The Florida Green Spring 2010

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The Florida Green

Spring 2010

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ON THE COVER: Number 17, Tampa Palms G&CC, Tampa. Photo by Daniel Zelazek.

Spring is Regeneration Time

It was great to see many of you at the GIS in San Diego. Congratulations to Bob Randquist, CGCS of the Boca Rio Golf Club, our newly elected vice president of the GCSAA. Our Florida reception was once again a big hit. Thanks to



Bill Kistler President

Jennifer for finding another unique location for our annual gathering. Thanks to all who attended, and thank you to all of our sponsors. Without your help and support the reception would not be possible.

What a winter! I hope everyone survived the unusually cold weather we've had this year. By now, if you overseeded your course, hopefully transition is under way. If you did not overseed, your bermudagrass has no competition and should be coming back and starting to look good.

This spring looks to be different from most. Not only will we be getting our courses ready for the annual member/guest events but many of us also will be replacing cold-damaged landscape plants around our clubhouses.

As I ride the course each morning observing the many white-tailed deer with their fawns, I am reminded that spring is a time of regeneration.

After this long winter season with its extreme cold weather, this could also be a time for us as superintendents to regenerate ourselves. Take moment and look back. Focus on the positive things that were accomplished. Thank your staff and crew for their hard work during those frosty mornings and disrupted schedules.

Now focus on what lies ahead. Let your staff and crew know what the next several months will bring, like course-wide fertilization, aerification, mole cricket control, and member and/ or outside events to prepare for. Just like spring training, we need to get our teams excited and ready to go for summer season projects.

Don't forget to keep a watchful eye on any local city and county meetings concerning fertilizer and other environmental issues like water quality and use. Make sure your members are informed about these meetings as well and how they could affect their lawns and lawn care companies' ability to maintain their private property.

As always, good luck and success with your chapter's spring events and activities so we can continue to pursue education, networking with peers and helping fund turf research to make our courses environmentally and economically sustainable in these challenging times.



Improve Your Water-Use Efficiency

Regularly checking irrigation head nozzles and operation for efficiency and conservation is just one of seven tips on improving water-use efficiency in Stewardship, Page 34.



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SPOTLIGHT



Host and speakers at the 2020 CFGCSA/FTGA Research Tournament, from left: Stuart Leventhal, CGCS; CFGCSA Vice President Bill Beasley; FTGA Sec/Treas Armando Campos; and Dr. Kevin Kenworthy UF/IFAS. Photo by Joel Jackson.

Warm Spots in a Chilly New Year

The Central Florida GCSA kicked off its New Year by holding the FTGA Turf Research Tournament at the Interlachen CC in Winter Park. Stuart Leventhal, CGCS and the Interlachen CC have been hosting the event for 22 years. Speakers at the event included Bill Beasley, external vice president of the CFGCSA, Armando Campos, secretary/treasurer of the FTGA, Joel Jackson executive director of the FGCSA.

The principal speaker, Dr. Kevin

Kenworthy from UF/IFASA, gave an update on the turfgrass breeding projects funded by the FTGA in cooperation with the FGCSA. The chapter picks up the cost of the lunch and Interlachen donates the golf, so all entry fees went directly to the FTGA Research Foundation to the tune of \$2,500.

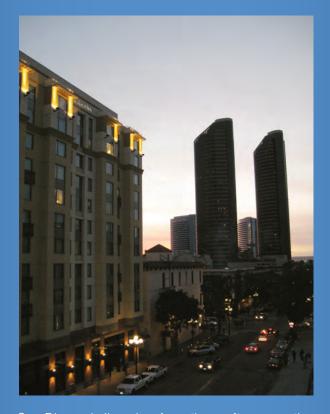
Three-time winner of the event John Lammrish teamed up with golf pro Dave Ragan III to represent the LPGA International GC and capture Low Gross honors.

The FGCSA Winter Board Meeting was held at the Disney's Grand



Treasure Coast GCSAA's scholarship awards winners, from left: Tim Cann, TCGCSA president; Justin Allison, Victor Faconti, Jake Connoly, and Chris Gast, scholarship chairman. Photo courtesy of TGCSA.

A SPECIAL THANKS TO THE FOLLOWING COMPANIES FOR THEIR SPONSORSHIP OF THE 2010 FGCSA RECEPTION IN SAN DIEGO



San Diego skyline view from the rooftop reception at the Solamar Hotel in the Gas Lamp Quarter.

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SPOTLIGHT

Superintendent John Lammrish, CGCS, left, and Golf Pro Dave Ragan III from the LPGA International GC teamed up to win the CFGCSA/FTGA Tournament. Photo by Joel Jackson.



Floridian Hotel Conference Center Jan. 22. During the meeting, the board voted to authorize the dual use of the FGCSA and GCSAA logos on official correspondence and e-mails. In 2007 the board authorized the dual logo use on the Florida Green magazine covers. During the research committee report, Kevin Sunderman from the West Coast GCSA presented a \$1,500 check for the FGCSA Research Account to kick off the 2010 fundraising year.

In February, around 200 members, suppliers and guests attended the FGCSA Reception at the GIS in San Diego. As expected, overall attendance numbers were down about 7 percent, a definite sign of the times. Normally the FGCSA has around 300 to 350 attendees at our West Coast receptions. Association Manager Jennifer Innes did her homework and



Kevin Sunderman, left, presented a \$1,500 check to FGCSA President Bill Kistler for the FGCSA Research Account during the 2010 Winter Board Meeting at Disney. Photo by Joel Jackson.

found a very competitively priced and unique venue in the rooftop Lounge Six of the Solamar Hotel in the Gas Lamp Quarter just a couple of blocks up from the convention center.

Thanks to the generosity of those attending the reception, we raised \$1,060 for the FGCSA Benevolent Fund. Jim Montgomery of Greensmiths,

2010 CALENDAR OF EVENTS

ΜΑΥ

- 6 FGCSA Spring Board Meeting & Awards Dinner, Naples
- 6 Palm Beach Chapter Meeting, Broken Sound CC
- 7 FGCSA/USGA Seminar and Poa Annua G.C.Horn Memorial Tournament, Naples
- 8 EGCSA Poa Annua Classic and Luau, Naples Beach Hotel
- 17 TCGCSA Blue Pearl Tournament, The Medalist GC, Hobe Sound
- 19 UF/IFAS Field Day, G.C. Horn Turf Plots, Citra
- **19** West Coast Chapter meeting, Lake Jovita GC
- TBA Suncoast GCSAA Annual Meeting

JUNE

5 – Palm Beach GCSA Future of Golf Tournament, The Falls CC
17 – Seven Rivers Annual Meeting & Vendor Appreciation Day

