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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.

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.

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.

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.

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.

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.

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.

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.
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 Nematomades
   New top dressers; brush inserted for verticut units; ultradwarf greens; Rolling just a fad now? Mowing heights and turf health. Share your programs and equipment arsenal. Deadline: Nov. 15.

2. Spring 2003 – Managing the Putting Surface: Programs and Equipment
   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 some of our worst turf pests? Share any successes with bio-control products? Deadline: Nov. 15.

3. Summer 2003 – Overseeding Trends & Poa Annua Control
   Do new 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 program 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.

Please submit articles via email if possible. Attached articles should be saved in Microsoft Word or, if you use another program 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.
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 – Vice President Greg Pheneger, Secretary-Treasurer Dale Walters, and Immediate Past President Geoff Coggan to help me guide our association in the right direction. In addition, Joel Jackson, association manager is one of the most valuable people we have relied on for years.

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 stewards of the environment and be productive as well as educational for all. 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.

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
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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.

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 Bob Sanderson Golf Championship was held at the Memorial Tourney to honor all members who have died.

FGCSA Honors Bob Sanderson with DSA

Ron Garl design. Robert Parmer of Richbuig was the host on this rolling The scramble format Memorial Tournament was organized 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 Hilaaman 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: FGCSA (Research Foundation, Economic Impact Study and Conference Reception); FGCSA (Research Account & GCSSA 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 Envirotron 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 remains a vocal advocate for the golf industry on environmental issues. And Darren Davis was named by the CFGCSA 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 Klausk 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

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 -
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."

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Jim Kernohan, Superintendent MetroWest Orlando, FL

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Purchases of TranXit™ GTA support the GCSAA’s "Investing in the Beauty of Golf" endowment campaign.
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 Pre-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 Roca 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 disciplines other than agronomy. The economics major from Hobart College in New York took his liberal arts degree and set up shop in the 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

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 turfgrass. He was bom with Sanderson as the first superintendent who earned their degrees in the Everglades Chapter nominated Sanderson to receive the FGCSA President’s Award for Lifetime Service.

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.”

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January 21st – Tampa Bay
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January 23rd – Mid-Florida
Orlando at Camp Down/OUC

January 29th – North Florida
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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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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 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 Clifton home: 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.

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 am 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 (Pro winner) in qualifying for CFGCSA’s national team. Cartin redeemed himself by taking first in the Stableford competition and leading the Central Florida team of Bruce Kosner.

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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 Duggens, 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, tournament 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 Gitaratz 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.

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.

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.

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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 Leaky, 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.

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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Our UHS Signature Brand Fertilizer "blue line" is comprised of products with the things you'd expect, such as quality and consistency. What sets these fertilizers apart is unique technologies, added performance and unmatched value.
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.

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 GCSSA 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 Klauck; back row: Jeff Brown, John Lamnrisch, GCSS, Darren Davis, and Joe Pantaileo. Not pictured: Doug Abbuil, Clayton Estes, CGCS and Buddy Keene. Photo by Joel Jackson.
26th Annual Larry Kamphaus Crowfoot Open
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Number 9, East Course, Boca Lago C.C., Boca Raton. Photo by Daniel Zelazek
"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
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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 gardener 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, melalucca, 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...
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 Nemacur 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 Nemacur. 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.

Back in 1992, Hurricane Andrew pro-
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.


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" Cheeseeman. 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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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.
Total acreage under maintenance: 210 acres:
Greens: East: avg. 6500 sq. ft. - 3.5 acres. Turf type: TifEagle. HOC 0.125 - 0.140; Stimpmeter: 9 - 9.5; 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 melaleucas.
Waterways/Lakes: 50 acres. Maintained by outside contractor. Well stocked with diploid grass carp and largemouth and peacock bass and bream.
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 Ubary 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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FALL 2002
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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Mechanically Inclined
MAINTAINING THE EQUIPMENT THAT MAINTAINS THE COURSE

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

Hawk's Nest is an 18-hole, private golf course in Vero Beach with a maintenance staff of 23. Head mechanic Bruce Raithel has one full-time assistant, Jacob Watson, and occasionally a part-timer as a second helper. Raithel, 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 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 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.
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, verticuting, 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 topdresser for light applications, Meter-Matic for heavier applications.

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
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 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 temper 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 easy 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 manager 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...
12 Reasons Why It’s the New Certified Bermudagrass Standard For Golf Course Fairways, Roughs and Tees

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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-
**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, let's 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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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 services 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 charts, 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 manufacturer's 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 quality cut.

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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.

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.

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.

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.

For information about the author, see inside cover.

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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 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 homemade 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?

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 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-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
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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.

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 visited 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. I have been living in South Florida for...
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...
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 sprinkling rates will help a little. However, exceeding a sprinkling 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 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 spuige. In addition to the standard nematocide 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:

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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 an insect, and not be a health concern to them.

