our nerves.

Does that mean you can curse at him or beat him up each time he immobilizes another piece of equipment? It may cross your mind, but you have to rely on your positive attitude and exercise patience.

It will take patience in many situations, like focusing on rebuilding that tiny carburetor, while getting interrupted by three radio calls on that maniac operator stuck again on No. 4. Time for making repairs may be taken away for training a new operator on a piece of equipment. If you can cut your tool-throwing down to once a week, maintain a good attitude, and exercise lots of patience, you'll gain a lot respect from the Superintendent and the crew.

Management Skills

Newly appointed equipment managers soon find out that the needed skills can be quite numerous. I think they are all important, but there are a few that I feel are good building blocks for quality equipment management.

I'll start with initiative, or "self-starting skills." Without initiative you're going to sit around every day waiting for a piece of equipment to break,

or rely on the superintendent to tell you everything you need to do.

Wrong!

One who lacks initiative will soon be waiting for things to break at home because their employment will be short lived. Equipment managers are hired to make educated decisions on what and when something is to be done to the club's equipment fleet. Besides unexpected equipment failures, a well-prepared equipment manager should know what they're going to do every day.

Good communication skills are essential. Communications may come easily to some and with greater difficulty to others depending on where they are. Maintenance crews are becoming more diverse every day, and being able to communicate with the operators is essential. You may want to consider taking a basic foreign language course either on tape or at a local school. Regardless of how you choose to strengthen your communication skills, the main goal is to find a way to communicate with the course management and the crew members.

The main objective is to always know what's going on. There's not a worse feeling in this line of work than to spend all day grinding reels only

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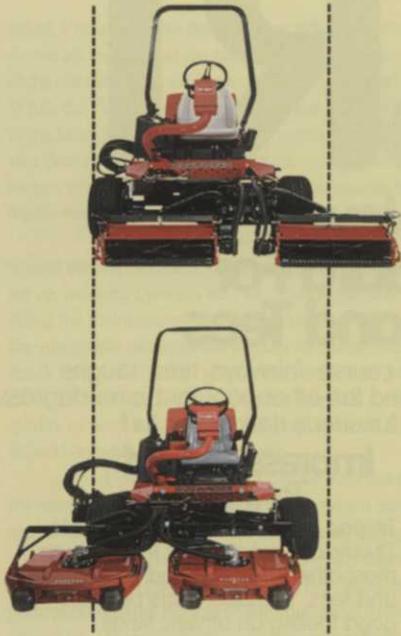
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to find out the greens are being top-dressed the next day. Whether it's a monthly planner, Post-it notes, a foreign language class, or just a good, old-fashioned conversation between people; good communication skills are a necessity.

Let's move on to computer skills. I know not every club has purchased a computer for the shop, but for those who have, I'm sure management envisioned neat, organized documents being printed out of that \$1,700 computer package they just purchased and not a higher pinball score at lunch time every day.

Having strong computer skills will create endless possibilities like being able to design different forms, record expenses and inventory to help the shop operate in a more efficient manner, or having online access to most of the major equipment suppliers in the industry. For those fortunate enough to have a computer, learn how to use it and make it part of your everyday role.

Next are organizational skills. Without these skills, an equipment manager would simply run himself ragged. For example, someone brings in a piece of equipment that has a broken part that you don't have in stock. Let's also say that this part requires an extensive amount of time to be removed.

Do you drop what you're doing to take it apart immediately and get consumed in it for the majority of the day?

The smart thing to do would be to finish the daily schedule so tomorrow's equipment will be ready to roll. If time permits, you can start breaking

down the broken machine. There are always times when you have to prioritize what and when jobs need to be done.

If you are blessed with an assistant or assistants, you may have several projects going on at once. If any job or project lacks good organization, it will likely be completed improperly or not at all.

Technical Skills

The last set of skills is definitely the most important. Do technical skills ring a bell? I bet you were wondering if I was ever going to mention these. Technical skills are definitely a broad category but I'll touch on a few that I feel are essential in the equipment manager's role.

Understand electronics and electrical systems. You don't have to know how to solder microscopic parts to a circuit board but it is helpful to be able to read an electrical schematic so you can troubleshoot that faulty part.

Be mechanically inclined. It's our job to know how gas, diesel, two-stroke and four-stroke engines operate and to be able to troubleshoot them if they fail. I don't know about other technicians, but I wasn't taught everything there is to know about all the equipment I'm responsible for just by enrolling in a small-engine class. Sometimes one has to learn by doing and that is where being mechanically inclined helps out.

Know hydraulic systems. It's very important to learn how the hydraulic systems work in the

different pieces of equipment.

Last but not least, reel grinding and reel set up will probably be the most reflective technical skill that you will encounter. What I mean is that whether you work for a private or public course, all the eyes of the players usually see quality of cut. If the player consistently plays on turf with streaks and stragglers, they will sometimes start to presume that the equipment manager doesn't know what they're doing.

We can also look at this situation from a different point of view. A set of reels could have a perfect cut, but the mower they're attached to could be mechanically unfit. That is why it is equally important to be strong in all the skills that I have mentioned in this section and not just one or two.

There's no way around the technical skills involved in performing the role of an equipment manager. If one chooses to strengthen or implement the other skills I've mentioned into their daily role, others will start to develop a more professional image of them.

Repair and Maintenance Budget

When you become an equipment manager, you often inherit the responsibility of spending a portion of the golf course's annual maintenance budget. This is usually the repair and maintenance budget or R&M budget line item. The R&M budget is for monthly replacement parts and shop supplies for the club's fiscal year. It is the responsibility of the equip-

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ment manager to spend this money in the club's best interest by buying only necessary items and not the \$150 case of brake cleaner from that cute blonde in the mini skirt.

It is important to keep a monthly log with a running total of the R&M purchases so you can keep track of total expenses for the year. I would suggest a log that includes the following: date of purchase, invoice number from sales receipt or packing list, vendor name, what was purchased, and the amount spent. Not only will this log help you stay on budget, it's good reference material for any questions that may arise in the event that you do go over budget.

Parts, Tools, and Shop Supplies

When it comes to purchasing important and necessary items for the shop, the equipment manager will be faced with many decisions. Questions like, What parts do I need to stock? Who is the best vendor to buy from? What brand of tools should I purchase? or perhaps What kind of supplies do I need?

All of these are legitimate questions and should be considered carefully. Although technicians' opinions will vary on each of the previous questions, here's a list of things to consider before making a final decision.

I'll start with "What kind of parts should be stocked?" While it's impossible to stock every part for every piece of equipment in your fleet, you should

stock the high-wear items such as belts, rotary blades, bearings, bedknives, filters (air, oil, & fuel) for most of the equipment, spark plugs, stick edger blades, string trimmer line and anything else your maintenance crew seems to use or "break" a lot of. The key is to keep records of what parts seem to wear out most often and stock two or more of them to prevent equipment down time.

"Where should you buy your parts?" I would suggest buying them from vendors who are knowledgeable about their parts inventory and will stand behind their products after the sale. When purchasing parts, don't buy the cheapest, buy quality. The last thing I want to do is repetitively replace junkie "will-fit" parts. I would also recommend supporting your local vendors as much as possible. By supporting local vendors, you not only help out the little man, but they will usually go the extra mile when you desperately need a critical part.

"What brand of tools should an equipment manager stock?" When purchasing tools, there are a few things that need to be considered, like: Who's going to be using them? How often are they going to be used? or How much money is in the tool budget?

The answers to these questions are very simple. The tools that are used the most should fit comfortably in the primary user's hands and be made of the best quality materials that a club or the technician can afford. However, you may want to re-think the previous statement when buying tools for the

crewmembers or irrigation technician. When purchasing tools for them, I usually try to buy the cheapest and safest tools possible.

The reason for this is that it makes absolutely no sense to purchase hundreds of dollars worth of tools only to have them buried in a hole or dumped out of a cart bed at the end of the day. I tell everybody that the company tool box is full of David Copperfield tools, meaning that every other day a tool seems to make itself disappear. Unlike Mr. Copperfield, the missing tools prove that their absence is no illusion; they're simply never seen again.

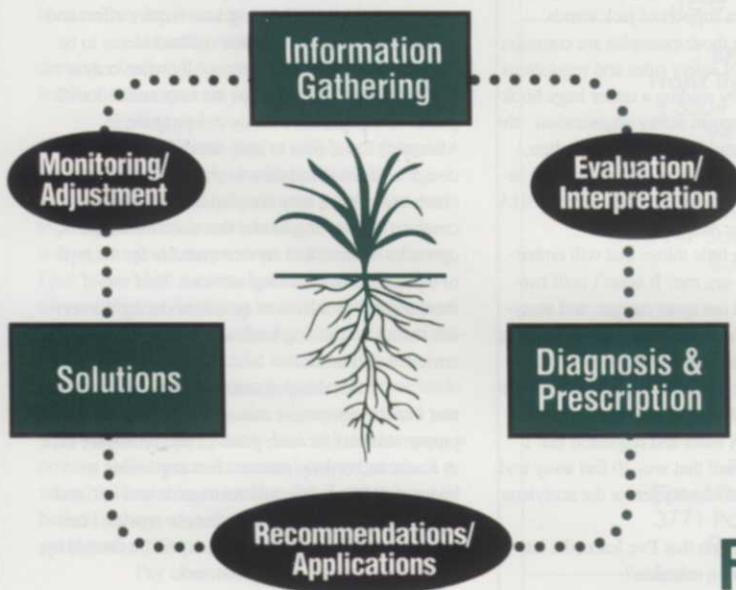
Now that we know tools can disappear on their own, lets move on to supplies that need to be kept on hand at the shop. While the supply list could go on and on, here are a few things that are important to have readily available.

Every shop should have as many of the following assortments as possible: o-rings, nuts and bolts (metric, standard, fine and coarse thread, minimum of grade five), cotter pins, roll pins, clevis pins, electrical wire and connectors, electrical fuses, square key stock, woodruff keys, battery terminal ends, penetrating oils, chain and cable lube, brake and carburetor cleaner, implement pull pins, tapes (Teflon, electrical, duct), wood screws, machine screws, set screws, and if possible, pop rivets. These should all be of the best quality afforded by the budget.

There may be other supplies that will be acquired as time goes on, but those just listed will

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usually get you by. When purchasing supplies, don't be afraid to try different products on the market. Experiment until you find the ones that work the best at the right price for you. One thing equipment managers should keep in mind while experimenting is to use up what they have before ordering another kind. If you don't, you may end up with five cases of different brands of penetrating oil sitting on the shelf collecting dust. This may indicate to upper management that the equipment manager is purchasing unnecessary items and may result in the time-consuming requirement that all future purchases be approved before any order is placed.

Shop Organization and Safety

Keeping a shop well organized will not only improve the efficiency of maintenance procedures, it will also produce a more professional image of you and the other staff each time somebody visits the maintenance facility. From tools to air filters, a properly organized shop should have a designated place for everything. Once locations have been established for items in the shop and parts room, it is the equipment manager's responsibility to make sure they stay in an orderly manner. It will not only make it easier to find parts and tools, it also creates a safe atmosphere by not having trip hazards in the middle of the floor.

When organizing a shop, keep things where they will be utilized in the most efficient way. Simple things like keeping tire tools close to the tire machine, keeping your welder and welding supplies close to each other, or even fabricating a rack to store oils and grease guns on, will definitely aid in efficient utilization.

It is also up to the equipment manager to maintain a safe shop. Shop safety usually amounts to nothing more than a little common sense. You certainly wouldn't put a reel grinder or welder near a flammable parts washer. Nor would you want to work on a jacked-up piece of equipment without the extra support of jack stands.

Although those examples are common sense, there are a lot of safety rules and regulations that must be learned by reading a rather large book published by a government safety organization - the Occupational Safety and Health Administration, called OSHA. I highly recommend reading this literature so you will be somewhat prepared if OSHA decides to inspect your shop.

It's all the little things that will embarrass you - or should I say, me? It wasn't until two years ago that I found out spare oxygen and acetylene bottles couldn't be stored next to each other on the same wall. I was so proud of the way I had the bottles chained and secured to the wall but the local fire marshal thought differently. He kindly enlightened me to the OSHA rules and requested that I drill more holes in a wall that was 20 feet away and chain and secure either the oxygen or the acetylene bottles there.