TBA – West Coast Chapter Championship, Old Memorial GC

JULY

- **29** Palm Beach GCSA Annual Meeting, Polo Club of Boca Raton
- **30** 8:00 AM Half Day Crowfoot Seminar
- 31 Annual Larry Kamphaus Crowfoot Open
- TBA North Florida Chapter Annual Meeting
- TBA South Floirda Chapter Annual Meeting

AUGUST

2 – West Coast Pro/Superintendent Tournament

SEPTEMBER

- **15-17** FTGA Conference and Show, Caribe Royale Hotel, Lake Buena Vista
- TBA Central Florida Memorial Scholarship Tournament, Lake Nona Club
- TBA Joint Meeting Palm Beach GCSA and South Florida GCSA

OCTOBER

- **TBA** Joint Meeting Palm Beach GCSA and Treasure Coast GCSA, Jupiter Island Club
- TBA South Florida M&E Charity Tournament
- TBA West Coast Bud Quandt Tournament, Tampa Palm G&CC

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Paspalum setaceum (Thin Paspalum), also called Bull Paspalum, is a warm-season perennial in the family Poaceae, found throughout much of the United States but primarily along the eastern corridor. Thin Paspalum can be identified by its flat, hairy to almost smooth, leaf blades. This weed produces short rhizomes and can form a clump.

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Thanks to Jim Montgomery, center, for donating his Benevolent Raffle winnings back to the Benevolent Fund at the FGCSA Reception in San Diego. Pictured with Jim are Mark Henderson, Gulfstream GC, left, and Mike Bonetti, Fertigation Specialists, Inc. Photo by Joel Jackson.

Inc. won the Benevolent Raffle and donated his winnings back to the Fund. We hope to see many more of you at the reception in Orlando next year. Jennifer is already searching for another interesting and convenient location.

Also at this year's GIS, a couple of our members were recognized with Environmental Leaders in Golf Awards. This program recognizes golf course superintendents and their courses for overall course management excellence in the areas of resource conservation, water quality management, integrated pest management, wildlife/habitat management and education/outreach. In



addition, these categories are judged on sustainability, criticality, originality and technology implementation/use.

An independent panel of judges representing national environmental groups, turfgrass experts, university research departments, and members of the golf community selected the 2009 ELGA Florida winners: Chapter Winner - Todd Draffen, TPC Treviso Bay, Naples, Everglades GCSA; and Merit Winner - R. Shane Wright, CGCS; Vero Beach CC, Treasure Coast GCSA.

Jeff Strother, president of the Suncoast Chapter told John Peirsol, head of the Lake City Golf & Landscape Operations Program that after the chapter's Suncoast Scramble tournament March 25, they will be donating \$1,000 towards the new LCCC environmental project and a new \$1,000 scholarship for a second-year GCO student to be \$500 per semester.

The Treasure Coast Chapter recently awarded three scholarships to local students who have excelled within the industry and in the classroom. Each received a check for \$1000 to assist in their education. Each student's application included scholastic achievements and awards, interests, industry work history and an essay stating the student's career goals. The winners:

• Justin Allison, a student at Indian River State College studying golf course management and an employee at Grand Harbor Country Club in Vero Beach.

• Victor Faconti is a student at Penn State University studying golf course management and has worked at Harbour Ridge Yacht and Country Club in Palm City.

• Jake Connoly is a student at Lake City Community College studying golf course management and has worked at Monarch Country Club in Stuart as well as Harbour Ridge Yacht and Country Club in Palm City.

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Brian Schwartz Bermudagrass Breeder

Wayne Hanna Bermudagrass Breeder

Dr. Hanna's TifSport and TifEagle bermudagrasses are still two of the most popular cultivars available for golf course fairways, roughs, tees and high-end greens. In 2008, Dr. Hanna and a select group of TifEagle growers introduced a new "No-Till TifEagle" program, which can save clubs up to 75% of the cost of conventional greens reconstruction. TifGrand, Dr. Hanna's new shade-tolerant bermuda, has shown great promise in multiple golf course test locations and will be available in the spring of 2010.

Dr. Schwartz is the newest member of TeamUGA. He's now responsible for our warm season breeding program in Tifton GA. Since January of 2009, Brian has worked side by side with Dr. Hanna and has been zeroing in on a bermudagrass with enhanced drought stress resistance. So far it has demonstrated the ability to maintain turf guality without water 12 to 14 days longer than present cultivars. Another of Brian's goals is to improve plant parasitic nematode tolerance, with a special focus on sting nematodes. He will also be initiating a zoysiagrass breeding program in 2010 to develop cultivars that are more widely adapted, faster growing and more disease resistant.

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COVER STORY



Hole 16 is the number-one handicap hole on the course. A 549-yard, par five that challenges you from every tee. Photo by Daniel Zelazek

Bring Your 'A' Game and Your Camera to Tampa Palms G&CC

Twenty-three years ago, noted architect Arthur Hills carved out a challenging 7,004-yard course in the wooded wetland wilderness just north of Tampa.

The multi-faceted property, now owned and operated by ClubCorp, Inc., has 25 guest suites in the clubhouse building, ample meeting space for conferences and events, private amenities for its country club members and a golf course that will require your best effort.

The diversity of the facility itself is matched only by the diversity of the teeming wildlife that can be enjoyed while chasing par down the tree lined fairways. I have been to Tampa Palms on several occasions, mostly to cover the West Coast GCSA's Annual Bud Quandt Tournament. I always come away with photos or sightings of several wildlife species. On my cover story visit in late February I saw critters from a half-dozen 8-to-10-foot alligators to playful otters. Superintendent Bill Kistler said earlier in the day he spied a buck and a doe and a bald eagle. Tampa Palms has been a certified Audubon Cooperative Sanctuary since 1993

Because the course was built in a lowland setting, 11 lakes covering 68 acres were excavated to provide enough fill to raise the course above the wetlands. Kistler recounted meeting the architect on the 15th anniversary of Tampa Palms. As they played the course, Kistler said Hills winked as he said, "I knew we had to raise up the fairways because of the wetlands, but I can't figure out why I didn't make them wider."

"He used up every golf ball in his bag and mine by the 16th hole," Kistler said. But with four sets of tees on every hole, golfers can easily find a yardage that fits their skill level.

Golfing challenges aside, being in a wetland setting has its pros and cons when it comes to turf management.

On the down side, the extreme heat and humidity in the summer keep Kistler and staff on the look out for possible disease outbreaks. "We have been following a fungus control program by Syngenta," he said. "It is a preventive program for bermuda greens and provides a good guide for understanding conditions and rotating products to provide maximum protection again disease damage."

