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Fall 1997



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I want you to feel free to call me if there is something going on you don't like or understand.

It seems like only a few years ago that I began attending state board meetings and listening to what was going on in our state and the GCSAA. I had

volunteered to be the external vice president for the Central Florida Chapter. I remember attending FGCSA meetings when Bill Wagner was president, so it has been over 15 years ago.

As your president this year, I am looking forward to working with Mike Perham, Darren

Davis, Dale Kuehner, Association Manager Marie Roberts, *Florida Green* editor, Joel Jackson and all the board members to keep the association growing and informed of all industry-related news and activities. We will try to provide education and seminars that will benefit superintendents, assistant superintendents, and their employees.

I would like to see more superintendents become involved in local and state association activities. I would like to see more superintendents write more articles for the *Florida Green* to tell your story to everyone who reads

the magazine. I enjoy reading the magazine and everything it has to offer and I hope you do too.

I would like to congratulate Gary Grigg on winning the 1997 FGCSA Distinguished Service Award. Having served in all offices of the GCSAA, Gary additionally gave his time to keep the FGCSA informed of all GCSAA-related activities. He also has done a great job of improving the image of superintendents nationally and here in Florida.

I want to thank each chapter in our state for the great job they do in fund raising each year. I encourage them to keep up the good work. We will all benefit from the money spent for future research. Hopefully, by the time you read this, the University of Florida will have named the new Turf Coordinator so more research can be done in the turf program to benefit all of us.

I have met many superintendents in my 18-plus years at Winter Pines and I hope that you will call me if there is something you would like to see done. Also, I want you to feel free to call me if there is something going on you don't like or understand.

Here's looking forward to another successful and productive year.

Looking forward, getting involved

PRESIDENT'S MESSAGE



Joe Ondo, CGCS
President
FGCSA

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It is incumbent upon all of us to offer our suggestions on what can be done to improve upon the Conference and Show schedule to attract FGCSA members. We are well represented within FTGA

It is with great pride and pleasure that I address the membership of the FGCSA as your vice president. As is the case with many of my predecessors, I am starting off on the wrong track by writing this days after the

deadline! Perhaps more than many others before me, I am distinctly aware of what goes into the making of each issue. I had the pleasure of serving as Dan Jones' assistant during part of his fine tenure as editor of the *Florida Green Magazine*. I have vowed to Joel that this will be my only tardy submission. I hope the next two years during which I will be

addressing you will enable me to hold true on that promise.

FTGA

What do those letters stand for to the majority of us? After the poor attendance by FGCSA members at this year's conference, some may say that it stands for the Forgotten Turfgrass Association.

We must not allow this to happen!

The FTGA must remain a viable entity in Florida. This organization has taken tremendous strides to improve the position of the turfgrass industry in the state. Ladies and gentleman, we are the most important component of the turfgrass industry.

This organization has repeatedly altered its schedule and programs to address the concerns of the golf course superintendent in Florida. It is time for the FGCSA membership to show its support to our sister organization. Three of the

four members of their Executive Committee are golf course superintendents. The president, David Barnes, represents a sod producer whose primary customers are golf course superintendents.

It is incumbent upon all of us to offer our suggestions on what can be done to improve upon the Conference and Show schedule to attract FGCSA members. We are well represented within FTGA

The vendors upon whom many of us rely for the majority of the year deserve our attendance. This is their opportunity to visit with each of us on a one-to-one basis. Due to the sheer size of the GCSAA show, personal contact is often not feasible there.

The FTGA relies upon the support of these vendors in order for the Conference and Show to be a success. Without our members attendance and support, the vendors will not be there to support the show, which will have a negative impact on FTGA.

We must rally behind this organization. Lend your support, and attend next year's Conference and Show!

Ready or not, here they come!

The winter masses have undoubtedly descended upon us by now. I hope that all our members are prepared for another season. Summer projects are a forgotten dream. The days are shorter, and the nights are cooler. Let's all take time to privately rejoice in our accomplishments. No one knows better than ourselves the fruits of our toils, which will become our golfer's reward for the coming season.