Did I mention that I've learned a lot over the years by making mistakes?

Regardless of how we learn the proper way to do things, try not to make too many mistakes when it comes to safety, and remember this last statement. The equipment manager should always

lead by example by using - and making sure others are using - the proper safety equipment recommended for individual jobs at the workplace.

Making Preventive Maintenance Programs a Success

Getting the longest possible life out of the equipment fleet should be one of the primary goals of the equipment manager. The best way to accomplish this is to design and implement a good preventive maintenance program. There are various PM programs available for technicians to use. There are computer programs where you can spend hours typing in key information from each piece of equipment and then keep track of how many hours each piece of equipment ran each day in order for the program to schedule the services.

Then there is program known as the "hourly method." This simply means that somebody walks around to every piece of equipment at the end of each day and records the hour-meter readings. This program usually results in following the manufacturer's exact specifications when certain services need to be done at certain hour milestones. In a perfect world, (and with a few assistant mechanics), I would have to say this program would promote the greatest longevity on the equipment. It does require one person to devote almost their whole workday to ensure proper filters are being ordered and the right services are being scheduled.

The last PM program that I'll mention is the one I use on our equipment fleet. This program is known as the "calendar method." The calendar method program works by estimating the amount of time each piece of equipment gets used each week or month, then making preventive maintenance charts for each type of equipment by following the manufacturer's recommendations as to when services are to be performed. Then the maintenance service for each piece of equipment is put into a four-week interval chart to simplify things.

Yes, all PM programs require effort and commitment, but the calendar method seems to be the most practical for me, especially when only a few people (two at my shop) are responsible for 92 pieces of equipment. I set up this program in Microsoft Excel files to keep the different charts I design organized and easy to change. After the charts are printed, they are placed in a transparent cover on a three-ring binder that contains the parts, operators' names, and service manuals for the type of equipment that is being serviced. That way if there are any problems or questions during the service, there's no running back and forth to the office to retrieve information.

Speaking of manuals, it is very important that the equipment manager make sure all the proper manuals for each piece of equipment are kept in a neat and orderly manner. It is impossible to know every piece of equipment inside and out, and by guessing at certain adjustments or repairs, I can assure you that most of your work will be created by you if you don't do your homework.

Another thing the equipment manager should keep in mind when performing oil and filter changes is the quality of materials being used. Always follow the manufacturers' recommendations

as to what *type* to use, but it's up to you to figure out what *brand* to buy. As far as filters go, there are only a handful of companies that manufacture them so do your research before making a decision on what brand should be installed in your equipment.

On the other hand, there are a lot of choices when it comes to purchasing engine and hydraulic oils. There are petroleum-based oils, semi-synthetic oils, fully synthetic oils, and biodegradable oils. A good rule of thumb for engine oil, once again, is to buy the best you can afford. I look for engine oil with a high TBN number and make sure that its API service classification meets or exceeds industry standards. When I purchase hydraulic oil, the first thing I do is make sure it's compatible to the manufacturer's specifications, then I look at a few things like its thermal stability, anti-wear protection, rust protection, hydrolytic stability, and demulsibility.

When quality oils are purchased, oil drain-and-change intervals can be extended. Longer drain intervals reduce labor and most importantly, generate less waste oil and filters. As you can see, there are many key factors involved in designing and implementing a PM program, but no matter what program you choose, always remember that a good PM program will help you manage the equipment and not let the equipment manage you.

Backlapping vs. Grinding

"Do I grind or backlap?" Every equipment manager is going to be faced with this question sometime in his career.

There is no wrong or right answer to the previous statement. But if you were to attend some of the technician meetings I've been to, you'd think it was some big, complicated decision. From what I've seen in the industry, it's mostly the equipment manager's preference and/or the turf conditions that lead to the final decision. Believe it or not, there are still clubs that do not have both grinders or backlapping machines, which makes the decision even easier because they are forced to do one or the other.

Naturally, certain factors will aid in the decision of whether to grind or backlap. It's mostly common sense but here are a few examples anyway.

Your end product is going to vary with different turf conditions. You're simply not going to get a reel to cut paper by backlapping it after it has mowed all those freshly topdressed greens. I'm sure there are some equipment managers out there who will argue against the previous statement, but for me, I just haven't had success. Let's say you have a fairway unit that, as far as you know, mowed only grass on all the fairways. Let's also say it takes four to five hours to grind that particular unit. Since the reels haven't taken a severe beating, most of the time backlapping can bring back a nice edge and also save you time. Either way you want to look at it, backlapping is nothing more than maintenance between grinds. If it takes 20-30 minutes to backlap a dull reel to bring it back to a sharp edge, then make a strong attempt to grind it whenever possible.

Pay close attention to the dulling curve because the longer you wait, simply means more damage and stress to the grass. Whether it's grinding or backlapping, the main objective in reel maintenance is to have a sharp reel that produces a high

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quality of cut. I've tried both methods and I would suggest to anyone who hasn't, go ahead and give them a try, because when done properly you'll see they are both very effective.

Working with an Assistant Mechanic

I know every shop doesn't automatically come equipped with an assistant mechanic, but there are some with up to five or six. If an equipment manager is blessed with one or more assistants, he should exercise patience and try to teach them everything they want to learn about equipment management. Over the years at technicians' meetings, I've heard several equipment managers say that they don't let their assistants anywhere near the reels.

Let me get this straight. These equipment managers have asked for assistants, got them, and now they're afraid to teach them something? I've thought about that statement and can't for the life of me figure out why anyone would have such an attitude. I guess that means these individuals go on vacation only to come back to a pile of work because the assistant mechanic wasn't trained on how to do it.

Assistant mechanics are employed so the equipment maintenance can be shared, not so they can change oil and sweep the floors at the end of the day. If they have questions, take time and answer them. If time doesn't permit, make a mental note and answer it later. Just remember,

you had to start somewhere too. The more knowledge that the assistant mechanic acquires will only make the equipment manager's job easier.

Praise your assistants. You'll be surprised how far a little compliment will go. Encourage them to enroll in classes that pertain to equipment management, such as a small-engine class or perhaps a reel-grinding class. I know these classes aren't available everywhere, but I also know that some of the major manufacturers offer seminars that would benefit assistant and head mechanics. Bring your assistant to these seminars when possible; let them learn with you.

For those equipment managers who are scared or threatened by a smart assistant, they apparently have the "you can't teach an old dog new tricks disease." Don't be afraid of your assistant learning more things about this industry. Those who have well-trained assistants know just how valuable they are.

They also know how much time and patience may have been invested in training them. I bring this up because at some point in time your assistant will reach his or her goal by landing an equipment manager's job. No matter how much time was spent training them, do not get mad or fault these individuals for improving themselves. All you can do is hope that some quality work ethics were instilled in them and

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An equipment manager also has to be organized mentally and in the physical work space to get the job done properly. Photo by Corby Coggins.



Equipment Manager Corby Coggins (left) trains assistant mechanic Mike Cole on utility vehicle engine maintenance. Coggins believes well-trained assistants make his job easier.



Read up on OSHA regulations and make sure your shop is always clean, organized and safe. You never know when an inspector might show up. Photo by Corby Coggins.

they reflect a good image of the people that trained them.

Professionalism

When you enter the golf course industry and strive to become a quality equipment manager, I can't emphasize enough the importance of professionalism. Equipment managers need to work as a group to create a more professional image for the position. Face it, when most people think of an equipment manager, they think of a greasy mechanic standing around with his shirttail out and a rag hanging out of his pockets. It's sad, but this image was created by us.

I can't say how many times I've seen individuals out in public who are obviously finished with

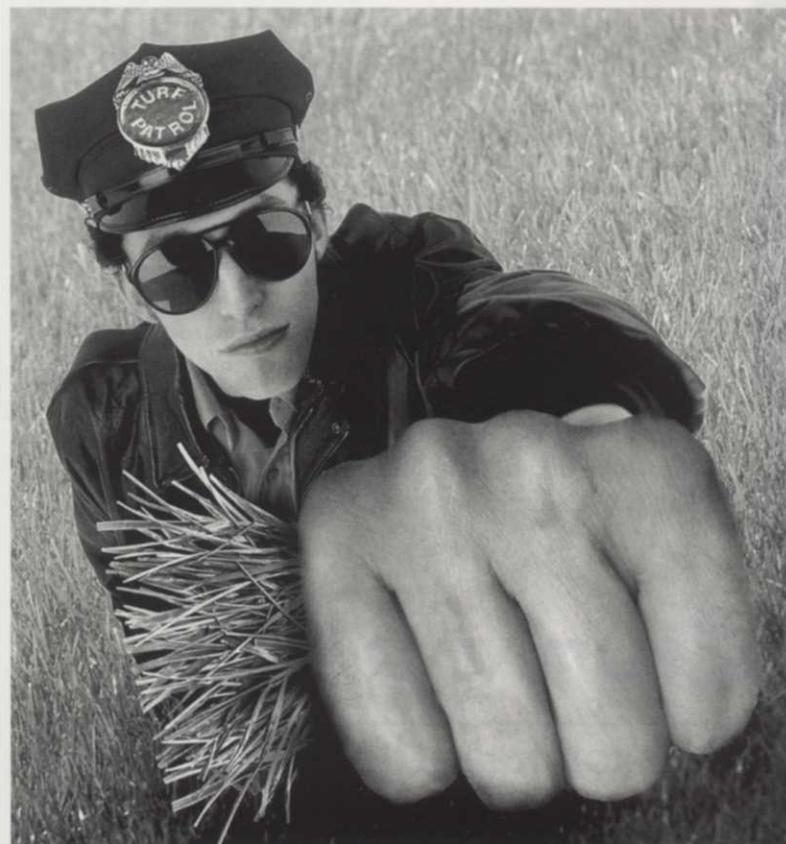
their day's work but still have grease all over their arms and face. I go to seminars put on by professional organizations only to see individuals come in with hats and shirts displaying their favorite NASCAR driver and a cell phone that won't quit ringing during the session. Don't get me wrong. I like NASCAR too but I think there's a time and place to display those sorts of things. One can dress nicely and look professional for far less money than what some of that race wear costs.

While our job does require us to get dirty or greasy, we can do little things such as wash up and tuck in our shirts before going to pick up items from the local parts store. If you're starting to get a little scruff on your face and you're not trying to grow a beard, shave it and make yourself look presentable.

You never know when you may have a face-to-face conversation with upper management or just people in general.

I'm sure some equipment managers are reading this saying, "I don't care what I wear to the seminars," or "I don't care if I have grease all the way up my arms when I stop for milk on the way home." They should care. These are usually the same people who are always saying they're overworked and underpaid. You never hear a professional-looking equipment manager complain about his pay because it usually matches his image. It's plain and simple: act like a professional and you'll get treated like a professional.

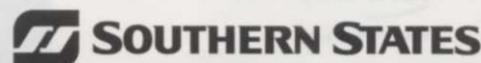
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Plugging in Paradise

By Darren Davis

Last summer I took a trip to paradise, Paradise Island that is. During my stay I visited with Jeff Hood, the director of agronomy at the Ocean Club Golf Club. Paradise Island is connected by two bridges to the island of Nassau. Together they make up what is known as New Providence, Bahamas. New Providence is only 2 percent of the total land area in the Bahamas, but the two islands account for 60 percent of the country's population with approximately 311,000 residents.