Kistler says they also have to be mindful of shade issues from the trees as they mature. "We have been able maintain good light conditions with strategic thinning of tree canopies. Back in 2001, the city of Tampa allowed the removal of 50 trees that were critically impacting several greens," he said.



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IC. the current three days per week watering of greens and tees, and twice per week on fairways and roughs — it is easier to

COVER STORY

maintain the soil moisture in the turf root zone. "Since we can only automatically irrigate three times

SUPERINTENDENT FACTS

On the plus side of the location, because of the naturally organic, heavy soils, when irrigation restrictions — such as



BILL KISTLER

Originally From: Vandalia, Ohio
Family: Wife Sharon and stepsons, Dustin and Shawn Barrett
Education: Turf certificate from U. of Georgia. Graduated from American Institute of Banking
Employment: 2002-present, Superintendent Tampa Palms G&CC; 2000-2002, Assistant Superintendent (AS), Countryside CC, Clearwater; 1998-2000 AS, IGM Tarpon Springs GC; 1993-1998 (Crew, Spray Tech, Foreman and finally AS), Dunedin CC.

Professional Affiliations & Offices Held: Current FGCSA president; past president Florida West Coast GCSA; GCSAA Member Relations Committee; Received 2004 & 2006 ClubCorp Super Star Award.

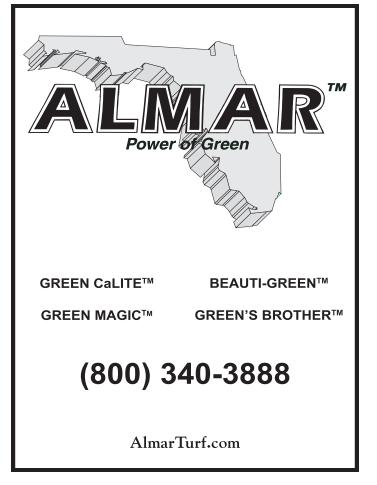
Work philosophy and advice: Don't take things so seriously you don't have fun with what you do. Manage your time and balance work and personal life. Don't be afraid to ask for help. Sometimes superintendents wait until it's too late before asking for help.

Goals: Accomplishing one goal of giving back to the industry as I complete volunteer board service to the West Coast and Florida GCSA. It has been an honor and personally rewarding for me to serve.

Hobbies & Interests: Golf and watching THE Ohio State University football and basketall games.



View from behind the Par 4, 4th hole. At 447 yards it is the number 2 handicap hole. Photo by Joel Jackson.



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COVER STORY

TAMPA PALMS GOLF & COUNTRY CLUB

Location: Tampa **Ownership:** ClubCorp USA, Inc. Playing policy: Private Average of rounds per year: 30,000 Number of holes: 18, 7,004 yards, Par: 72, Slope/Rating: 140/74.8 Designed by: Arthur Hills, constructed by Wadsworth Construction, opened 1987



Maintenance Staff of Tampa Palms Golf and Country Club.

Management

Team: Club Manager David Kupstas; Club President Steve Brantley; Green Chairman Tom White; Head Golf Professional David Glandt; Golf Course Superintendent Bill Kistler

Major projects: 2006 Bunker renovaton; 2008 Enlarged practice range tee area and added target greens

Acreage under maintenance: 88; total property: 277 Greens: 3 acres. average size: 6,878 sq.ft.; turf type:

- TifEagle; HOC: .120 .130 inches; no overseeding; green speed goal: 9.5 11.0.
- **Tees:** 5 acres; turf types: Tifway 419; HOC: .5 inches; overseeding: rye blend @ 200 lbs/acre.

Fairways and Roughs: Fairways: 50 acres; roughs: 30 acres; turf types: Tifway 419, HOC: .5 inches on

pumping system; Toro OSMAC Site Pro control system; Proplus fertigation system.

- Water Management/Conservation: Southwest Florida Water Management District – Phase II Modified: Greens & Tees 3x per week. Fairways & Roughs 2x per week.
- **Staff:** 13 full time. 40 hrs per week. No overtime. No part-time employees.
- **Communications:** Daily meetings with crew and pro shop. Weekly department head staff meeting. Weekly one-on-one with general manager. Monthly Golf & Green Committee meetings. Daily interaction with members on the course and in the clubhouse area.

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fairways, 1-2 inches on roughs; no overseeding.

Bunkers: 42.

Sand type: GASH GA-26. Raked with Sand Pro and by hand. Native Areas: 135 acres of wetlands and woods bordering the golf holes.

Waterways/ Lakes/Ponds: 11, 68 acres, maintained by Lake Masters. Irrigation: Well; Flowtronex

THE FLORIDA GREEN

Office: 954-741-4041 Fax: 954-741-4082 per week, we do have to supplement by hand watering areas that show signs of wilt, which is allowed under the SWFWMD's modified phase-2 restrictions we are currently under," Kistler said. It also means that we have to increase our scheduled run times on our elevated greens and tees built of sandier material and tend to dry out quicker than the fairways."

Kistler and staff also do seasonal mapping of insect infestations for mole crickets, army and sod web worms. By pinpointing specific areas of concern, pesticide applications can be targeted to specific areas, saving labor and material costs and minimizing environmental inputs.

Cultural practices like aerifying and topdressing are not much different from any other course that strives for high-performing putting surfaces with greens speed goals of 9.5 to 11 on the stimpmeter.

I did find one twist that was new to me: During the "Closed Mondays" light topdressing of greens in the growing season, Kistler says they run a roller over the greens after the topdressing is dry. "The vibrations of the roller really help the sand grains to move down into the canopy followed by a light syringing. Then after the irrigation cycle at night, the sand is really invisible the next day and we pick up very little - if any - when we mow."

Kistler's greens fertility program calls for a weekly spoon feeding of 0.1 lb. of nitrogen with Plant Food Company's liquid with 1 to 3 oz. of

FOR SEG

Shade Tolerance Study by Clemson University

Overall Shade Tolerance Rank

Overall shade tolerance rank of 42 bermudagrass cultivars after 8 weeks of full sun (control) and 64 percent continuous shade emson University greenhouse complex.