Finally, let us not forget our support at home. The holiday season will be rapidly approaching. We all deserve some Holiday Cheer!

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**PERHAM'S
PAGE**



Michael Perham, CGCS
Vice President
FGCSA

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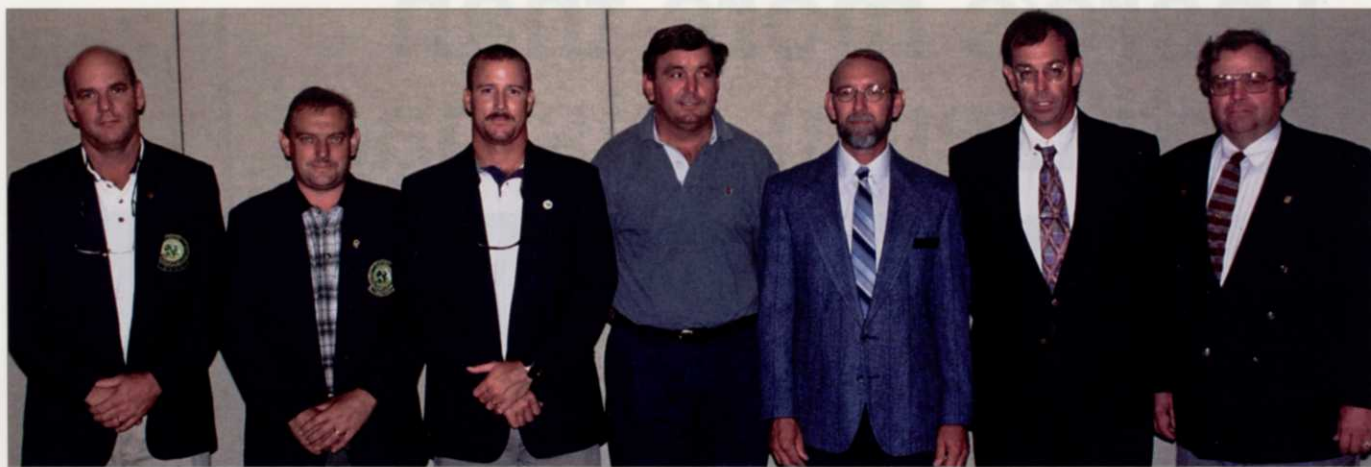
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1997-98 FGCSA Board of Directors from left: Cary Lewis, CGCS, West Coast; Geoff Coggan, CGCS, Central Florida; Craig Weyandt, Treasure Coast; David Court, CGCS, Palm Beach; Jim Goins, South Florida; Paul Illgen, Seven Rivers; and Gary Grigg, CGCS, Everglades. Not pictured: Todd Carlton, Coastal Plains; Steve LaFrance, North Florida; Roy Wilshire, CGCS, Ridge; and Tom Crawford, Suncoast. Photo by Joel Jackson.

Crowfoot renamed in honor of Kamphaus

FGCSA leaders take office at annual event

BY JOE ONDO, CGCS

AND JOEL JACKSON, CGCS

The 21st Crowfoot Open weekend began Saturday, August 2, 1997 with the Summer FGCSA Board of Directors meeting and FGCSA Annual Meeting for election of officers.

The new officers for 1997-98 are Joe Ondo, CGCS, president; Mike Perham, CGCS, vice president; and Darren Davis, secretary/treasurer. Other highlights of the meeting included:

- Adoption of the 1997-98 operating budget
- A report from Roy Bates, president of the FTGA on the final stages of the IFAS Turf Coordinator selection
- Roy also gave an update on the movement to found a Florida Golf Alliance of all major golf entities in the state. The FTGA and FGCSA remain key players in this endeavor.
- Golf Agronomics donated \$6,000 from proceeds of their rebate program. This makes six straight years of participation by GASH. Their donations have exceeded \$30,000.
- Review of the 1997 Florida Legislative session by consultant, Mike Goldie.



FGCSA President Joe Ondo, CGCS, left; Mike Perham, CGCS, center, vice president; Darren Davis, secretary/treasurer.