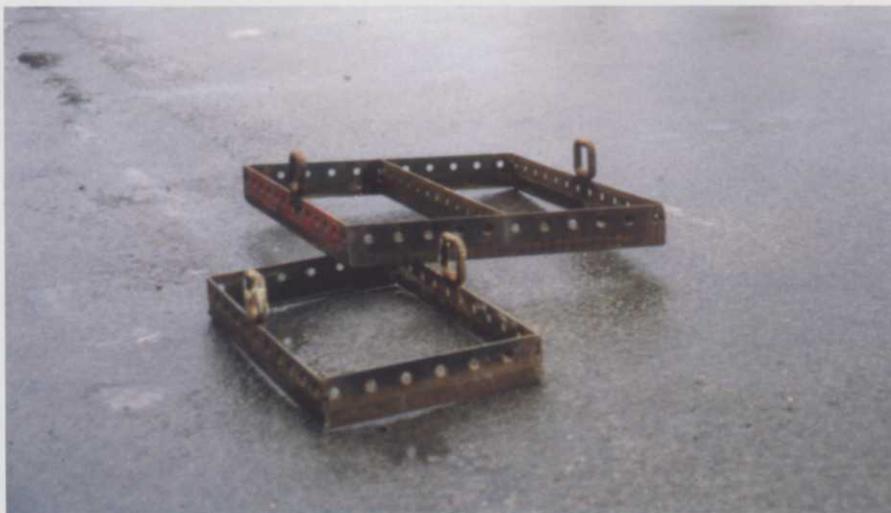
Hood, who also had a stint in Barbados as a golf course superintendent, has been working in the Bahamas since the summer of 2000. He has found that innovation is not just a method or tool to solve an occasional problem; in the Bahamas, innovation is a standard approach to even routine golf course management issues.

Hood previously was employed in Florida as the golf course superintendent of Bonita Bay East, and as the IPM specialist for Colliers Reserve, both in Naples. While Hood's current assignment in Paradise Island is just a short commuter flight across the ocean from Florida, he sometimes feels that the mere 185 miles might as well be half way around the world. When I asked Hood what he misses the most about being stateside, he quickly responded, "Convenience. You can't get in your car and go to a Home Depot or Wal-Mart for one-stop shopping like we have become accustomed to in the States."

One Super Tip that Hood shared with me highlighted the innovative attitude that he and



Paradise Island Superintendent Jeff Hood holding two sizes of pluggers. Photo by Darren Davis.



Bigger than standard pluggers. Less damaging than a sod cutter: Welded bedknives with lifting rings surgically remove Paspalum off-type patches in TifEagle greens. Photo by Darren Davis.

his staff exude. The problem that they were facing was how to effectively and quickly remove paspalum off-type patches in his TifEagle greens and fill the void with pure TifEagle from his nursery green. A sod cutter would be too aggressive and lacked the preciseness that Hood preferred on the putting surfaces. The standard cup cutter or hexagon-shaped plugging tool would be too small for most of the patches and therefore would be too time-consuming.

The solution Hood devised was to have his equipment manager weld old bed knives into the shape of a square. Different sizes were developed and hooks attached to allow the home-made tool to be lifted from the surface of the turf. A consistent depth was obtained by inserting the tool to the same depth both on the golf course green and the nursery. The result was a process that went smoothly, quickly and was the least disruptive possible, which was equally important to keep the golfers happy at this high-end facility.

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BENHAM'S BEAT**Why No Media Respect for Florida Golf?**

Don Benham

It is amazing how much Florida and Michigan have in common. Both states are almost surrounded by water; Florida by saltwater and Michigan by freshwater. Freshwater lakes heavily populate both states. Each state is also a golfer's paradise with many types of golf facilities. In the last 10 years, the two states have led the nation in the number of new golf courses being built. Is that good or bad? Well it depends on whom you are talking to in each state.

Water is one of the main issues in each state. Would you believe that, around the Detroit area in the suburbs, strict water restrictions are in place? No washing cars or watering lawns. Some cities are on a twice-a-week watering restriction. There really isn't a fresh water shortage in Michigan, but the city of Detroit supplies much of the water to the southeastern part of the state and the further you are from the water source, the less pressure you have. During the morning hours in some areas, the pressure is so low that flushing toilets can cause lack of pressure for your shower. It is recommended that you wash clothes after 9 p.m..

If you are still with me and wondering, "So what!" Why are you telling me this?" You have your own watering problems with restrictions and times you can water. The percentage of water used on golf courses, recreation and home lawns is about the same for each state. Advisory groups in both states recommend "natural plantings". Ok, what is your point Benham?

The point is, in Michigan I have not read a single article attacking golf-course use of water. Not one! The media does not blame golf courses for water usage shortages. In Florida golf is always the main target of the media. What do you think is the reason for that difference? Is it because there is more golf played by out-of-state golfers in Florida? Is that the reason? I don't really know the reason. Do you have ideas for the reasons? If so e-mail me your thoughts.

Both states have strong turfgrass associations and major university turfgrass programs. I do think that Michigan has had a stronger connection between the Legislature and Michigan State University and the Michigan Turf Grass Foundation. I think Florida Turfgrass Association needs to do a better job with the Legislature and I need to do a better job as public relations director.

Michigan turfgrass does not have a lobbyist but has depended on Gordon LaFontaine to get

the message across. He has a ten-year start on me, but I need to catch up fast! I have Joel Jackson on my side and that is a big advantage. We also have a huge commitment from the University of Florida to sell our message with great research done here in Florida. The GCSAA has signed an educational contract with only two states they felt had a solid turfgrass association, a great partnership and strong support from the state GCSA Guess who? Florida and Michigan.

For information about the author, see inside cover.

PLAYABILITY VS. AESTHETICS Can Expectations Of American Golfers be Met in the Future?

By John Foy

Golf course conditioning has steadily improved. Around Florida and across the lower South, the introduction of the ultradwarf bermudagrasses has raised the bar with respect to putting green quality. These new cultivars can be mowed

average rainfall for two to three years, lake and aquifer levels reached record lows, and in a large portion of the state, the alarming reduction in potable water supplies created a crisis situation. Water management districts around the state were forced to impose - or further expand - landscape irrigation restrictions. For the first time at many courses, it was necessary to manage with significantly less water. While this presented challenges to course managers, they found that it was possible to survive.

By midsummer, it began to rain with a vengeance, and the opposite extreme developed. Though much needed, periods of prolonged and/or extremely heavy rainfall during the late summer and fall resulted in a new set of course management challenges. By year-end, total rainfall amounts for most of the state had reached at least average levels, and in some locations were as much as 10 to 12 inches above normal. Naturally, this brought an end to the drought, and irrigation restrictions were either completely lifted or reduced by the water management districts. With a rapidly growing population in Florida, however, it is a fact that water has become a limited resource,



Like the Old Course at St. Andrews, the New Course at Grand Cypress in Orlando is not always lush green, but it always has great presentation. Photo by Joel Jackson

routinely at 1/8 inch or less, which was unheard of just a few years ago. Golfer expectations have risen, and in some cases the standards for daily conditioning are equal to or better than what was expected of tournament courses just a few years ago. However, environmental extremes and increasing governmental regulations result in limitations on the use of basic resources such as water, pesticides, and fertilizers. Thus, the question arises as to whether golfer demands and expectations can be met in the future.

Successfully managing golf courses in Florida in 2001 meant dealing with environmental extremes. During the winter and into the early summer, a severe drought occurred. This is the normal dry season in Florida, but with below-

and less will be available for course irrigation in the future.

The drought and irrigation restrictions of 2001 were a wake-up call for golfers at facilities throughout Florida. Due to demands for a lush green color, over-irrigation of golf courses has been one of the most common mismanagement practices encountered. The base bermudagrass turf of Florida golf courses does have good drought tolerance, and we found that it was indeed possible to maintain turf coverage and good playing conditions when irrigation restrictions were in full effect. Although adjustments in management programs were necessary, the golfers found better playing surfaces and in particular a lot more roll on their tee shots. Some golfers finally began to



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realize and accept that green color is not a factor that impacts course quality or playability.

In addition to less water for course irrigation, increased regulation of fertilizers and pesticides has and will continue to occur. In response to environmental concerns, the golf course maintenance industry has made excellent progress in reducing its reliance on these materials. Nevertheless, pesticides must be applied to control heavy pest (insect, weed, and nematode) pressures, and fertilizers have to be used to produce a dense, healthy turf cover. The loss of some compounds is to be expected, and this will make it even more difficult to maintain an acceptable level of pest control. Research continues to develop alternative management practices, treatments, and better adapted turfgrass varieties or cultivars, but how many facilities will be able to use materials that cost \$300-\$500 or more per acre on a large-scale basis?

Labor is yet another resource issue that has been a major concern. Nearly every golf course I visited this past year was dealing with a labor shortage. Not only was it hard to find and retain adequate staff to keep up with routine maintenance, but there has been a shortage of qualified individuals for assistant and technician positions. There is simply no way around the fact that modern-day course management is labor intensive and time consuming. This is especially true of course grooming and manicuring, which has a big impact on the average golfer's perception of quality. We can talk

about prioritizing and reallocating resources, but at a growing number of facilities, essential maintenance practices have been curtailed or have become very expensive due to labor shortages and shrinking budgets.

Over the years I have enjoyed the *Greenkeeper International* magazine, published by the British and International Golf Greenkeepers Association. Something that has always stood out has been the use of the word "presentation," with the primary focus being course conditioning. Unlike American trade magazines, every picture is not a shot of a green, perfectly manicured golf hole. I find this refreshing but troubling at the same time, because it highlights the fact that the aesthetic side of course presentation is often over emphasized in the United States.

It has been my contention for many years that unrealistic golfer expectations and demands will not be changed until regulations restrict or remove various management tools. I am confident, however, that American ingenuity will prevail and that the golfers of this country will continue to be provided with good to excellent quality facilities. Nonetheless, with ever-increasing limitations on resources, we remain confronted with the big job of educating golfers about the differences between aesthetics and playability.

(Reprinted with permission from the USGA Green Section Record, March-April 2002. For information about the author, see inside cover.)

USGA Green Section Updates

When it rains, it pours!

Overcast Skies Stress Bermudagrass

By John Foy



June first is the official start of the hurricane season for Florida, and sometime during this month the rainy season normally kicks in. Leading up to June, we had been in a typical pattern of very sunny, dry, and warm weather. Limited rainfall over the past two months was having some impact, and every course we visit-

ed was dealing with localized dry spots (LDS). In some cases, irrigation water quality (sodium/salts) required adjustments in management practices. Yet, relative to this time last year, when a severe drought was occurring, the weather has not been a major issue.

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It's hard to complain about rainfall after two years of drought, but recent rainy weather patterns are affecting summer maintenance schedules and turf performance.

more than 15 years and I am still amazed at the rainfall extremes that occur. Approximately two weeks

ago, a tropical front moved up from the Gulf of Mexico and settled in over the southern part of the

state. This front fed in a tremendous amount of moisture, which in turn resulted in typical summer thunderstorms. While the thunderstorms have been a little erratic, needed and welcomed rain was experienced throughout the state. That was until Father's Day weekend when more widespread - and at times very heavy - rains occurred. In Naples, more than 7.5 inches of rain came down over the weekend. The month-to-date total rainfall at the Palm Beach airport was reported at 11.92 inches. The normal month-to-date rainfall is 4.65 inches.

Recent rains have complicated course maintenance activities and, in particular, keeping up with proper mowing frequencies. However, far more critical is the reduced sunlight intensity as a result of heavily overcast skies for the past 10 to 14 days.

Bermudagrass originated on the savannas of Africa where high-intensity solar radiation is a constant. Overcast weather results in reduced photosynthesis and growth. Several days of reduced sunlight intensity has a negative impact on bermudagrass health and general turf quality. This is especially true with putting greens maintained at very low heights of cut. For the remainder of the summer until a dryer, more favorable weather pattern redevelops, the practice of slightly higher heights of cut on putting greens is strongly recommended.

For Tifdwarf greens, a height of cut in the range of 0.150-0.180 inch is advisable. While the ultradwarf cultivars can tolerate lower heights, raising the mowers to 0.130 inches or slightly higher

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also is recommended. Furthermore, care needs to be exercised with verticutting frequency and severity. To compensate for higher heights of cut and to continue to provide acceptable play, rolling and/or double cutting, more frequent light top-dressing, and growth regulator applications are the best options. For the next few months, surviving the stressful environmental conditions and maintaining full bermudagrass turf cover on greens will be the main objective at most Florida courses.

As noted in earlier updates, greatly reduced sunlight intensity was as much of a problem as the persistence of moisture-saturated conditions. A primary consequence of these conditions was reduced root-system development. Shallow roots and sandy soils that lack moisture retention are a troublesome combination. Once the rains stopped and the sun popped out, temperatures also quickly shot up. These conditions resulted in the rapid onset of drought stress if supplemental irrigation was not re-initiated in a timely manner. While it may have rained yesterday, don't be surprised with having to schedule irrigation tonight.