| at the Clemson University a | | | Cultivar | Ran | ık† | |
|--|-------------------|---|--------------------|-----|-----|---|
| Culitivar | Rank [†] | | Mohawk | 1 | | |
| Celebration | 6 | + | SWI-1001 | 1 | | |
| TifGrand | 5 | - | Tifway | | 1 | |
| TiftNo. 1 | 5 | - | Midlawn | | 1 | |
| Transcontinental | 5 | - | Tifsport | - | 1 | |
| SWI-1003 | 4 | | | - | 1 | |
| Sunbird | 4 | | OR 2002 | + | 1 | |
| Aussie Green | 3 | | Ashmore CIS-CD5 | + | 1 | |
| MS-Choice (Bullseye | 2) 3 | | CIS-CD5 | + | 1 | |
| Princess 77 | 3 | | | + | 1 | |
| SWI-1045 | 3 | | CIS-CD7 | + | 1 | |
| SWI-1041 | 3 | | Panama | + | 1 | 1 |
| SWI-1012 | 3 | | La Paloma | + | 1 | 1 |
| B-14 | 2 | | Yukon | + | 1 | - |
| B-14 Riveria | 2 | | OKC 70-18 | + | 1 | - |
| | 2 | 2 | NuMex Saha | ra | 0 | - |
| SWI-1046 | | 2 | SWI-1014 | + | 0 | - |
| TiftNo. 3 | - | 2 | GN-1 | -+ | 0 | - |
| Southern Star | | 2 | Patriot | | 0 | _ |
| TiftNo. 2 | | 1 | Sundevil | | 0 | - |
| Sunstar | | 1 | SR 9554 | | | _ |
| SWI-1044 | | 1 | Arizona Com | mon | | |
| FMC-6 1 International Former of times a cultivar placed in the top | | | | | | |

statistical category when grown under 64 percent continuous

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COVER STORY

Primo growth regulator. They also apply a slow-release granular fertilizer at a 0.25 lb. rate of nitrogen following core aerifications.

The greens are verticut lightly each week during the growing season and core aerified two or three times a year between April and Septemember. Solid tines are used year-round on the greens to reduce compaction. The tees and fairways are core aerified each spring. As a matter of good stewardship all of the cultural, nutrient and pest management programs are adjusted as needed for weather conditions to maximize the benefits to the turf and to minimize any environmental impacts.

Relaying those changes and implications requires good communication between the superintendent and his staff and the rest of the management team. To that end Kistler says he has daily crew meetings and checks in with the pro shop each day. He added, "It is critical to maintain good relations with

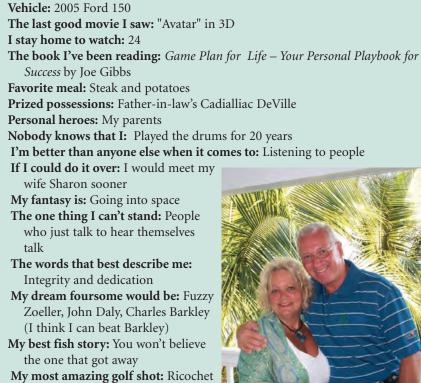
all departments at a club and with the customers. I try to interact daily with our members as they play the course. They may see something or have a question that I can respond to for their enjoyment of the course.

"The folks in golf operations and food and beverage often hear comments before anyone else, so it's good to check in with them frequently also to learn what the members are saying. We do have weekly department head staff meetings and monthly golf and greens committee meetings to stay on top of programs, event calendars and any issues."

For those advocating that superintendents need to become more educated in the business side of operating a golf club, Kistler has a head start. He came to the superintendent profession by way of a degree in banking and a turf certificate from the University of Georgia.

"After moving to Florida I wasn't sure of my career path," he said. "I

FUN FACTS



shot off the one rock on No 17, par 3 lakebank at Farmlinks. It landed on the green and I made a par.



Bill and Sharon Kistler.

"Don't take everything too seriously. Have fun with what vou do. ... And above all, don't be afraid to ask for help.

took a job at the Dunedin CC mowing roughs so I could also play free golf. Before I knew it I was promoted first to spray tech, then foreman and eventually assistant superintendent.

"I had found something I liked to do."

Kistler credits Dale Reash, longtime superintendent at the Countryside CC in Clearwater with as being his biggest mentor. "Dale was the person who had the greatest influence on my professional development. He prepared me for that next step to become a superintendent."

After two years under Reash's guidance, Kistler took over at Tampa Palms in 2002.

Kistler appreciates his growth and development in a career he has come to love and one of his goals is to repay the profession and those in it that have helped him so much. His debt is being paid in full. He has served the West Coast GCSA in all of its offices and is currently serving as the president of the Florida GCSA. Kistler is also a member of the GCSAA Member Relations Committee.

Kistler offers these words of advice to anyone who pursues a career as a superintendent.

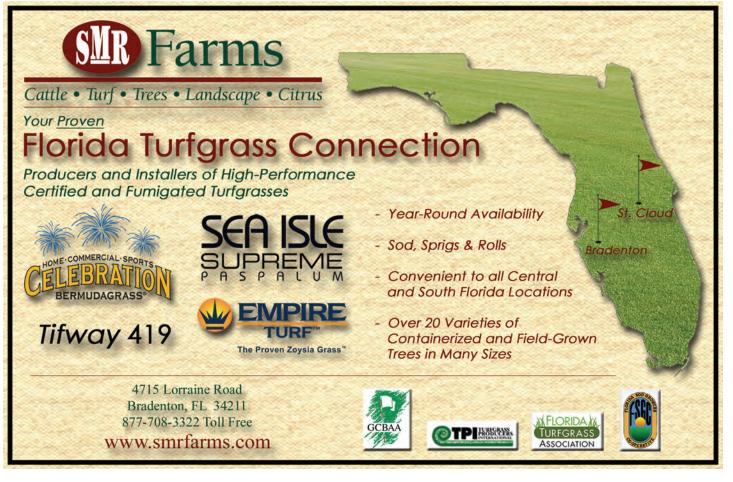
"Don't take everything too seriously. Have fun with what you do. Manage your time wisely to be effective at work and have balance with your personal life. And above all, don't be afraid to ask for help. Too often superintendents wait too long before asking for help.

"In today's market I've been asking others how they are dealing with budget and staff reductions for one, and still getting the jobs done and meeting expectations. Over the years I have often compared notes with other superintendents and vendors, on what

Continues on Page 17



Number 14 is a long, tight par-4 guarded by five of the 42 bunkers on the course. Photo by Daniel Zelazek



COVER STORY

Tampa Palms – A Certified Audubon Wildlife Sanctuary



Saw several of these big gators grabbing some rays.



A PHOTO ESSAY By Joel Jackson

Wild turkey flocks, left, are a common sight in the roughs; Great Egret, below left, stalks prey on No. 18; Little Blue Heron, below, walks on water. Turtles, above on facing page, sunning on a chilly day. Later an otter was seen playing in the lily pads.

Other wildlife seen that day but not pictured here include: anhinga, cormorant, limpkin, moorhen, osprey, otter, red shouldered hawk, tri-colored heron, white ibis, wood ibis and yellow crowned night herons.







From Page 15

they are seeing out there in terms of turf problems and potential solutions."