A prime example is use of the materials fipronil (Chico 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 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 are 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 chloridane (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 groundwater 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 (Swanarc, 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-treatment 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 below 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 volatilized used by the county for mosquito control. Second - when the New Jersey scientists conducted 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 dacthal metabolite TCPA was found above the MCL in the golf course monitoring, in one well in each county. Dacthal 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 nitrile analyses of surface water and groundwater were reviewed. What they found was remarkable:
### Table 1

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

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

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Maximum Level Detected (ppb)</th>
<th>Environmental Level (ppm)</th>
<th>Ratio (1/1 would pose a risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>dichlorvos</td>
<td>0.34 g/l</td>
<td>900 g/l/96 hr LC50 - bluegill</td>
<td>1/2647</td>
</tr>
<tr>
<td>malathion</td>
<td>1.02 g/l</td>
<td>&gt;100,000 g/l/96 hr LC50 - walleye</td>
<td>1/63</td>
</tr>
<tr>
<td>methoxychlor</td>
<td>0.37 g/l</td>
<td>17 g/l/96 hr LC50 - Atlantic salmon</td>
<td>1/46</td>
</tr>
<tr>
<td>metolachlor</td>
<td>0.005</td>
<td>2000 g/l/96 hr LC50 - rainbow trout</td>
<td>1/400,000</td>
</tr>
</tbody>
</table>

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 waterways; 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, such as using good BMPs?

Here is their overall conclusion:
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!

REFERENCES


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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 participating 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.

On the Web

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
Sealsle 1, a new salt-tolerant (halophytic), drought-resistant, warm-season turfgrass, is now available as "certified" sod or sprigs. After seven years of extensive research at the University of Georgia's Griffin Experiment Station, combined with careful evaluation of 35 small-plot golf course locations, Sealsle 1 was released in 1999 by plant geneticist Dr. R.R. Duncan. Unlike Adalayd, Futurf and other earlier medium and coarse-bladed paspalum cultivars, Sealsle 1 is similar in texture and wear tolerance to the hybrid bermuds. And Sealsle 1 has a number of other advantages, especially under difficult environmental scenarios. First and foremost, it can handle multiple stresses: prolonged drought, high salt levels, low light intensity, waterlogging and extremely high or low soil pH levels. Secondly, Sealsle 1 can tolerate most types of alternate water sources, including wastewater, effluent, ocean water, gray water and brackish water. It also requires less irrigating, less fertilizer and only minimal pesticide applications when compared to other warm-season cultivars. As water quality and water conservation become even more critical in the days ahead, Sealsle 1 may be the best choice for fairways, tees, roughs and transition areas. Sealsle 1 not only thrives in difficult environments, it also gets very high marks for turf quality, cold-hardiness, turf density and turf strength, disease and pest resistance, and rapid recovery from normal wear and injury. On top of that, Sealsle 1 has the most attractive, rich dark green color of any of the warm season grasses. See for yourself. Schedule a trip to see Sealsle 1 at one of these quality-conscious producers licensed to grow and sell certified Sealsle 1 seashore paspalum.

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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."

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 Klonz, 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 Velpke, 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 the lush, green grass is not always healthy for the environment."

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 Bone, 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 buy into the program from the beginning."

Matt Taylor, Royal Poinciana Golf Club

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."

Mark Metzger, Arrowhead Golf 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 implement-ed - in a way, a move to organizational commitment."

Garth Bone, Chi Chi Rodriguez Golf Course

"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."
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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.

Bob Haley, Hammock Dunes

“Don't be intimidated by the paperwork! Just do it! Obstacle to overcome.”

Walter Wells, Habitat at Valkaria

“Involve all the golf course staff and surrounding Hancock。”

Buddy Keene, Gainesville Golf & Country Club

 Involve your employees and members.

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.”

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.”

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“Surround yourself with interested people to help with the process.”

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 benefit 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 ACS can be used to promote your course in the community and enhance marketing efforts for membership and home sales. The ACS 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 Club

“Golf courses should be involved in the ACS 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 ACS 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.”

Rus 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.”

Buddy Keene, Gainesville Golf & Country Club

“The ACS 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.
True champions that don’t crack under pressure.

Some coated nitrogen products talk a long game. But their coating may be cracked even before they hit the ground through blending, storage or handling. And after application by mower blades, equipment and even foot traffic, especially on close-knit turf such as tees and greens. When this happens you get soluble urea which can cause excess growth, excess clippings and uneven color. What is the solution? Homogenous products like Nutralene®, Nitroform® and IB™ nitrogen. No coatings to worry about, just controlled, sustained release without burning or excess growth and in particle sizes which resist mower pickup.

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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 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 several golf courses including the Municipal Golf Course from 1946 to 1958, worked for Ousley Sod Co. from 1962 to 1974, and consulted at several golf courses including the Palm Beach Community College for more than 20 years. He officiated at numerous industry functions as a speaker, 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.

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've 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!”

FOR INFORMATION ABOUT THE AUTHOR, SEE INSIDE COVER.

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
AFTERWORDS

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.

THE FLORIDA GREEN
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 and feedback for poor performance. So in that spirit, I give you my 2002 Birdie and Bogey 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 Bogey** 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 turfgrass 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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Afterwords

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 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 misguid- ed activist.


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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Private and university trials have shown Cypress to be a premier overseeding grass. Cypress Poa trivialis establishes fast and can be cut close immediately, even after overseeding. As your Bermudagrass goes dormant, Cypress will provide the finest dark green putting surface with no interruption in play. Cypress is tolerant to shade and damp soils. This unique prostrate growing variety thrives in cool weather and will survive cold weather that will damage Turf Type Ryegrasses. But most important, Cypress will maintain its dark green color all winter long. As the weather turns hot in the spring, Cypress will die out naturally as your Bermudagrass begins to grow. Cypress will not choke out your Bermudagrass in the spring as some heat tolerant Perennial Ryegrasses do.

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