It has been a common finding on our Turf Advisory Service visits over the past two to three weeks that accomplishment of routine summer maintenance practices has been delayed. Rescheduling aeration operations and other cultural management practices and adherence to pest management programs has been a problem. This has resulted in a flush of weed invasion, and aggressive post-emergent herbicide treatment programs will be necessary to re-establish an acceptable control level. Along with catching up on routine maintenance, wrapping up summertime projects has become a priority. Most probably don't need to be reminded that the beginning of the winter season is just a couple of months away.

Finally, as it turns out, this has not been a good summer for major course renovation. Unavoidable weather delays have resulted in most renovation projects falling four to six weeks behind.

While bringing in extra people and equipment to try to catch-up is an option in some cases, there is not a whole lot that can be done to reduce the time required for turf establishment and development of proper/acceptable conditioning.

As we move closer to the fall, increasing sprigging rates will help a little. However, exceeding a sprigging rate of 1000 bushels per acre with Tifway bermudagrass when planting fairways, roughs and tees is of no benefit. Even with ideal weather, 8-10 weeks is still required to establish full turf coverage.

While hot temperatures will persist in South Florida through October and into November, as the day length progressively becomes shorter, bermudagrass growth rate slows down. If turf establishment is not well under way at this time, it is advisable to begin an education program to make golfers aware that it may not be possible to make the originally scheduled fall reopening for play. Also, at least one full summer growing season will be required to achieve a truly mature character.

Nematodes Adding to Deluge-Induced Bermudagrass Stress

By Todd Lowe

Much of Florida is still receiving routine, weekly (sometimes daily) rainfall that began in early June. After having weathered through a two-year drought, the extended rain is welcomed at most golf courses.

With the frequent rainfall, mowing is difficult to impossible at times. The turf continues to grow and excessive amounts of clippings are generated during subsequent mowings. The plant growth regulator Primo is applied to many golf courses in Florida to improve overall quality. However, it has also been an effective tool to use during rainy periods. Primo decreases vertical turf growth thus decreasing the need for routine mowing. Therefore, clumps of clippings are not as prevalent on courses that apply Primo every three to four weeks during summer months.

The abnormal rainfall pattern also is bringing with it extended cloudy weather. Bermudagrass putting greens are very sensitive to reductions in sunlight and become chlorotic (yellow) when low mowing heights are maintained during these stressful times. As mentioned in the previous update, it is important to maintain higher mowing heights during this time to increase photosynthesis and improve turfgrass quality.

Nematode damage has been visible at many of our visits lately. Nematodes are microscopic worms that feed on turfgrass roots, making the turf more prone to drought stress and nutrient deficiencies. As a result, yellow, thin patches of turf are created and these are often associated with a small purple weed called spotted spurge. In addition to the standard nematicide NemaCur, Curfew is an experimental product that has been providing good results for the past two years. Eradication is not possible with any product and golfers must accept some occasional discoloration.

There are several products on the market that claim to provide nematode suppression, but most have limited non-biased research to substantiate their claims. University of Florida nematologist, Dr. Billy Crow, has been evaluating many different commercial products for several years. He has finally found a promising product that may be developed within the next two years that provides control as good as NemaCur and is safe to the environment. It is a byproduct of the mustard industry and has provided excellent results in his trials for the past two summers. The results from these studies as well as others (weeds, insects, diseases, fertility) were discussed at the University of Florida turfgrass field day on July 25.

For information about the authors, see inside cover.

USGA web site
www.usga.org/green/news/new.html



Todd Lowe

PLANTS OF THE YEAR FOR 2002 - PART 4

Editor's Note: Last in the series for 2002. Selected each year by a panel of horticulturists, nurserymen, educators, landscape architects and other professional members of the horticulture industry, these plants have attributes which attract wildlife or have minimal maintenance impact on the environment.

Jewel of Thailand Ginger

BOTANICAL NAME: *Curcuma cordata* (petiolata)

HARDINESS: Zones 8-11

MATURE HEIGHT AND SPREAD: 3' tall
CLASSIFICATION:

Perennial

LANDSCAPE USE:

Specimen or ground cover for shade

CHARACTERISTICS:

Bears a 1-foot-tall pink inflorescence with yellow flowers in the fall. The pleated leaves are a handsome addition to the garden through the summer.



"ZZ"

BOTANICAL NAME: *Zamioculcas zamiifolia*

HARDINESS: Zones 9B-11

MATURE HEIGHT AND SPREAD: 2'-4' tall, 3' wide

CLASSIFICATION:

Foliage plant

LANDSCAPE USE:

Ground cover, accent or specimen plant

INTERIORSCAPE

USE: High indirect light location, can tolerate low light

CHARACTERISTICS:

The succulent aroid resembles a *Zamia* cycad. It has thick glossy leaflets and is one of the few aroids (*Philodendron* relatives) that can be grown from a leaf cutting.



Giant Plume Ginger

BOTANICAL NAME: *Curcuma elata*

HARDINESS: Zones 8-11

MATURE HEIGHT AND SPREAD: 7'-8' tall
CLASSIFICATION:

Perennial

LANDSCAPE USE:

Specimen plant or ground cover

CHARACTERISTICS:

The perennial bears a bright pink inflorescence in spring as the massive foliage emerges to form impressive clumps. The exotic-appearing bloom can be cut for a long-lasting cut flower.



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Are We Guilty?

Is Water Pollution Happening at the Golf Course, Or - Do Our BMPs Really Work?

Charles H. Peacock

Good scientific writing usually demands that the third person be used. So, as a scientist, I rarely get a chance to use the first person. However, this



seems to be one of those times when it is more appropriate. Over the last 10 years, I have been involved in more than 50 golf course projects from New York to California to Arizona to Florida to North and South Carolina involving water quality issues.

The theme, whether it comes from concerned citizens, environmental watchdog groups, or regulatory agencies at the federal, state, or local level always is the same - how are you going to stop all the pollution coming from the golf course? Whenever these questions arise, I first become a little defensive.

Often my response is - why do you believe that there are water quality problems associated with golf courses? The reply is always the same - but, they douse the golf course with all those toxic pesticides and fertilizers and other chemicals and they are constantly out there spraying!

Now, there are several issues here:

First, are pesticides toxic? Of course they are - if they were not they would not be labeled as pesticides. Government regulations require that materials which are applied for the use of controlling plants or animals be regulated because they injure or kill specific organisms. The general public, whose level of scientific understanding may be limited or simply non-existent, just doesn't seem to be able to differentiate between how a material can control say an insect, and not be a health concern to them.

A prime example is use of the materials fipronil (Chipco Choice for mole cricket control) and imidacloprid (Merit for grub control). These materials are also sold for flea and tick control (Frontline and Advantage respectively) in the little plastic tubes you apply directly to your pet and it provides extended control of these serious pest problems. Fido and Fluffy don't go belly up with a direct application, yet, the public is fearful of exposure with an application to turf where there is no direct contact with the concentrated form.

The second issue is - why does someone assume that just because we spray pesticides or apply fertilizers they end up in the water? Or, even if small quantities of materials do end up in the water, why do people assume it creates an environmental problem?

Part of the answer to this question is that

the questioner obviously may have a poor understanding of biology, chemistry and ecology. However, even those people who are more scientifically oriented erroneously make unfair assumptions. Here is an example - golf courses spray pesticides; there are ponds, lakes and streams on golf courses; the pesticides must be getting into the ponds, lakes and streams. Simple logic seems to follow here. Or, what about the fertilizers you apply - all that nitrogen is probably polluting the Neuse River because they have nitrogen problems in the Neuse and there are golf courses in the river basin.

Yet, what has been ignored are basic questions that everyone should ask:

- What do we know about what happens to the materials applied to golf courses?
- Have any scientific studies been conducted which have documented the fate of nutrients and pesticides applied to golf courses?
- What about golf courses that are monitoring the quality of surface water and groundwater? What are they finding in their sampling?

The Press - Often Another Problem!

Over the last 15 years, water quality issues on golf courses have been a hot topic in the press. Often assertions are made that if a new golf course is

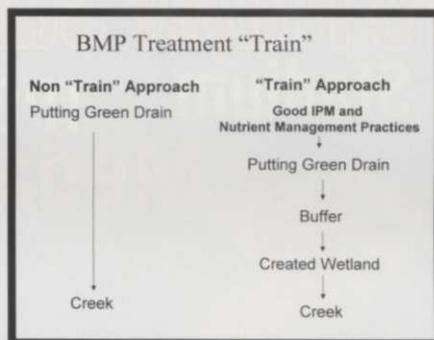


Figure 1. A Generalized Concept of the Best Management Practices "Train" Approach to Managing Resources.

being considered for construction, it will contaminate the streams and lakes and everyone's drinking-water wells in the vicinity. Even on existing courses which have operated for years, the press often insists that water quality, and, in some cases, quantity are seriously jeopardized by the golf course at the center of their focus.

Probably the most notorious example was the article in the *Wall Street Journal* which headlined, "Golf Courses Are Denounced As Health Hazards" and featured a cartoon of golfers dressed in protective gear while playing the course. The focus of the article was that golf courses, in the reporter's opinion, used too many chemicals which are of course toxic. (By the way, what is "too many" and how would he know?)

Once, when such an article on water quality concerning the Neuse River appeared in the

Raleigh *News and Observer*, it stated that "City sewage, industrial wastewater, farm fertilizers, livestock manure and lawn and golf course chemicals are changing the Neuse (River), choking it with nitrogen and phosphorus." I called the reporter and told her that I had worked with the Division of Water Quality on water quality issues and was somewhat up to date on the concerns. I asked her where she got her information, where the studies had been conducted which had determined that golf courses were causing water quality problems because I had kept up with the literature fairly closely and I wanted to obtain a copy. The reply I received was typical

"Well, I don't know that there have been any studies, I was just making a generalization!"

Wow, what a generalization. Let's see if I understand it correctly - golf courses apply fertilizers so the nutrients must be ending up in the Neuse River. How about I make a generalization - people die in automobile accidents, so your car must have killed someone! Is that close?

I became a little agitated in my discussion with her and ultimately she cut me off with - "I'm sorry you are so upset, maybe you could write a letter to the editor." Well, she entirely missed my point. Responsible journalism demands that you investigate the facts, not form generalities. However, more and more we see in the press stories which are one-sided. Why? Because they are easier to write! Why ruin a good story with facts?

The Beginning

Interest in the environmental impact of golf courses on water quality is not new. For the past 30 years, various research studies have looked at the movement of specific chemicals under differing golf course conditions, especially on sand-based root-zone-mix putting greens and for nitrogen-source losses under a variety soil conditions. All of these studies were efforts to first document what was actually happening and then second to develop Best Management Practices to eliminate or minimize problems. With the onset in the early 1980s of scientists and regulators more intensively studying pesticides and nitrates in groundwater because of health concerns, it was inevitable that golf courses would ultimately come under scrutiny.

Now, I'm not opposed to that. In fact, I believe that all golf courses should be monitoring water quality at their sites for several reasons:

First - it documents what the facts are; this gives a sound basis to refute claims which may arise as to how your management is affecting the environment.

Second - it documents how effectively the BMPs are working, regardless of whether they are the Land Use (those physical factors which are put in place through good course design and engineering such as retention/detention ponds, vegetative filter strips, buffers, etc.) or Source Prevention - how good a job you are doing in your management, what I like to call Intelligent Management. Of course, this assumes that first, you care about how good a job you are doing (let's make this a basic assumption) and that second, you understand what you are trying to accomplish as to not overloading the ecosystem's capacity to function (this is the subject of another article at a later time.)



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The Facts

While there are numerous scientific studies which have been conducted at universities around the US and beyond to look at pesticide and nitrogen fate, many are often criticized because they are not conducted at golf facilities where day-to-day conditions dictate the management practices the superintendent faces to keep the course playable.

While these "academic" type of studies are critical to developing an understanding of the many complex factors which affect how pesticides and nitrogen behave, the ultimate concern is what are the water quality conditions at actual golf course facilities. The following summarizes the major studies which have been published, either in peer reviewed scientific journals or under scientifically rigorous conditions specifically for environmental regulatory or health agencies.