After learning how Kistler brings his "A" Game to the golf maintenance operations every day at Tampa Palms, I grabbed my camera and spent the next two hours snapping pictures in this wildlife sanctuary which doubles as a golf course.



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Stay With the Basics!

By John H. Foy

According to the news media, there are signs that the national economy is beginning to recover. Yet, for many

clubs and courses throughout Florida, rounds and membership levels are still down. Thus the struggle continues for providing the level of course conditioning and quality desired with reduced operating resources.

USGA Green Section agronomists from across the country have compiled conservation strategies in an effort to assist courses in surviving these challenging and difficult economic times.

Regardless of the region, turfgrasses being managed, and type of club or course, getting back to and staying with proven and agronomically sound basic programs and practices is a key component of these conservation strategies.

Traditionally applied products such as fertilizers, pesticides, water — and even plant growth regulators — have a long history of

use; and their value has been proven through many years of research.

Unbiased research is always needed to determine if the benefits of new or non-traditional products justify their cost. In preparation for writing this article, I went online to the Turfgrass Information Center at Michigan State University and did a literature search on the subject of biostimulants. For anyone who is not familiar with the Turfgrass Information File (TGIF), this is a resource database that contains a range of electronic and printed articles stimulant is "anything that promotes the growth, development, or general health of turfgrass." Dr. Kussow further refined the term to "non-traditional" substances and materials, and again

excludes traditional products such as fertil-

izers, pesticides, water,

and plant growth reg-

ulators. Previously a

University of Georgia

scientist reviewed

the labels of 15 bio-



Always use an untreated check plot to compare results when applying new products. Photo by John Foy

from published, peer-reviewed sources on turfgrass research. The biostimulant search resulted in 235 records of articles starting in 1989 up through January, 2010. I would like to summarize a few points noted during my stimulant products for turf and found 59 different ingredients. The most common active ingredients of biostimulant products are hormones, carbon sources, humates, and microbes. As noted earlier, the term biostimulant began to appear in literature back in 1989,

and over the past 10 to 15 years, there has been increasing interest in materials that provide enhanced turfgrass growth and health or increased stress tolerance of especially cool-season turfgrasses such as bentgrass. However, there

has been some work done here in Florida with bermudagrass. In the 1996 summer issue of the Florida Green, Dr. Monica Elliott and Marcus

Regardless of the region, turfgrasses being managed, and type of club or course, getting back to and staying with proven, agronomically sound basic programs and practices is a key component of these conservation strategies.

review of the literature.

Defining "biostimulant" is in order. To paraphrase the definition used by Dr. Wayne Kussow, emeritus professor of soil science, University of Wisconsin - Madison used in the introduction of his article, Biostimulants: Yes or No published in the May/June 2009 issue of the Grass Roots magazine, a bioPrevatte provided a summary of their evaluation of two commercially available, seaweed-derived biostimulants applied to a Tifdwarf bermudagrass putting green. "A consistent lack of response was observed over the two year study" was the summary of their research.

A more recent study was a USGA

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HANDS ON

funded project, "Evaluation of Cytokinin Plant Extract Bio-stimulants: Iron and Nitrogen Products for their Effectiveness on Summer Creeping Bentgrass Summer Quality." The research was conducted by Drs. Derek Settle and Peter H. Dernoeden and can be accessed through the USGA's Turfgrass and Environmental Research On-Line at http://usgatero.msu.edu/ vo8/no1.pdf.

This field study examined the impact of six products that contained cytokinins, and other plant extracts nitrogen or iron, or various combinations thereof on their impact on creeping bentgrass putting green color and summer quality. These products were compared to urea (N) and evaluated in Lemont, IL, and College Park, MD, in 2007 and 2008.

In the report summary, a key point that caught my attention was: When data were averaged over the season in both IL and MD, urea alone and treatments containing urea generally provided best summer quality. There were, however, no significant differences among urea alone, Iron Roots plus urea, Roots Concentrate plus urea, or Panacea Plus and urea at either site." Product application costs were also included in the report and ranged from \$7.50 per acre for urea to \$29.00 to \$170.00 per acre for the other products used in the study. This information reiterates the point that significant cost savings can be achieved without

compromising quality by using basic materials.

Even in the Information Age, keeping up with the most current research can be challenging. Also, every course has unique characteristics, and thus onsite evaluation of products should be performed.

This does not have to be a large and time-consuming process; but in order to fairly evaluate a product, an untreated control — or check — plot is needed. This can easily be accomplished by using a sheet of plywood to cover temporarily the same area of turf each time before application of a new product. Having a side-by-side comparison makes it easy to decide if real benefits are being provided.

Organic Fertilizers and Pesticides

By Joel Jackson

In an age, where the term 'Going Green' takes on many aspects, organic-based products are making their way into golf course fertilizer and pest-control maintenance programs.

Some of the more recent products like Ecumen are a direct result of the loss of Nemacur as the predominant nematicide used on golf courses.

As Nemacur was being phased out, several superintendents like Steve Wright at Boca West, Alan Puckett at Eaglerooke and Steve Ciardullo when he was at Mountain Lake tried the product NeoTec to supress nematode activity and reported various levels of success. Recently Bill Kistler at Tampa Palms told me they had applied DiTerra this past June and reported significant reductions in sting nematode counts in follow-up samples.

On the nutrient side, who among us hasn't applied Milorganite sometime in our careers? And we have seen additional organic fertilizer blends emerge like Nature Safe and Bovamura among several others. These just happen to be some of the brands I have heard about or seen advertised. And these are just the granular products, there are also numerous liquid blends used in foliar feeding programs.

The timing of this topic during the current recessionary trend is perhaps unfortunate since budgets have been scaled down at most clubs, so discretionary spending on all products and programs in general is under closer scrutiny. So getting the biggest bang for your buck is critcial.

At the USGA Green Section program out in San Diego this past February, one of the presentations concerned ways to economize and yet still provide good playing conditions, and the take-home message was, stick to fulfilling basic agronomy needs for the health and performance of the turf."

One example was that if soil and tissue samples showed you needed to apply nitrogen, then apply urea and not a full blend with other macro and minor nutrients if the test doesn't call for it; and the same goes for potash, phosphorous, etc.

I know we can't generalize too much because each course is different with its soil profiles, water quality, micro-environments, etc. There are situations like the loss of Nemacur that call for trying other products and other than Curfew, some of the organic products might deserve a look as a useful tool for your particular course.

In a companion article in this section, John Foy, director of the Florida Region of the USGA Green Section talks about doing your due diligence in selecting and using organic based products. They may have a place in your programs. Just make sure they're the real McCoy and a good fit for your course and your budget.



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HANDS ON

SUPER TIP Twist and Shout No More!