The Fall FGCSA Board Meeting is scheduled to be a two-day affair, Nov. 7-8, at the Grenelefe Resort in Haines City. The meeting will feature Joe O'Brien of the GCSAA as facilitator of a one-day planning and organizational assessment session on Saturday following the regular board meeting on Friday. All chapters should send their representatives to this informative working session.

Sunday, Aug. 3 was spent in practice rounds and theme park visitation as superintendents' families took advantage of the Crowfoot Open's proximity to Disney World, Sea World and Universal

Studios. Later that evening, the traditional banquet got a new look as a casual pool party held at the host Grand Cypress Villas. After a sumptuous buffet dinner, the crowd was entertained by a Polynesian revue complete with hula dancers who selected willing subjects from the audience.

Host Tom Alex announced that the Crowfoot Open will be known as the Larry Kamphaus-Crowfoot Open in honor of Walt Disney World superintendent Larry Kamphaus who served as chairman of the event for the past 17 years.

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James Goins, left, president of the South Florida Chapter, presents Joe Ondo, CGCS, with a check for \$12,000 for the FGCSA Research Fund. The money was raised at the 1997 South Florida Turf Expo.



Dale Kuehner, CGCS, right, immediate past president, is presented a plaque for his service by former FGCSA president Greg Plotner, CGCS.



Dale Mitchell, left, and Richard Coyle, right, present Dale Kuehner, CGCS, with a check for \$6000. This donation marks over \$30,000 in support for the FGCSA from Golf Agronomics.

Larry died unexpectedly of a heart attack in June. Joel Jackson presented a framed picture of Larry and the eulogy that appeared in the summer issue of the *Florida Green* to the Kamphaus family.

Larry's wife, Vilma, continues to serve as co-chairman of the Crowfoot Committee.

An 8:00 AM shotgun start was the order of business for 120 players on the New Course at Grand Cypress on Monday, Aug. 4.

The low gross superintendent this year was Chris Cartin who fired a fine 69. Cartin won a spot on the FGCSA team to compete in Anaheim, Cal. in 1998.

Finishing second was Mark Hopkins and third was Buck Buckner. In the net division, first place went to Ron Rood with Chad Sartain and John Lamrsh taking second and third.

Ken Ezell of Clifton, Ezell and Clifton topped contestants in the commercial gross division besting Dick Bessire and J. R. Gall. Meanwhile, Kent Busser led

Gary Ray and Will Cassidy in the commercial net division.

The team of Chris Cartin, Chad Sartain, Tom Diggins and John Lamrsh brought the Crowfoot Open trophy home to the host Central Florida chapter.

Special thanks to Lisa McDowell and her parents Bob and Jan Lloyd for their help at the banquet and tournament registration; to Jim Hagstrom, tournament coordinator at Grand Cypress for help in the scoring. A big pat on the back to Tom Alex and his staff for having the golf course in excellent condition and to all the employees at Grand Cypress who make each event there a special occasion.

Another great job by Vilma Kamphaus and the Crowfoot Committee. It was hard to stay focused this year without Larry being there, but his spirit was with us. He will continue to be remembered and honored in all the Larry Kamphaus Crowfoot Opens to come. Thanks to all the participants and sponsors. We hope to see all of you again next year.

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Superintendents well represented on FTGA Board, Executive Committee

Fun(d)-raising, education, trade show highlight annual FTGA Conference & Show

The 1997 Florida Turfgrass Conference and Show held in Sept. 4-7 had a lot to offer. There was a GCSAA seminar on aquatic weeds on Thursday; golf and fishing fund-raising tournaments on Friday; the annual Toro Corn Boil Friday night; workshops and concurrent educational sessions Friday and Saturday; and the trade show on Saturday and Sunday.

The new FTGA officers and directors for 1997-98 elected at the Annual Business Meeting & Luncheon:

• **President, David Barnes**, vice president/general manager of Greg Norman Turf Company. David, a 20-year veteran in the turfgrass industry is, among other things, a former golf course superintendent. His rich turf background extends back to his student days under the tutelage of the legendary Dr. G. C. Horn. David co-chairs the G.C. Memorial Fund Raising Tournament in Naples at the Poa Annu Classic every spring.