Massachusetts

One of the first studies which documented water-quality conditions on golf courses was published in 1990 in the journal *Ground Water Monitoring Research* (Cohen et al., 1990). This study was undertaken under the auspices of the Environmental Protection Agency.

Groundwater quality was monitored at 19 wells on four golf courses on Cape Cod in Massachusetts. This location was chosen because of fragile ecological conditions - sandy soil profile, high rainfall totals, shallow groundwater. The golf courses chosen were all more than 30 years old so they had a long history of fertilizer and pesticide use. Sampling sites were clustered around areas where the highest amounts of materials were used, greens and tees, and then under the fairways.

Summary of findings:

The wells were monitored for 17 pesticides. Of these, seven of the 17 chemicals were never detected in water samples. Of the 10 materials which were detected, only chlordane (which is no longer used on golf courses) exceeded Health Guidance Levels (HGL).

Of the 12 materials which were legally registered for use at the time the study was conducted, none were found in concentrations greater than one-fifth of the HGL. Nitrate-N concentrations were generally below the 10 ppm federal (and World Health Organization) Maximum Contaminant Level (MCL). Based on the spatial and temporal data collected, nitrate-N concentrations decreased in response to lower application rates and use of slow-release fertilizer formulations.

This pioneering study answered a lot of questions. It also opened up a lot of discussion based on the authors' conclusions that: "this was one study with one set of pesticides in one hydrogeological setting." This was what drove the initiative to start more closely documenting both surface water and groundwater conditions at other golf course locations.

What was highly significant in this study was the observation that "turf management practices are closely related to nitrate concentrations in groundwater. Rate and frequency of fertilizer application as well as type of fertilizer used appeared to be significant factors in ground water nitrate-nitrogen concentrations

beneath managed areas". While everyone in turf management has preached this for years and intuitively it certainly makes sense, having scientific proof lends much more credibility to what can be accomplished.

Florida

In 1996, the US Geological Survey released a report which was prepared in cooperation with the Florida Department of Environmental Protection and Hillsborough County in Florida (Swancar, 1996). This report was based on a four-and-a-half-year study of pesticide occurrence in groundwater, surface water and irrigation water on golf courses in Florida.

This study was much more exhaustive in scope than the Cape Cod Study. Three pairs of golf courses were selected to determine the effect of irrigation with reclaimed water on pesticide leaching. Each pair consisted of one golf course using ground water for irrigation and one using reclaimed water.

Pairs were located in the same area and had similar pesticide use. Three additional golf courses were added in the second year of the study to obtain data on pesticides in other areas of the state. On these nine golf courses, water samples from a total of 39 shallow wells, three irrigation systems, six golf course ponds, two reclaimed water-storage ponds and three wastewater-treatments plants were analyzed.

This study found that pesticides were detected in ground water samples on seven of the nine golf courses. However, 45 percent of all occurrences were at barely detectable (trace) levels and 92 percent of the occurrences were under the MCL or HGL.

Surface water samples showed similar results with 60 percent of the occurrences at trace levels and 95 percent of the occurrences were below the MCL or HGL. In fact, only three surface water samples out of 61 samples which had detections of materials had levels above the MCL, and all three were on the same golf course pond. Samples taken directly from deeper irrigation wells on two golf courses contained no pesticides above detection limits.

Criticisms of water-quality data comparisons often come from ecologists. They assert that water-quality samples are only compared with human health comparisons, and not with ecological standards.

Based on the pesticide detections found in this study, two of my colleagues: Dr. Miles M. (Bud) Smart, director of environmental planning for Audubon International, and Dr. William Warren-Hicks, an environmental toxicologist with the Cadmus Group in Durham, N.C., and I evaluated water-quality sample data using an aquatic community ecological risk model. What we found was most interesting. When we looked at the range of pesticide concentrations in surface water and compared it to the concentration of that pesticide which would put 5 percent of the genera of aquatic organisms at risk, none of the pesticide detections were even close (Table 1). The one of most concern, chlorpyrifos (Dursban) was still nine times lower in concentration than would put the ecological integrity of the aquatic system at risk. Thus, even though detections are occasionally noted, their environmental impact is rare.

New Jersey

A study was conducted in 1999 at Ocean

County Golf Course at Atlantis in Little Egg Harbor (Meyer, 2000). Samples were obtained from surface water in and around the Atlantis Golf Course on a weekly basis from April through October. Students from Georgian Court College in Lakewood, N.J. collected the samples and the Pesticide Residue Laboratory of the Pesticide Control Program at the New Jersey Department of Environmental Protection analyzed all of the water samples.

The results from this study point out quite a few interesting facts:

First - the majority of the pesticide residues detected were not associated with the routine insect and disease control measures employed on the golf course - they were residues from previous use of DDT for control of soil-dwelling insects which moved into the ponds bound to particulate matter and malathion used by the county for mosquito control.

Second - when the New Jersey scientists made a comparison of the levels detected with environmental levels of concern (Table 2) just like in the Florida study, the maximum levels detected compared to the lowest aquatic reference level there was no risk to the aquatic ecosystem in the ponds sampled.

New York

Long Island has for many years now been concerned with its groundwater because it is a source of drinking water for so many people and the island has a long history of farming and pesticide use. In October, 1997 the Suffolk County Department of Health Services teamed with the New York State Department of Environmental Conservation to conduct a comprehensive examination of pesticide impacts on groundwater. Like the Florida study, this was much more extensive than the Cape Cod project. This project was not limited to golf courses, but they were included. Groundwater impacts resulting from pesticide and fertilizer use were examined by testing 31 wells located at 18 Long Island golf courses.

Only the dachthal metabolite TCPA was found above the MCL in the golf course monitoring, in one well in each county. Dachthal is no longer used in NY, one of the reasons being it was applied at a very high rate and was known to be very persistent in the environment unlike the currently labeled chemicals. As for fertilizer concerns, nitrate concentrations for the wells averaged 4.3 ppm and the median nitrate concentration was 2.6 ppm, well below the health standard for drinking water of 10 ppm. The authors of the study concluded:

"The monitoring results indicate that turf management practices can effectively control impacts to groundwater at golf courses."

While this is not surprising to those of us in the turf business, it is something we like to hear someone else conclude!

The Nation

In 1999, an article entitled "Water Quality Impacts by Golf Courses" appeared in the *Journal of Environmental Quality* (Cohen, 1999). The authors examined water quality data from seventeen studies (on 36 golf courses). A total of 16,587 data points from pesticide, pesticide metabolite, pesticide solvent and nitrate analyses of surface water and groundwater were reviewed. What they found was remarkable:

Pesticide	Concentration to affect 5% of aquatic genera(ppb)	Concentrations Found in Florida study(ppb)
acephate (Orthene)	1,352	1.5 to 20.1
bensulide (Betasan)	377	not detected
chlorothalonil (Daconil)	5	not detected
chlorpyrifos (Dursban)	0.9	0.1
simazine	2,730	0.08 to 38

- None of the authors of the individual studies concluded that toxicologically significant impacts were observed, although Health Advisory Levels (HALs), Maximum Contaminant Levels (MCLs) or Maximum Allowable Concentrations (MACs) were occasionally exceeded.
- The individual pesticide database entries that exceeded HALs/MCLs for groundwater were 0.07% of the total.
- The individual pesticide database entries that exceeded HALs/MCLs for surface water were 0.29% of the total.
- The MCL for nitrates in surface water was never exceeded.
- The MCL for nitrates in groundwater was exceeded in 3.6% of the samples; however most of the samples where the nitrate MCL was exceeded were apparently due to prior agricultural land use.

They concluded, as did the New York and

New Jersey investigators, that "widespread and/or repeated water quality impacts by golf courses are not happening at the sites studied."

North Carolina

In 1994, a graduate student at North Carolina State University evaluated surface water quality at three golf courses in coastal North Carolina (Ryals, et al., 1998). He sampled surface water at these sites every two weeks from January to December. Each course has a sandy loam soil and adjoining wetlands, saline marshes, or elevated water tables. They concluded from this study: "The data indicate that impact to the surface waters from the courses was minimal. Of the four pesticides (atrazine, chlorothalonil, chlorpyrifos and 2, 4-D) and two nutrients (nitrogen and phosphorus) surveyed, only 16 samples exceeded the US EPA HALs. (And these were from locations on the golf course). All analyses of the

samples collected from the outflows of the courses were below their detectable limits."

Now, sixteen may sound like a large number of samples which exceeded a threshold which is considered a problem, except they evaluated 1,578 samples so excessive samples represent around 1% of the samples. Furthermore, these were all nutrient problems, not pesticides, something which can be easily controlled with changing the BMPs used at the course.

Additionally, all of the detectable pesticide levels were below environmental hazard levels (based on the LC50 value), and none of the samples collected from the natural areas surrounding the three courses or from the outflows from the courses showed detectable pesticide residue levels.

The Center for Marine Science at the University of North Carolina at Wilmington has also been investigating water quality as impacted by five golf courses in coastal North Carolina (Mallin and Wheeler, 2000). These studies occurred over a period from 1993 to 1998. The authors of this study drew some conclusions based on their interpretation of the data:

- "In general, nitrate levels were greater in streams leaving the courses compared with streams entering the courses, but concentrations varied considerably"

My comments on the interpretation of their data:

Outflow site nitrate+nitrite concentration averaged over 1993-1997 from the five golf courses was 0.055, 0.107, 0.315, 0.321, and 1.462 ppm. Now,

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Comparison of Detections of Pesticides Currently in Use with Environmental Levels of Concern

Pesticide	Maximum Level Detected (ppb)	Environmental Level (ppm)	Ratio (1/1 would pose a risk)
Chlorothalonil	0.46 _{g/l}	250 _{g/l/96 hr LC50} - rainbow trout	1/543
dichlorvos	0.34 _{g/l}	900 _{g/l/96 hr LC50} - bluegill	1/2647
malathion	1.02 _{g/l}	64 _{g/l/96 hr LC50} - walleye	1/63
metaxyl	0.6 _{g/l}	>100,000 _{g/l/96 hr LC50} - rainbow trout, carp, bluegill	1/166,667
methoxychlor	0.37 _{g/l}	17 _{g/l/96 hr LC50} - Atlantic salmon	1/46
metolachlor	0.005	2000 _{g/l/96 hr LC50} - rainbow trout	1/400,000

ecologists suggest that eutrophication does not occur until surface water has total N concentrations is greater than 0.75 ppm and moderately enriched water only when it is greater than 1.25 ppm. Thus, only one golf course has a moderately enriched nitrogen condition from nitrates and none of them came close to the health level of 10 ppm. The authors of this study point out that there are some recent studies that indicate that in controlled conditions, nitrate levels this low have caused serious phytoplankton bloom formation in Neuse River estuary waters and that these levels may be associated with declines of seagrass thereby creating problems with coastal fish habitat. However, they sampled directly at the golf course, not in areas where dilution would appreciably lower the nitrate concentrations.

Other conclusions they drew:

- "Orthophosphate concentrations were elevated on mid-course sites on two courses (out of five), but were low in the outflow water except at one course."
- "The golf courses studied were not significant sources of fecal coliform bacteria to nearby waters; in fact, passage through some courses served to reduce coliform loads entering from upstream suburbs."

My comment on their conclusion:

Imagine that, water entering the golf course from an urbanized area is actually *filtered* by the land-use practices on the golf course!

- "Landscape management practices appeared to play a critical role in determining nutrient concentrations in the outfall and at mid-course sites."

My comment on their conclusion:

Does this sound like intelligent management plays a role, in such as using good BMPs?

Here is their overall conclusion:

"Vegetated buffer zones, wet detention ponds, and wooded wetland areas led to considerably lower nutrient output than sites lacking such management practices and should be used whenever possible to protect nutrient-sensitive receiving waters."