By Darren J. Davis

Maintaining a good stand of grass on the putting green and collar is perhaps one of the primary responsibilities of today's golf course superintendent. Greens are always priority number one, and the reputation of the course and superintendent is often determined by their condition. Amazingly, when the greens are good, most other inconsistencies on the course are usually overlooked.



Plastic lattice sheets are lightweight and easy to transport. Photo by Darren Davis.

normally make their turns.

Turning on the lattice alleviates the twisting and subsequent tearing or thinning of the turfgrass in areas that are under the most stress. While at Congressional, Whalen witnessed a similar technique where plywood was used for the same purpose. He feels the lattice is equally effective, more durable and much easier for the crew to handle.

Technological advancements and research have provided today's golf course superintendent with improved equipment, better techniques and added knowledge, enabling them to better maintain closely cut, heavily trafficked turf. However, when encountering stress in the midst of the winter golf season, such as the extremely cold and cloudy winter of 2010, turfgrass management often involves using whatever means necessary to keep grass alive!

Veteran golf course superintendent Jim Whalen at Calusa Pines in Naples, has worked at some prestigious golf courses in his career. Among them, Augusta National Golf Club and Congressional Country Club are on his resume. Similar to Augusta and Congressional, Calusa Pines prides itself on providing a challenging golfing experience with lightening fast greens.

At Calusa Pines, due to a very low height of cut and frequency of mowing and rolling, the edges and collars of some greens need a little extra attention. In part, due to the challenging Winter of 2010, Whalen instituted a practice that helps to alleviate stress on his putting green collars.

Whalen purchased a dozen sheets of 1/8 x 23-1/2x 95-inch white garden plastic lattice from Home Depot at a cost of \$11.97 each. The greens mowing crews transport the lightweight sheets of plastic lattice each morning in the backs of their utility vehicles. Before mowing, the sheets are laid flat on the collar in areas where the walking mowers



Lattice provides greens collar protection from mower turning damage. Photo by Darren Davis.

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The Florida Golf Impact Report was unveiled Jan. 28 at the 57th PGA Merchandise Show in Orlando. In attendance were, from left, Joe Steranka, PGA of America CEO; Rich PGA Merchandise Show in Orlando. In attendance were: (l-r) PGA of America CEO Joe Steranka; executive director of the North Florida Section of the PGA Rich Smith; Florida Chapter of the Club Managers Association of America President Al Kinkle; North Florida PGA Section President John Reger; governor of the State of Florida, Charlie Crist; FGCSA Vice President Gary Myers, CGCS; Martha Mazzitelli, past president of The Florida Gulf Coast Chapter of the Hospitality & Financial Technology Professionals; Cindy Acree, executive director of the Florida Golf Course Owners Association; and executive director of the Florida State Golf Association, Jim Demick. Photo courtesy of the PGA of America.

Florida Golf Economic Impact Study Unveiled at PGA Merchandise Show

On Jan. 28 in Orlando, Allied Golf Associations met with Gov. Charlie Crist to present study results from the latest Florida Golf Economy Report. The event took place at the PGA Merchandise Show at the Orange County Convention Center.

Florida, recognized worldwide for hosting championship golf events among its more than 1,100 golf courses and 62 golf resorts, also carries the distinction of having the largest direct golf economy of any state. Florida hosted 20 professional championships in 2007, including 11 PGA Tour events, six Champtions Tour events, two LPGA Tour events and one Nationwide Tour event.

In 2009, the Florida Golf Economy

Report was commissioned by GOLF 20/20 for the Florida Golf Impact Task Force, and prepared by SRI International. The report, which contained its most recent data from 2007, indicated that the Florida golf industry generated a total economic impact of

The full version of The Florida Golf Economy report is available at www.golf2020.com. \$13.8 billion, supporting more than 167,000 jobs with \$4.7 billion of wage income. Golf-related events donated over \$312 million dollars to Florida charities.

In 2007, the size of Florida's direct golf economy was approximately \$7.5 billion – the largest in the United States. This is comparable to revenues generated by other key industries in the state, such as amusement and theme parks (\$4.0 billion), medical equipment and supplies manufacturing (\$4.4 billion), agricultural products (\$7.8 billion), and hotels and motels (\$11.2 billion). Golf brings visitors to the state, spurs residential construction, generates retail sales, and creates demand for a myriad of goods and services.

Weathered, Worn and Battered

By Todd Lowe

Cold conditions continue to plague Florida golf courses, as below-normal temperatures have persisted since early January. A golf course superintendent from Southwest Florida questioned a local meteorologist about weather conditions, and below are a few of the reported facts:

• There have been nine morning lows in the 30s. In an average year, we reach the 30s only a few mornings for the entire winter season.

• Three morning low records have been broken.

• The coolest high temperature was tied on Jan 10.

• The area has tied "the record" for consecutive lows below 50 F.

On Jan. 9, a high of 52 F was reached at midnight, but around 8 a.m. tem-

peratures fell into the 30s and remained there all day. The coolest high temperature was 40 F, so, if you overlook midnight, Jan. 9 could be the coldest day ever in Ft. Myers.

The turf actually began to come out of winter dormancy and turn green on lower mowed surfaces when a slight reprieve from the cold weather was experienced in late January. Believe it or not, this factor also had a negative impact on some golf courses that deal with plant-parasitic nematodes, as the nematodes became active as well.

Soil temperature dropped shortly thereafter with several cold fronts and frosts, and this caused additional turf loss, as already-thin areas received continued golfer traffic and no turf recovery. Putting green perimeters have been the most widely damaged areas due to the stresses of increased mower turning, golfer entry and exit, and shade.

Cold fronts have generally been accompanied by rain. In fact, many superintendents have reported no irrigation applied in 2010 to date. This has had a beneficial impact on lake levels, as they are very high on most golf courses, but excessive leaf and soil moisture and moderate temperatures can increase turf diseases. Patch diseases have been observed at a few golf courses, and the University of Florida turf pathology lab has reported a high incidence of Pythium in golf course samples. Preventive fungicide programs should be continued until warmer and drier conditions occur.

Recovery simply cannot occur until active turf growth resumes with warmer soil temperatures. Multiple days above 80F and nights above 60F are necessary to make any marked improvements



in turf quality. Sustained warm air temperatures are necessary to significantly raise soil temperatures. Active bermudagrass recovery can occur when soil temperatures rise above 65 F at a 4-inch depth.

EDITOR'S NOTE Following are February cold-damage comments from John Foy, USGA Green Section director of the Florida Region.

For the northern third of Florida, freezing temperatures occurred for several nights in a row, and bermudagrass and seashore paspalum went fully dormant and off-color.