• **Vice President, Scott Wahlin**, CGCS, is currently the superintendent of the Longboat Key Club. Scott has been active in the FTGA since 1980 and the GCSAA

since 1985. Scott was certified in 1992.

• **Secretary/Treasurer, Mark Jarrell**, CGCS. Mark is another turf student who learned his turf lessons under Dr. Horn at the University of Florida. Mark has been an ardent supporter of the FTGA since 1972 and has served on the board for nine years. He was awarded the FTGA's Wreath of Grass Award in 1995 for his many years of service to the association. Mark has been the superintendent of the PGA National Golf Club in Lake Worth since 1979.

Directors:

• **Jan Beljan**, design associate with famed architect Tom Fazio for 18 years. Jan has served as a panelist for the Women in Golf Summit and as an instructor for the GCSAA. She is a two-year board member of the FTGA

• **Stuart Bozeman**, golf course superintendent and general manager of the Seven Rivers Country Club. Stuart was chairman of this year's Envirotron Classic hosted by the Seven Rivers GCSA at World Woods.

A member of the FTGA since 1979,

Stuart is looking forward to his first term on the Board of Directors.

• **Paul Crawford**, golf course superintendent at the Palm Beach Country Club for 17 years. This Michigan State grad has been active in FGCSA, FTGA and GCSAA committees and boards for over a decade. Currently the Business Manager for the *Florida Green*, Paul brings a wealth of organizational experience to the FTGA Board.

• **Christy Feary**, sales representative for Pro Plus Fertigation for 3-1/2 years. A member of the Central Florida and Treasure Coast GCSAs, Christy brings a degree in public relations to the FTGA Public Relations/Publicity Committee which she chairs.

• **Jay McCord**, marketing for Nutri-Turf, Inc. This Jacksonville resident has been an FTGA member since 1985 and served on the FTGA Board for the past four years. Jay has been a director in the North Florida GCSA. Jay is very active in other turf organizations serving on Turf and Horticulture advisory boards and councils.

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On behalf of the Everglades chapter, I wish to thank each and every sponsor for their support of this event. Many of these companies have been with us for quite a few years and it is wonderful to have that kind of dedicated support. It was great to see some new faces involved this year. Without supplier sponsorship this and many other events would not be possible. It has been very interesting to see the "Poa" evolve over the years. It should continue to change for the better with the new board taking over the reigns. We look forward to seeing everyone again next year and until then, may God bless you and your families. Thank you.

Terry Wood.

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15th Green
View from 17th tee
Photo by Daniel Zelazek



Winter Pines Golf Club...

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BY JOEL D. JACKSON, CGCS

The Winter Pines Golf Club averages 80,000 to 90,000 rounds of golf a year! Those kinds of numbers bring to mind muni courses with hardscrabble turf and often neglected amendments. Not Winter Pines.

Located one block west of State Road 436 on the east side of the city of Winter Park, the club has evolved over the years into a popular and well maintained facility. Under the visionary ownership and operation of the McMillin family and the professional stewardship of new FGCSA President, Joe Ondo, CGCS, sweeping changes and subtle improvements have been introduced over the years to keep providing a profitable and pleasing product to the golfing public.

The club opened in 1968 and was originally a par-62 layout. Never long but always challenging, the course is ideally suited for senior golfers, young golfers and beginning golfers of all ages. Even the good players looking for a venue to hone their approach game find Winter Pines a test of skill.

"The first tee time is officially 6:30 a.m. this time of year, but they'll tee it up as soon as they can see," said



The flash barely lights up this group of "dew sweepers," and they are the second group off! Photo by Joel Jackson.

Joe. Using a flash attachment, I took a picture of what I thought was the first group off the tee. Wrong! It was the second group.

The first group was already approach-

ing the third tee in the slowly brightening dawn as we rode the course..

"These are our regulars. These guys have been teeing it up every day, six days a week ever since I've been here," said

Joe. There's a lot of golf to be played and there's usually 294 more folks behind them on the busy days.