In 1992, the US Golf Association published a book entitled "Golf Course Construction and Management - Environmental Issues" edited by James C. Balogh and William J. Walker. In this book, they pointed out that BMPs are used in an attempt to reduce the adverse water quality and environmental effects of agricultural and forestry management systems. They included a number of goals of BMPs including the following:

- to reduce the offsite transport of sediment, nutri-

ents and pesticides

- to control the rate, method and type of chemical being applied
- to reduce the total chemical loads by use of IPM, economic thresholds, alternate pest control options and fertility testing
- to use both biological and mechanical soil and water conservation practices

About this time, Livingston and McCarron (1991) started promoting what they termed the idea that a stormwater management system might be considered as a "Best Management Practices (BMPs) Train" in which the individual BMPs are considered the cars (*Figure 1*). This concept promoted that water taken through a combination of treatment processes such as vegetated filter strips, retention ponds, created wetlands, etc. which would each reduce the pollutant load in each treatment process ("car in a train") by some percentage. Therefore, prior to discharge into the natural environment pollutant concentrations would be so low there would be no impact and that the natural bio-geo-chemical cycling of the ecosystem would not be disturbed. As part of this, an intelligently managed golf course management program which starts with good design and engineering and then incorporates a good IPM program into the BMPs Train concept could be protective of water quality.

Thus the UNC-Wilmington data strongly support this whole concept!!

The Message

Best Management Practices do work! Is there really any need to expound on this further? However, as long as you and I are in the turf industry, we will continue to be the target of special-interest groups and an uninformed (and many times unwilling to be informed) press as well as individuals. You have a choice - continue to manage the way you have been and ignore the opportunity to prove how effective your management really is - or, review and revise your management practices to attain the BMP goals Balogh and Walker mention. Monitor your surface water and groundwater so you can look anyone in the eye and tell them that your golf course doesn't have any water-quality problems, you have the data to prove it, and you are backed by numerous scientific studies which have been conducted over the past 18 years, and you will be happy to provide them the scientific literature citations!

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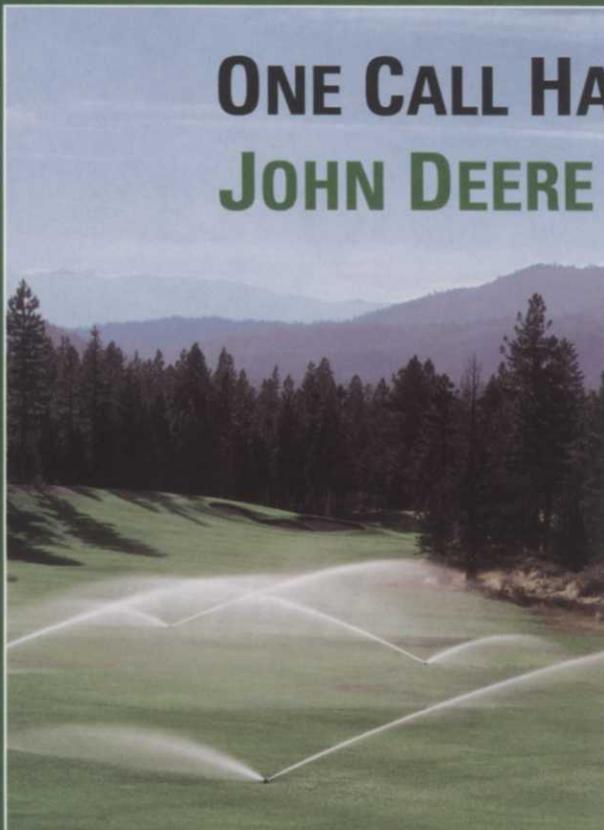
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Birds, Not Birdies, Count on North America's Golf Courses

By Jean Mackay

Volunteer birdwatchers recently turned up 295 different species of birds on golf courses participating in Audubon International's 2002 North American Birdwatching Open. During the 24-hour event, 48 golf courses that are participating in the Audubon Cooperative Sanctuary and Audubon Signature Programs recorded as many different bird species as they could to provide a snapshot of bird activity on golf courses at the height of bird migration in May. Audubon International encourages courses to play an active role in conserving habitat for birds and protecting overall environmental quality.

Eagles Landing Golf Course in Berlin, Md. sighted 92 different bird species during the day to record the highest number of species for the third year running. Birders at Lake Quivira Golf Course in Kansas sighted 78 species and Turning Stone Casino Resort in New York came away with 76 species, to place second and third respectively. Among this year's leading courses were prior top performers The Club at Seabrook Island in South Carolina (75 species) and Michigan's Gull Lake View Golf Club (71 species). Joining them for the first time this year was Oak

Meadow Country Club in Missouri with 74 species.

"The results of the North American Birdwatching Open show that it's not just the size of the property that counts, but the variety of habitats present and the way natural areas are managed that make a difference," said Jean Mackay, director of educational services for Audubon International. The diversity of species overall and the number of birds recorded per site reflect both the geographical spread of golf courses across North America and the wide range of habitats found on and around these sites. Fifty-six percent of participants identified 50 or more species, while 14 percent counted fewer than 30.

Data from this year's event proved to be highly consistent with data gathered since the event was first held in 1998. The top twenty-five birds sighted remained nearly unchanged. Mourning doves, blue jays, and red-winged blackbirds topped the list of birds sighted. From there, the inventory of birds gets more interesting, with sightings of great blue heron and red-bellied woodpecker on nearly 75 percent of partici-

pating courses and eastern bluebird and green heron on 52 percent.

In addition, seven federally threatened and endangered species were sighted. Fifteen courses spotted loggerhead shrikes, eight courses recorded sandhill cranes, and six courses identified American bald eagles. Other endangered/threatened species included least tern, brown pelican, grasshopper sparrow, and clapper rail.

"In the end, the greatest challenge of the North American Birdwatching Open is not in counting the most birds, but in calling all golf courses to take account of wildlife and other environmental aspects of management," said Mackay. "When properly managed, golf courses can make a valuable contribution to the rich diversity of avian species across North America."

Audubon International is a not-for-profit 501 (c)(3) environmental organization dedicated to improving the quality of the environment, with an emphasis on helping people become actively involved in good environmental stewardship and sustainable resource management.

The organization was established in 1987 to find ways to address environmental problems by working cooperatively, and in partnership with, a diverse array of organizations and individuals to improve environmental quality on the lands they manage.

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STEWARDSHIP NOTES

It's Time to Walk the Talk

By Shelly Foy

I already miss summer. Not the hot, humid days where you feel that you can hardly breathe when you step outside; but the slower pace of it. No fighting teenagers to get them off to school, no volunteering at schools for a couple of months, and the "slower" season in our office when most of the members are up North somewhere and superintendents are busy with summer projects and renovations. We actually have time to catch up a little and even take some time to head to



A flock of cedar waxwings finds sanctuary at the Willoughby G&CC over the winter. Photo by Bob Smith.





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our favorite mountain in North Carolina.

But alas, those days are over, and my to-do list is so, so long. Just in this one week of late August, I have to finish this article for the *Florida Green* (hopefully on time for a change), plan a program for two regional conferences, work on trying to schedule four Audubon workshops in the same week, in season, work on the budget for our office, plan the first Audubon committee meeting for the elementary school, start working on an Audubon talk for the SFGCSA and wonder why in the world I agreed to help raise money for my daughter's high-school sailing team. This on top of mom duties of carpooling, grocery shopping, cooking, cleaning and dragging teenagers out of bed at 6 a.m. Sound familiar to anyone?

What's my point? We all have busy lives. I don't know anyone who has a 9-to-5 job anymore. We are all spread too thin, but somehow all these to-do things seem important. Well, I am going to ask each of you to add one more important thing to your to-do lists: Attend an Audubon Workshop closest to you the first week in December.

This series of Audubon Workshops will be sponsored by the FGCSA and the USGA, and will be at various locations in Florida. David Court, president of the FGCSA, thinks the ACSP is important enough to make this one of the things he promotes during his presidency. Joel Jackson's recent government-relations experiences makes him think it's critical so he spends lot of time e-mailing all of the chapters to promote the workshops. I think it is important enough to tackle organizing it.

So, David, Joel and I are hoping that you will all make an effort to attend the ACSP workshop closest to you. The plan is to have Audubon staff take everyone through the first certification steps, the Site Assessment and the Environmental Plan. We will provide everyone with a list beforehand of the important information to bring with you. When you leave this workshop, you will have completed the first certification step.

ASCP Florida Survey Results

I have been curious for a long time about what makes golf courses become so committed to the ACSP. I decided to send a survey to all 59 certified ACSP golf courses in Florida and ask a few questions about how they feel about the ACSP. I was encouraged by the responses and thought that maybe you might heed some advice from your peers. If you are not a member, join; and if you are one of those who just keep sending in your registration fee and never do anything, maybe some of the following responses will get you fired up. We don't have the space to list every answer to the following questions, so author's choice is the name of the game.

How has going through the ACSP certification process been beneficial to you personally?

"It has provided me a tool to use for public relations and education of others unfamiliar with the benefits golf courses provide to the environment, community and to each of us as individuals. It has allowed me to look beyond what I currently know and expand my knowledge of the diverse environment that I manage."

Darren Davis, Olde Florida Golf Club

"Answering the certification questionnaire forced me to pay more attention to the many different species that inhabit a golf course, from animals, birds and fish to plant life. The water-quality issues were especially enlightening. I had not really understood the science involved or the complexity of the ecosystem until I started trying to answer the questions."

Nancy Miller, Maple Leaf Golf & Country Club
(Although Nancy is new to Maple Leaf, she has worked on Audubon certification at three locations previously.)

"The educational process of learning how golf courses and maintenance can affect the environment has been beneficial to me. It has also allowed me the opportunity to teach others, and to be able to clarify in better detail the public relations dilemma of why golf courses are not hazardous to the environment."

Scott MacEwen, TPC of Tampa Bay

"I have never looked at it as a personal achievement. However, I did find it rewarding to see the changes in the views of the members and guests, resulting in a greater respect for the environment."

Mark Metzger, Arrowhead Golf Course

How has going through the ACSP certification process been beneficial to your golf course?

"We now use a lot of natural fertilizers and pesticides. It is a good feeling when members notice the results we are achieving."

Jeff Klontz, Country Club of Florida

"The process has helped to remove areas from cultural practices, i.e., mowing, and helped to decrease labor and chemical expense in those areas."

Walter Wells, Habitat at Valkaria

"We have seen major reductions in the amount of fertilizers, pesticides and water use."

Bob Volpe, Pelican's Nest Golf Course

"The certification process brings together many different people on the course. The superintendent, manager and members all work together for a common goal and get to know and understand each other better. Being involved in the process brings a sense of pride to all the participants. The certification is also a good marketing and public relations tool."

Nancy Miller, Maple Leaf Golf & Country Club
"We were able to naturalize some areas, which saved some labor. We in turn utilize this labor to keep up with our native plantings and butterfly gardens. Many of the native plantings have made many areas more aesthetically pleasing to our guests."

Scott Welder, Walt Disney World - Lake Buena Vista Course

What is the difference in just being a member of the ACSP and being certified in the program?

"I feel the biggest difference is the level of involvement. The certification process unites the entire community, and the lasting effects of this union will continue for the life of the club."

Mark Metzger, Arrowhead Golf Course

"Being certified has increased the awareness of our membership on the importance of maintaining our natural habitats."

Cindy and Danny Claude, Lemon Bay Golf Club
"Fully certified signifies more than just an interest in

doing the right thing. It shows a willingness to commit to a completed task and walking the walk, not just talking the talk."

Darren Davis, Olde Florida Golf Club

"The difference is total commitment to environmental stewardship. Being just a member of the program ensures that you are aware and involved in the environmental process. Having attained full certification means that you have gone through the entire process, established policies and procedures to attain certification, and allowed the process to be totally implemented - in a way, a move to organizational commitment."

Garth Boline, Chi Chi Rodriguez Golf Course

Was there a specific problem or concern that participation in the ACSP helped solve? (For example, using the education information to promote increased naturalization for habitat) <-

"I think it adds a platform to be able to get things accomplished. Most members are not aware that the program exists. Being involved in the program has also helped get items in the budget."

Matt Taylor, Royal Poinciana Golf Club

"Yes, it helps our members understand why the way we manage the course has a direct impact on how well we co-exist with wildlife. They also now understand that lush, green grass is not always healthy for the environment."

Pete Metcalf, Wyndemere Country club

"Our homeowners around the course use the same irrigation source as we do and there has been a constant debate over water quality. The documentation that comes with certification has calmed these concerns."

Mark Metzger, Arrowhead Golf Course

"Re-emphasis on no-spray zones around the lakes of the course."