Most golfers in this part of the state are more understanding, as they witness this annually. But, with the largeacreage winter overseeding programs being discontinued at many courses, there have been concerns expressed Only once in my 25-year career with the Green Section has true bermudagrass winter kill been encountered in Florida. That was in 1987 and was limited to a few putting greens in the Panhandle.

about the brown grass. Temperatures have not sufficiently warmed enough to allow the bermudagrass to break winter dormancy.

The resumption of sustained growth in North Florida cannot be expected for at least a couple of months, and the continuation of aggressive traffic management is essential to minimize damage and loss of turf coverage. Only once in my 25-year career with the Green Section has true bermudagrass winter kill been encountered in Florida. That was in 1987 and was limited to a few putting greens in the Panhandle. In these cases, there was a direct correlation between the damaged areas and moderate to severe shade. However, this was before the introduction of the ultradwarf bermudagrasses and their widespread use. Not having previously experienced a similar prolonged stretch of cold temperatures with the ultradwarfs, there are definitely some concerns about the potential for low temperature injury, and even winter kill, on greens in the northern part of the state. Oklahoma State University research determined that the rel-

> Photo Right: Thin brown roughs like this that lingered well into April are finally greening up. Photo by Joel Jackson

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ative low temperature tolerance of TifEagle, Mini-Verde, and Champion was 21.2, 21.6, and 23.4 degrees Fahrenheit, respectively. According to the Florida Automated Weather Network (FAWN), air temperature lows of 16 to 18 degrees Fahrenheit were recorded at various monitoring stations across the northern part of the state. Low soil temperatures of 33 to 39 degrees Fahrenheit also were recorded at these same stations.

While visiting a couple of courses in Jacksonville recently, it was reported that over the January 9th weekend, putting green rootzones were frozen solid, and it was impossible to change hole locations.

During visits to these courses, the ultradwarf bermudagrass putting greens were found to still be in a semi- to fully-dormant stage, but based on examination of profile samples, no significant injury or winter kill of the stolons, rhizomes, or root system The Mid-Continent, Southeast and Florida Regions of the USGA Green Section have hosted Live Meeting webcasts to discuss . . . dealing with the freezing winter weather.

had occurred. There are still concerns about the possibility of low temperature injury and winter kill at some northern Florida courses.

The potential for problems is increased in locations with other stress factors, such as shade, excessive thatch, or restricted drainage. In locations where damage is suspected, harvesting plugs with a hole cutter, bringing the plugs indoors, planting them in pots, and putting the pots under a grow light, heat lamp, or in a south facing window, is suggested to assess if damage has occurred. The plugs should be adequately watered, and within 7 to 10 days a green-up response should begin to occur.

If, after two to three weeks, the turf plugs are exhibiting 50 percent or less green foliage, significant cold damage will have occurred, and replanting might be required. Hopefully, this will not be the case, and with appropriate management practices during the late winter and spring, a full recovery can occur. It is recommended to keep everyone advised about the results of the damage assessment. The Mid-Continent, Southeast and Florida Regions of the USGA Green Section have hosted Live Meeting webcasts to discuss and educate golf course superintendents, course officials and golfers about dealing with the freezing winter weather. Check the USGA Green Section online portal at http://gsportal.usga.org for scheduled or recorded Live Meeting webcasts that review cold temperature damage and recovery measures.



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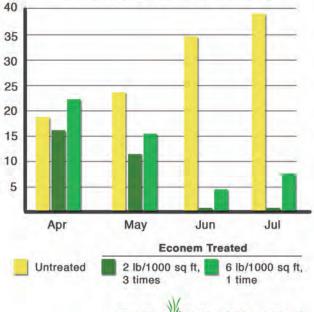
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Maintaining Environmental Programs In a Tough Economy

By Shelly Foy

When budgets are being cut, staff layoffs are common, and you are trying to do more with less, how do you continue supporting your environmental programs? In reviewing some of the most successful Audubon Cooperative Sanctuary Programs in Florida, there is a common trait. Programs that have member/golfer participation are flourishing and are not as affected by the current economic situation.

Superintendents, are already aware of ways that golf courses benefit the environment. Through outreach and education, the goal is to share this information with others. Most people learn by doing, letting your golfers/ members take a more active role in your environmental programs can benefit you in many ways.

"Great idea, but how do I do that?"

My answer always comes back to communication. In order to get people involved, you have to tell them what you are doing; then you have to ask for their participation.

PUT IT IN WRITING

Write an article for your club newsletter, explaining what the ACSP is, and end by asking that anyone interested in participating contact you. You can start by using information that is available from Audubon International's website, *<www.auduboninternational.org.*

After completing Step 1 in the ACSP, the Site Assessment and Environmental Plan, you will receive a press release from Audubon International. Many superintendents use this press release in their course newsletters.

No newsletter?

Post the press release in the locker rooms or pro shop and add a note asking those interested to contact you.

Beautification committees are perfect groups of people to involve in your ACSP. Ask to attend their next meeting. Tell them about the program. Encourage them to get involved. If your course has a Web site, you can post information there as well.

Create a blog discussing environmental attributes of the golf course. Talk about the ACSP. Make sure golfers have the address for the site. Share with staff the responsibility for keeping content updated and fresh. Encourage golfers to participate by asking them to post comments or photos. A good example of a superintendent blog can be found at *www.stonecreeksuper.blogspot.com*.

START A CLUB

Form a Resource Advisory Group or an Environmental Club

Many courses successfully garnered member/golfer support by creating a Resource Advisory Group. Here is some helpful information from Audubon International on forming such a group:

"We recommend that you develop a Resource Advisory Group in the early stages of your ACSP involvement. Members who formed a strong advisory group had better success with Cooperative Sanctuary planning, project implementation, and publicity. This group is there to help you with the planning and implementation of projects, and relieve you of some of this work.

Remember when choosing people that the group should have several functions. One purpose is to provide

Good Time to Join ACSP

If you are not a current member of the ACSP for Golf Courses, now is a very good time to join. We are seeing an increase in ACSP membership across the country as superintendents look to the program to help identify and communicate positively about changes to management practices that, while triggered by budget cuts, also help to enhance habitat and conserve natural resources. technical advice as you begin to implement specific projects. Group members may volunteer time or labor and can help monitor enhancement efforts. An even more important purpose is public, employee, and member relations. Your group can help disseminate information and help to publicize your Cooperative Sanctuary efforts.

Choose people you feel comfortable working with and who will gladly volunteer their skills. There are no meeting requirements for this group. Some meet once a month, others meet four times a year, and still others have several core members who meet informally and outside resource people who are involved as needed.

It is not always easy to get people involved. Initially you may want to print up something in your newsletter or put a flyer on your bulletin board asking if anyone's interested. From there you may want to ask people that you know will be good candidates for the advisory group.