Like so many golf course sites in Florida, much of Winter Pines was de-

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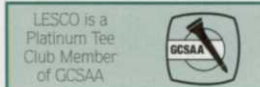
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veloped on mucky land not suitable for other building. In 1977, however, one parcel of the land containing holes 4 through 8 was sold for real estate development. A new set of holes was designed and built on some of the remaining low-land portions of the property.

“No one seems to recall who did the original design, and I couldn’t find a name in any of the files,” said Joe. “Bud Timbrook and Gardner Dickinson are on record as doing the new holes.”

This redesign allowed the course to be lengthened and the par increased to its present 67 giving patrons a couple more holes to unleash a long tee shot. Two years later, Joe Ondo would arrive to begin his role in the continuing transformation of Winter Pines.

With a staff of only eight including himself to groom the course, Joe Ondo

Reflections of the 2nd hole as seen from the green. Photo by Daniel Zelazek.

Florida Club Course Designer Dick Gray Uses Georgia Grass On His Greens.

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Tall trees shadow the 5th green at sunrise. Note the newly planted cypress tree along the lake bank. Photo by Daniel Zelazek.

is a prototype working superintendent. He can be found on a greens mower, fairway unit or rough mower when weather puts the mowing schedule behind, or when the ranks are thinned by illness or vacation. He is often the cup setter when the crew is busy verticutting or fertilizing the course.

He works hand in hand with owner Ed McMillin on projects like concrete cart path pouring, and he is the final shaper when greens and tees are rebuilt.

Joe's staff contains a blend of young and experienced alike.

Veterans Steve Brown, Bob Keeth and Bob Farrington provide a core of de-

pendable workers to anchor the team.

"I first met Bob Keeth when he was the superintendent of Rosemont Golf Course and I was a student on the Lake City summer bus tour," said Joe. "Bob lives just down the street and after he left Rosemont he came by one day looking for a job. He's been here 18 years."

Brown has been mowing and going at Winter Pines for 18 years also along with Keeth. Farrington is the senior crew member with 21 years of service to Winter Pines, and he doubles as the irrigation and spray technician.

Equipment longevity is also a matter of pride.

"We have a 1979 Toro HTM fairway mower that is still going strong," said Joe. "Having mature responsible operators helps make the equipment last longer."

Joe is no stranger to caring for the equipment as he has taken his turn grinding reels in his role as a hands-on superintendent. Grinding is a talent he learned while in the Lake City Golf Operations program.

With a small crew and big ambitions, Winter Pines has found a way to success-

Major renovations/projects

Starting in 1981 to 1987, added automatic irrigation system to holes #1 and #9 through #18 and the driving range. We did all the work in house. We kept the quick coupler system running while we did the renovation. Most holes now have double row coverage with Griswold controllers and valves. We did 1 to 2 holes per year as time and money permitted. We added on to the new system after the new #4 through #8 holes were built. In 1985, we took on effluent water from the city of Winter Park after they installed a 10-inch main line to the middle of the course. Over 2 miles of drainage lines have been installed in the last 18 years to keep the course open as much as possible. Constructed and poured over 6,000 linear feet of concrete cart paths to either replace old asphalt at greens and tees or to extend paths so they ended in dry areas to lessen damage by cart traffic. All this work was done by the owner and our crew. Rebuilt greens #2 through #7 and both practice greens one hole a year to replace contaminated Tifgreen 328 or Tifdwarf surfaces. All work done in house except for fumigation.



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1979 Toro HTM fairway mower and operator Bob Keeth are both 18-year veterans of Winter Pines. Photo by Joel Jackson.

fully accomplish its desired improvements. By doing things in-house, slowly and deliberately, one step at a time, they have shown their customers how they are making things better while keeping 99 percent of the golf course in play at all times.

Perhaps one of the biggest undertakings was to re-grass eight of the greens that were still planted in Tifgreen 328. All are push-up style construction with no under drains.


While it was impractical and cost prohibitive to core out the muck-based greens, the sod was stripped, herringbone drain fields were added to the base and greens mix added to the surface to provide a well drained root zone. Working at a pace of one green per season, seven of the greens have been completed to date.

The other greens contain some of the old original Tifdwarf from the 1960s.