Bob Haley, Hammock Dunes

"The naturalization of lake-bank areas was far easier to put to the golfing public through the literature provided and helped get resources for the project."

Walter Wells, Habitat at Valkaria

"Our golf course is in an urban area and loss of habitat has been a great concern for our golf course. By using the educational guidelines to provide additional natural habitat, plant-food sources, replace aquatic plantings and provide a nesting box and feeding station program, we have greatly increased the wildlife population on our golf course."

Garth Boline, Chi Chi Rodriguez Golf Course

"There are many concerns or problems that come up on a regular basis that are usually abated by the fact that we are a participant of the ACSP. For instance, if I receive feedback from a member concerning our handling of pesticides or other chemicals, it is so much easier to convince them that things are OK by explaining that the ACSP teaches and requires proper BMPs and IPM techniques."

Russ Geiger, Hole-in-the-Wall Golf Club

What tips can you give others going through the certification process?

"Get as many people involved as possible so that not only does this lighten the amount of paperwork, but it also gets the rest of your staff to marry into the program from the beginning."

Matt Taylor, Royal Poinciana Golf Club



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"Once you get started, don't stop. Keep plugging away at it, and seek help from others if you need it."

Buddy Keene, Gainesville Golf & Country Club

"Be patient, yet stay focused on completing the process. Stay dedicated to the program and you will see benefits. Audubon staff is extremely helpful; use them, they are there to help."

Jim Moore, TPC at Eagle Trace

"Don't be intimidated by the paperwork! Just do it! Take lots of pictures. It is a great learning experience."

Nancy Miller, Maple Leaf Golf & Country Club

"Remain focused. Just getting started is the hardest obstacle to overcome."

Walter Wells, Habitat at Valkaria

"Involve your employees and members."

Tim Cann, Harbour Ridge Golf & Country Club

"Just do it - You will be glad you did. It provides more positives than negatives."

Bob Volpe, Pelican's Nest Golf Club

"You can maintain the golf course at the same level while still becoming certified."

David Tandy, TPC at Eagle Trace

"Buy a digital camera, photos are a tremendous help."

Pete Metcalf, Wyndemere Country Club

"Make it fun! Get everyone involved in the process from the start. You will be surprised by the enhancement of the relationships you have with all participants."

Mark Metzger, Arrowhead Golf Course

"Work a timetable and complete one section at a time. Don't overload yourself with projects, and realize that it is an on-going plan."

Cindy and Danny Claude, Lemon Bay Golf Club

"As Nike says, 'Just do it.'"

Darren Davis, Olde Florida Golf Club

"Keep your certification materials on your desk, in front of you, so you don't put it aside and never complete it!"

Alan Bakos, The Moorings Country Club of Naples

"Once you get started, you won't want to quit. Network with your peers. Keep good records - you will need to recertify every two years."

Scott Welder, Walt Disney World - Lake Buena Vista Course

"Surround yourself with interested people to help with the process."

Scott MacEwen, TPC of Tampa Bay

"Involve all the golf course staff and surrounding community in the program. Make sure information on program success stories gets to everyone."

Garth Boline, Chi Chi Rodriguez Golf Course

"Hang in there and take it step by step. The benefits will be worth every minute. Also, don't hesitate to ask interested members for a hand in completing certain tasks. I have found more than one member who has gladly helped out."

Russ Geiger, Hole-in-the-Wall Golf Club

Why should golf courses be involved in the ACSP?

"It is the perfect opportunity to make your course a better place. The teamwork it promotes is a huge benefit. Finally, the message of co-existence with nature and enhancement of wildlife is very important in today's world."

Mark Metzger, Arrowhead Golf Course

"It brings an emphasis to environmental enhancement and preservation to the members. It establishes a project that members can rally around. It is a positive experience."

Bob Haley, Hammock Dunes

"We live in a prove-yourself environment. Golf course superintendents need to get the word out how great golf course properties are for people and wildlife."

Tim Cann, Harbour Ridge Golf & Country Club

"The benefits to the environment, course aesthetics through the influx of wildlife, and the overall benefits to the ecosystem surrounding and throughout the golf course is reason in itself."

Walter Wells, Habitat at Valkaria

"The benefits are immeasurable. The involvement helps the community to understand that golf courses are able to enhance and protect the environment."

Cindy and Danny Claude, Lemon Bay Golf Club

"The process increases morale of your staff, members and guests. The ACSP can be used to promote your course in the community and enhance marketing efforts for membership and home sales. The ACSP increases awareness of your natural surroundings and helps preserve a wide array of native species: animal, vegetable and mineral. Besides, it just makes you feel good!"

Nancy Miller, Maple Leaf Golf & Country Club

"Because it is truly the right thing to do. Strength is in numbers. There are not just a few good golf courses; we all do positive things that may need to be tweaked just a little to become even better stewards of the environment. Again, we must be seen 'walking the walk,' NOT just 'talking the talk.'"

Darren Davis, Olde Florida Golf Club

"To educate the uneducated."

Bob Volpe, Pelican's Nest Golf Course

"Golf courses should be involved in the ACSP for many reasons, but in a nutshell, there is strength in numbers. The more golf courses we have certified in the program, the less outside groups can 'cherry pick' courses that are not. It also gives superintendents a forum to showcase the efforts we make on a daily basis."

Matt Taylor, Royal Poinciana Golf Club

"We are all aware of the multitude of challenges that we face from ongoing environmental regulation and how it governs what we can and can't do with respect to golf course maintenance practices. Being involved in the ACSP places you on the leading edge of confronting these issues and gives you a firm position in defending the fact that golf courses can and do lead the way in conservation of the environment and its natural resources. It basically (and boldly) states that we are taking very serious care in what we are doing."

Russ Geiger, Hole-in-the-Wall Golf Club

"It is an easy way to document and show the public that golf and the environment can be harmonious."

Scott Welder, Walt Disney World - Lake Buena Vista Course

"It shows the community that we are professional and are genuinely concerned about the environment."

Alan Bakos, The Moorings Country Club of Naples

"If for no other reason, to increase your knowledge base and thereby solidify the professionalism we all

strive to achieve."

Pete Metcalf, Wyndemere Country Club

"Because it is a great avenue to show that we do care and that we are environmental stewards."

Buddy Keene, Gainesville Golf & Country Club

"The ACSP gives each club the opportunity to promote environmental and agronomic programs to its members and the community. It will help to give the club direction and planning, as well as broaden their awareness toward the environment. Golf courses will have the opportunity to focus on environmental stewardship and make improvements to their golf course that benefits everyone. There is no reason not to be involved."

Jim Moore, TPC at Eagle Trace

And that folks is the rest of the story. Shelly Foy signing off and saying I would really like to see as many of you as possible attending these Audubon Workshops!

For information about the author, see inside cover.

FREQUENTLY ASKED QUESTIONS

Do you have to be a member of the ACSP to attend?

No. We would hope that everyone interested in the program attends. We believe that after you have gotten through the first step and see that the new certification format is not all that time-consuming, you will be excited about joining the program.

What if I have already completed step one in the certification process. Will the workshop still be of benefit to me?

Yes. We will be going through every certification category and will give you specific information and ideas for those categories that you are still working on.

My course is already fully certified. Why should I attend?

We are encouraging all fully certified golf courses to attend and share information about your ACSP program. We would like for you to be on hand to help others by working one-on-one to fill out forms. Also, since fully certified golf courses have to re-certify every two years, there should be plenty of idea sharing with programs and projects you may want to implement on your golf course.

Will there be any CEU's available for attending?

We will be applying for any credits that we can get.

I completed my Environmental Plan in 1999. Do I need to attend this workshop?

Audubon updated the certification process last year, and the new forms are designed to be less time-consuming. Any golf course that has submitted an Environmental Plan prior to 1/1/02 will have to re-submit with the new forms. Bring your old forms with you and we will help you get updated.



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Joe Konwinski 1915-2002

The Will Rogers of Turfgrass

by Mark Jarrell

Joe Konwinski, one of the Florida Turfgrass Association's founding fathers and its first president in 1952, passed away Aug. 17. He was 87 years young. This master of one-liners quipped to one of the last friends to visit him at the hospital, "Get me out of here - this place is full of old people!"

Joe never met anyone he didn't like, and the overflowing crowd at his funeral was testament to the inestimable number of people who were touched by this perpetually smiling, gracious, and witty human dynamo of service to others. Some, like Ralph White, Mike McLaughlin, Gerry Millholen, and Alan Puckett - all past-presidents of the FTGA - drove many hours to pay their final respects to their dear friend who was an icon of the golf and turf industry. Joe said in 1983, shortly after then-Lake Worth Mayor Betty Cortese declared June 18 "Joe Konwinski Day," that he wanted it to be remembered "that sometime in life I've helped someone like they've helped

me." One wonders if he had any idea how well he succeeded.

The headlines of his lengthy obituary columns in the two local newspapers read "Goodwill Ambassador Dead At 87," and "Joe Konwinski, 87, promoter of Lake Worth, avid volunteer." His passing rated a front-page photo in the *Greenacres Observer*. Joe's memorial folder featured a photo of him receiving an award from former Lake Worth Mayor Tom Ramiccio and Gov. Jeb Bush. While the golf and turf industry for many years has embraced him as an invaluable envoy, promoter, and activist, only upon his passing do we learn the depth, range, and diversity of Joe's service to others.

Joe volunteered his time to the Special Olympics, the Boy Scouts, the Girl Scouts, the Salvation Army, and the American Heart Association. He served on the Palm Beach Community College Beautification Committee, the John F. Kennedy Hospital Development Council, and the Lake Worth High School Advisory Board. He was club

secretary for the Rotary Club of Lake Worth for 43 years, on the board of the Palm Beach Habilitation Center for 31 years, master of ceremonies for the Lake Worth Chamber of Commerce monthly breakfast meetings for 20 years, and founder of the American-Polish Club of Lake Worth, serving as its president for 17 years. When he returned home each summer to Iron River, Mich., he would promote Lake Worth and South Florida as a guest on a radio show.

Joe entered the turf world in 1946 after leaving the U.S. Army Air Corps, where he served four years as a glider pilot throughout World War II at 21 different bases. He was the superintendent of the Lake Worth Municipal Golf Course from 1946 to 1958, worked for Ousley Sod Co. from 1962 to 1974, and consulted at more than 100 golf courses, resorts, and sports fields throughout his career. He taught a turfgrass management course at Palm Beach Community College for more than 20 years. He officiated at numerous industry functions as a speaker, an emcee, and an installer of officers. He

was friend and mentor to many young turf neophytes who have gone on to become successful golf course superintendents and sports field managers. It was hoped by all of us who knew and loved him that he would be the special honoree at the FTGA's 50th anniversary celebration in September.

We all remember Joe's infectious grin, positive attitude, and eternal optimism; his one-liners, funny stories, and ability to get a hug from every woman in the room. We all have our special stories and memories of this beloved gentleman. I will always remember the years I helped Joe with his booth promoting the turfgrass industry at Lake Worth High School's annual Career Day. We always had a large baking pan on which I placed a slab of putting green turf and a miniature soccer goal that Joe felt grabbed the kids' attention and drew them to our booth. He also liked placing pie tins of various colored fertilizers (like the blue Nitroform) to gain notice, and got such a kick out of telling the kids to bend over and smell this very fragrant material called Milorganite. We both were amazed at the number of students who knew ammonium nitrate could be used to make bombs, but had no clue it was a plant fertilizer.

Joe leaves behind four generations of relatives, including a brother, daughter-in-law, and numerous grieving nieces, nephews, grandchildren, and great grandchildren. His beloved wife Lucy, 1994, and son Joey, 1977, preceded him in death. His service was Aug. 27 at E. Earl Smith & Son Funeral Home in Lake Worth, and he was interred at Pinecrest Cemetery. Numerous and various means of honoring his memory have been suggested and are in the works.

On the last page of Joe's memorial folder was a poem so apropos of this remarkable man and the life he led:

*Goodbye Is Not Forever
When you lived your life for others
and you loved without condition
When you made so many laugh
and your smile won't be forgotten
When you left behind an empty place
that no one else can fill
When the friendships that you shared
long to be renewed
When you built your life on hope
and fulfilled it every day
The footprints that you left behind
will bring us face to face
So, goodbye is not forever,
you're only steps away*

AS IT LIES

All Aboard!