Tip: Don't forget the importance of recruiting course officials for this Resource Advisory Group. General managers, golf professionals, and green committee members often have more one-on-one contact with members/ golfers, and can be valuable assets in implementing programs and projects.

Another successful way to get involvement is to form an Environmental Club, or Audubon Group (call it whatever you want). This can be viewed as an added amenity a club can offer to their members/ golfers. There are many examples in Florida that demonstrate the success of forming these groups (See the Grand Harbor stewardship article in the *Florida Green* Winter 2008 Issue). These groups are also excellent fundraising arms to help keep environmental projects moving forward.

EDUCATIONAL TOOLKITS:

Audubon International is creating individual toolkits that are available free to member courses. If your golf course is a member of the ACSP, simply go to the members' on-line area (*www. AudubonInternational.org/members*) to



Activities like this birding tour at The Sanctuary GC on Sanibel can help maintain environmental programs. Photo by Kyle Sweet.

download the toolkits.

Nonmembers may also request a copy of these toolkits for a fee of \$10 per download, or \$20 per hardcopy.

Two toolkits are currently available: BirdBlitz, and The Green Golfer Pledge. Each kit comes with everything you need for the project. Completed toolkits can also be used toward certification in Outreach and Education and Wildlife and Habitat Management.

The objective of the BirdBlitz toolkit is to make a list of each bird species you see or hear on your property in a 24-hour period. This is a great tool for gathering support for your environmental programs by enlisting action from your members, golfers and staff. Each kit explains the project and tells you everything you need to know to get started. Kits include participation forms, checklists, rules, and case studies.

CONCLUSION

Encouraging participation in your programs is critical to getting golf's positive environmental message out. Working cooperatively on environmental projects will help develop closer ties with your members/golfers, can lead to increased funding for projects, and provide program sustainability in tough economic times.

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STEWARDSHIP



Regularly check irrigation head nozzles and operation for efficiency and conservation. Photo by Joel Jackson.

Improve Your Water-Use Efficiency

By Todd Lowe

Water use will continue to be an important golf topic as they are big targets for environmentalists. While many golf courses manage their water well, we should make every effort to improve water-use efficiency and to document improvements over time. Below are some helpful tips to consider:

1. DECREASE IRRIGATED TURF ACREAGE

An obvious way to decrease water usage on golf courses is to decrease irrigated turf acreage. Many golf courses have converted bermudagrass turf areas into naturalized landscape plantings along out-of-play rough areas. In rough areas that receive limited play, bahiagrass is a good alternative as it requires very little water and is less penal than ornamental grasses or shrubs.

2. Level irrigation heads

Leveling irrigation heads is an ongoing practice on golf courses as they settle over time. However, did you know that you can improve irrigation efficiency by as much as 20 percent by making sure they are level?

3. NOZZLES

Nozzles can be installed to improve irrigation use and efficiency. Most nozzles generally last five to seven years and it is important to replace them as necessary to improve your distribution uniformity. Companies like Full Coverage Irrigation (*www.fcinozzles.com*) specialize in optimizing distribution with improved nozzles.

4. IMPROVE IRRIGATION DESIGN

Older irrigation systems contain large heads that are spaced far apart. Such heads are often referred to as "water cannons" as they spray a large amount of water over a long distance. Newer irrigation designs often use smaller heads spaced closer together. Dry spots can occur in areas with sandy soils or nematodes, and improved irrigation designs allow staff to apply water only where necessary with minimal wastage. This is certainly not a cheap fix; but most systems are replaced every 25 years and it is important to have a qualified irrigation designer to create an efficient design for your golf course.

5. Improve controller efficiency

Older irrigation controllers block several heads together on the same station, while newer systems allow for single head control. Isolated dry spots are difficult to irrigate with such systems without wasting water, as multiple heads are run at the same time.

6. SENSORS

Portable soil probes, like the Spectrum TDR, measure soil moisture and provide turfgrass managers with objective numbers that can be used to improve irrigation scheduling. These units also have the ability to log data based on GPS and can provide moisture mapping. In-ground units are also available from other companies, but are more costly and they can only measure water in the area that they are installed. Also, it is important to be aware of their location during soil cultivation practices.

7. IRRIGATION AUDITING

Become a certified irrigation auditor. The GCSAA offers a two-day seminar each year where participants can learn the basics of irrigation distribution, uniformity, and how to audit your system. Some water management districts in Florida have helped golf courses with irrigation system auditing as well.

Advances in technology will continue with golf course irrigation systems and provide better prescription irrigation. Newer technology is being developed and innovative systems like subsurface irrigation are becoming increasingly popular with golf courses, especially around bunker faces. Also, mowers with infrared sensors may one day be able to tell turfgrass managers when the turf is becoming dry. In any case, we must continually look at ways to decrease the use of natural resources for an environmentally sustainable future of our industry. Tom Burrows, Consulting Agronomist/Turfgrass Specialist Independent Consulting using "Brookside Laboratory"

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WRITE STUFF



GREEN SIDE UP By JOEL JACKSON

In these challenging times, are you heeding the wisdom of successful superintendents who keep saying, "Growing grass is only 10 percent of the job? The rest," they say, "is communication, leadership and management

skills, and understanding good business practices."

Here are some writing tips to help with the communication part, gleaned from writing magazines over the years, and from having Larry Kieffer edit my Florida Green articles for almost twenty years.

I'm also being a bit selfish since we want you to write articles for the Florida Green and share your Hands On tips and experiences. The better you write, the less editing we have to do, but we're always there to help out as needed. The main thing is for you to share information with your peers.

These tips can also be useful for writing notes for presentations, your club newsletter articles and even

course maintenance blogs that are growing in popularity in these days. I also have editors who nip and tuck my columns and articles, so don't sentences and paragraphs. think you have to be a bestselling novelist to succeed. Here are those tips to "speed" to better writing:

1. Use picture nouns and action verbs rather than adjectives and adverbs.

2. Never use a long word when a short one will do as well.

3. Use simple sentences instead of long, complicated ones.

4. Vary your sentence length.

5. Put the words you want to emphasize at the beginning or end of your sentence.

6. Use the active voice. Avoid the past tense.

7. Put statements in a positive form.

8. Use short paragraphs. 9. Cut needless words, Get to the point.

10. Use plain, conversational language. Write like vou talk.

11. Avoid gobbledygook and jargon.

12. Write to be understood, not to impress.

In summary, what you have is unique knowledge of your golf course and what it takes to make it look good and perform well. Being able to communicate that knowledge is an important and valuable skill in today's golf industry.

You're already good at the grass stuff; use these tips to practice the write stuff.

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