The rebate on this ticket is bigger than the cost

Many songs have been written about trains. The list of titles and authors would fill pages. Until 40 years ago, they were a main source of transportation in this country. To all of us old-timers, who actually rode on trains and may have had a Lionel model set up at Christmas, trains held or still hold a wonderful mystique.

By Jim Walker

Sadly, trains in this country do not still run as successfully as they do in Europe. On the Continent, it is faster to ride the train than to fly in a lot of cases, given that airports are so far out of the city and many travelers' destinations are in the city.

I still get goose bumps when I watch an old movie and the conductor leans out from the passenger steps, waves his lantern or flashlight and bellows those famous words: "All Aboard!" So much for the nostalgia, now on to the heart of the matter: Why you should get aboard and join your local chapter's board of directors.

For me, it took 16 years of slopping at the trough until the guilt became so intense that I realized the time had come for me to give something back for all those years of meeting, eating, and playing golf.

I will never forget my first board meeting. It was at Sunrise Country Club where Machine Gun Al Ross hung his hat. From that first meeting I have never been sorry for stepping up and getting on the train. People like Bill McKee and Dale Kuehner made me feel at home and I was comforted in the fact that they were glad to have me involved.

There they were some of the movers and shakers of our chapter, and all nice guys when you got to know them. In the beginning, the part of the meeting I enjoyed most was after, when everyone would go to dinner and shoot the bull about work. I learned so much at those dinners, whether sitting and listening or ask-



ing questions. The sharing of knowledge and hearing about other people's problems and solutions has been a wealth of information for me.

My years on the board were very satisfying and sometimes quite trying. We had a run of bad luck for a few years with new people coming on the board and then leaving for various reasons; sadly for some who had lost their job and happy for others who had gotten new and better jobs out of our chapter, and some who just could not follow through on their commitment.

I have made some wonderful friends I would otherwise not have made were it not for my involvement. I can honestly say that everyone with whom I served was a nice guy or gal and I would not have missed it for the world.

Do yourself a favor. Get on board. Make some new friends. Make other friendships grow even stronger. Learn and teach. Enjoy good food and good friends. You will not be sorry.

"ALL ABOARD!"

P.S. Getting to know and work with work with our association

manager, Marie Roberts was definitely a high point of my years on the board. What a wonderful and professional lady she is. Kudos to my special friend in Stuart. The other high point of my years on the board was getting to work with my wife Susi for several years. How many guys do you know whose wife is a superintendent? Baby, you're the greatest!

For information about the author, see inside cover.



LETTERS TO THE EDITOR

Economic Study

For years our association and industry have done many good

things for the state in terms of providing quality recreation, positive economic impact and improved environmental management. Over ten years ago when I was on the board, we complained that we did all of that good but no one in the government knew what we were doing. Last year we finally got a great chance to tell our story.

Professors Alan Hodges, Ph.D. and John Haydu, Ph.D. authored the "Economic Impacts of the Florida Golf Course Industry." It was partially funded by the FGCSA as well as the FTGA, EGCSA, WCI, Taylor Woodrow, Bonita Bay Group and the Florida Golf Alliance. The report relied on input from all Florida golf courses. Sadly only 17 percent of the state's courses responded. That's 223 responses out of 1,334 golf courses that were contacted.

I know that we all receive too much junk mail and probably too many magazines but the envelopes were standard IFAS/U of F and I received at least two of them, probably three. Shame on all of you who blew off our best

chance ever to tell our story to the Legislature, the media and the public. If a thousand of us could have taken 20 minutes of our precious time to complete the survey, we would have had a more unified response and really show the Legislature that we are a serious and committed group.

Scott Bell

Past President 1994-95

Golf Course Manager - Red Stick Golf Club

Scott, while I share your frustration at the apparent indifference of so many courses to participate in a meaningful exercise to show that unity factor, Dr. Haydu assures me that the data collected was detailed enough to achieve verifiable results.

Many will prosper because of the efforts of the few, but then that's nothing new in our industry.

Containment Barrier

Over the past year we have discovered a problem with USGA & modified sand-based greens. The black plastic containment barrier in low and runoff areas



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2001 FLORIDA GREEN PHOTO CONTEST

The winners of the 2002 contest will be published in a four part series beginning with this issue. Contest rules and guidelines for the 2003 contest will be in the Winter 2003 issue.

The 2002 winners combined sharp photography, color and mood

to capture top spots from the panel of judges. Enjoy the efforts of this year's contestants.

Category 4 Scenic Hole - includes sunrises, sunsets, frosts, storms or any other interesting view of a golf hole.



Editor's Choice - Sunrise on #10 Green by Tom Biggy, Bent Tree C.C.



First Place - Reflections on a Par 3 by Neil Cleverly, The Old Colliers G.C.



Second Place - Audubon C.C. by Jason DiMartino.

in the front or sides of greens tends to promote excess water retention inside the barrier at 1 to 2 inch depths. Our research has shown the high water retention created by the containment barrier provides an ideal environment for algae and anaerobic soils (black layer) and significantly increases the risk for turf loss.

Possible solutions:

1. Remove approximately 6 to 8 inches of the containment barrier to a depth of 6 inches.
2. Remove the entire barrier in the front or side of the greens where runoff is evident.
3. Install a smile drain inside the green's cavity, cut a hole in the barrier and extend the pipe well outside the cavity.

*Matt Pulis, MS, International Sports Turf Research Conference Agronomist
Nat Hubbard, Field Representative*

Gentlemen, thank you for sharing your observations and remedies.

Birdies, Bogeys and a Couple of Pars

In GCSAA seminars, like "Managing Your Employees for Peak Performance" and "Team Building," we have learned the importance and necessity for recognition and reward for good performance and guidance

GREEN SIDE UP



Joel Jackson, CGCS

and feedback for poor performance. So in that spirit, I give you my 2002 Birdie and Bogy awards to recognize the over and under achievers of the year. If the score

fits, write it down, figure your handicap and practice to do better next time.

Par:
EPA Administrator Christine Todd Whitman scores a par. She gets a

birdie for actually playing golf, but also a bogey for challenging golf to do better in non-point source pollution. Read the 20 years of research, Ms. Whitman, and quit listening to your staff who thinks EPA means Eliminate Pesticides ASAP.

Birdies to those staff members at FDOACS, FDEP, the water management districts and yes, even U.S. EPA, who are willing to listen and work with real-world data.

Bogeys to those at the same agencies who use assumptions, computer models and politics to make important decisions.

Birdies to the chemical and fertilizer manufacturers who diligently work on making safer more efficient products.

Bogeys to companies who make and market snake oil.

Birdies to superintendent associations and developers who work with government agencies for fair and reasonable rules and regulations on golf's behalf.

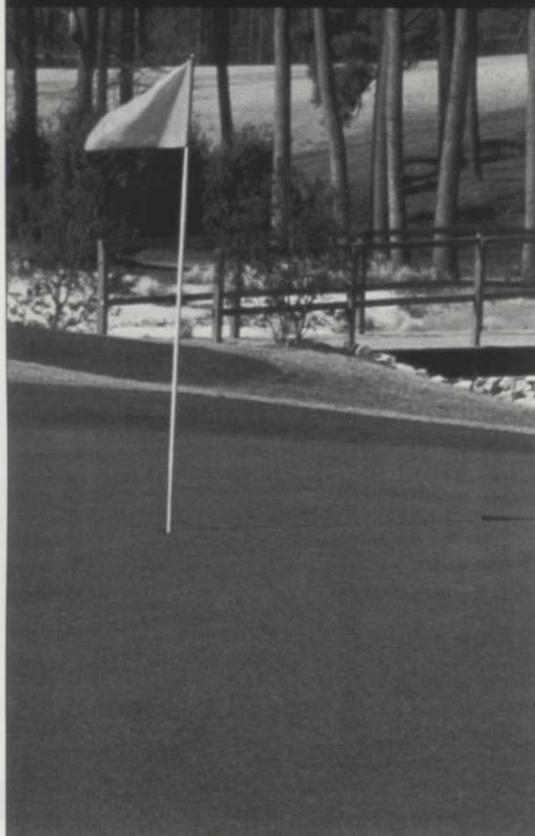
Bogeys to golf course owners and developers who take but never give. See below.

Birdies to the 270 courses who responded to the UF/IFAS survey on the Economic Impact of Florida's Golf Industry. Thanks to you we have quality data for making a case for funds and reasonable regulations.

Triple Bogy to the 1,000-plus golf courses who failed inexcusably to make a simple but profound impact and contribution to the industry that supports their very existence. Hang your heads in shame.

Birdies: To all the vendors and suppliers around the state who continue to support our associations. We love you man!

Bogeys: To the Florida Legislature for cutting the IFAS budget. Even North Carolina, with a turf-grass industry economic impact one-quarter of Florida's, budgets \$650,000 annually for turf research and education to NC State. Note to IFAS lobby-



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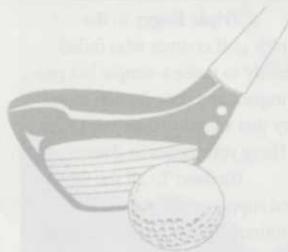
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Birdies to the owners, general managers, club managers, golf professionals, club presidents, green chairmen and club members who get it that Mother Nature rules. They respect and work with their superintendents to create healthy turf and good playing conditions.

ists in Tallahassee. The number in Florida is \$4.4 billion in golf revenue

Birdies to the Golf and the Environment organizers for bringing activist groups and golf to the table.

Bogeys to the high-powered, most influential golf associations for not showing up. Can you say PGA?

Arnie scores a par. He gets a birdie for admitting at the Golf and Environment summit that his dad relied on arsenate of lead in the old days. Yes, we have come a long way baby! But he gets a bogey for saying the word arsenic near an activist group. Say goodbye to MSMA.

Birdies: To the 59 certified ACSP golf courses in Florida.

Pars: To the 234 uncertified ACSP member courses.

Bogeys: To the 1,000-plus courses that are not members.

Double Bogeys: To those who don't even know what ACSP stands for?

Birdie: To Geoff Coggan for visiting 11 of the 12 chapters during his term as FGCSA president.

Birdies: To Alan Puckett and Bobby Ellis for beginning to take the FTGA message on the road.

Bogeys: To chapter education dhairmen who can't find a speaker for the monthly meeting. See hints above. The number at IFAS is 352-392-1831 and GCSAA is 800-472-7878. They're free too!

Birdies to the 10-12 clubs in each chapter that host meetings, some every year.

Bogeys to the hundreds of clubs in each chapter that don't volunteer to host a meeting - ever!

Birdies to those who serve as officers, directors, committee members, and chapter administrators.

Bogeys to those who never volunteer for anything. Keep those checks coming anyhow! We need your money for turf research, continuing education, benevolent funds, and government relations.

Birdie to the *Orlando Sentinel* for their series on water issues in Florida. It was pretty balanced for a change.

Bogeys to those papers like the *Tampa Tribune*, *Sarasota Herald Tribune* and *Palm Beach Post*, who don't print all the facts, don't research the facts or don't know the difference between fact and fiction.

Birdies to Hootie Johnson and the members at Augusta. This is America. It's their club. It's private. Besides over 1,000 golf rounds were played by women at Augusta last year. There are many men-only clubs that don't allow women on the course. But they don't have the media attention that Augusta does. God loves a misguided activist.

Bogeys to Martha Burk and the National Council of Women's Organizations. Good cause. Wrong target. Wrong methods. Just plain wrong.

Birdies to the owners, general managers, club managers, golf professionals, club presidents, green chairmen and club members who get it that Mother Nature rules. They respect and work with their superintendents to create healthy turf and good playing conditions.

Bogeys to the egomaniacs and arrogant dictators in those same positions who can't see past today's stimpmeter readings. They create revolving doors and merry-go-rounds and they give their courses bad reputations. The world knows who you are.

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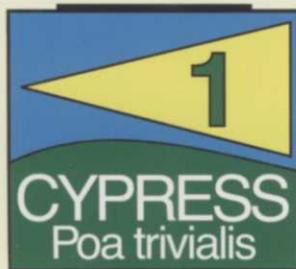
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