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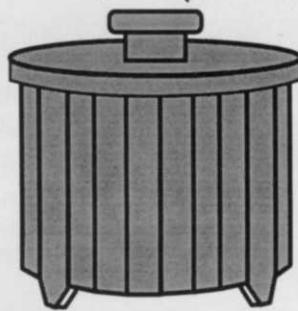
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Winter Pines Golf Club

Location: Winter Park, Florida.

Ownership: Ed McMillin and family.

Playing Policy: Public.

Average rounds per year: 80,000 - 90,000

18 holes: Par 67 playing at 5,402 yards.

Course/Slope Rating: Gold = 74/137; Blue = 71.8/132; Green = 69.6/127; Red = 71.8/127

Management Team: Club Manager & President, Jon McMillin; Head Golf Professional, John Pohira; Superintendent, Joe Ondo, CGCS.

Original designer: Unknown. The course opened in 1968 as an 18-hole par 62 course. In 1977, the original holes 4 through 8 were sold for homesites and bud Timbrook and Gardner Dickinson designed five new holes to make it a par 67.

Acreage under maintenance: 80 acres.

Waterways: Nearly 1 mile of canal and pond bank running through the property. Water quality managed by Aquagenix.

Greens: 3 acres. Average size = 5,000 sq. ft. Turf type = Tifdwarf. HOC: 5/32" year round. Overseeding - Type and rate: PhD Ryegrass and Winterplay Poa trivialis blend.

Putting surface goals: Consistent roll. Medium speed.

Tees: 1.5 acres Turf type = Tifway 419. HOC: .5" year round. Overseeding = Bright Star Perennial Ryegrass @ 15 lbs/m.

Fairways: 20 acres. Tifway 419. HOC: .75" year round. No overseeding.

Roughs: 50 acres. Turf type = Tifway 419. HOC including seasonal changes) = 1.5." No overseeding.

Irrigation: Source = 100% effluent from the City of Winter Park. Griswold electric controllers and valves with one or two heads off each valve. Double row Rainbird and Thompson heads.

Staff: Total of 8 including Superintendent. Mechanic - Steve Grode; Pest Control and Irrigation Tech - Bob Farrington. Bob has been at the club 21 years. Part time equipment operator and former mechanic (12 years) - Bob Keeth (18 years total). Bob is a retired Central Florida Superintendent. Equipment operator - Steve Brown (18 years).

Special circumstances, unusual conditions, which are challenging in managing the turf: Most holes built on muck or peat. Poor drainage and continual settling of soil creating water holding pockets. Constant modification of drain lines. Adding new lines and collection basins for quick removal of water.

Equipment: Toro triplex greens mowers; Jacobsen Greensking for tees and collars; Toro HTM 175 for fairways. Toro Spartan 7 gang for roughs and banks.

Cultural/pest control/fertility programs: Mole cricket program - Spring application of fertilizer with Oftanol. Spot treat areas as needed with 1% Microflo Dursban bait and Orthene. Weed control program - Fall application of fertilizer with Barricade for winter and early spring control. Spot treat areas as needed for sedge and goosegrass. Fertility programs for greens - .5 to 1.0 pounds of nitrogen per month with liquid supplements as needed.

Wildlife: Mallard ducks, anhingas, white ibis, blue heron, cranes, and 2 red tailed hawks that fly in and out from the nearby former navy training center.



Early morning at the 8th green. Photo by Daniel Zelazek.

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Joe and company cut out the herringbone pattern, saved the turf and then trenched the lines. Meanwhile, the customers played on only one temporary green for a few weeks.

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Compared to some of the new material planted on the renovated greens it is denser and less susceptible to the infamous "mutation" spots. Joe keeps the greens mowed at 5/32 of an inch all year with minor exceptions during overseeding and renovation.

"I apply .5 pounds of granular nitrogen per month to the greens and then spray weekly with a liquid fertilizer complete with minors. We like to verticut once per week and double cut the greens twice per week to keep the surfaces rolling consistently," said Joe.

These greens are also getting attention with the installation of drainage as needed. During the record rainfalls of the summers of 1993 and 1994, it was obvious that the other push-up greens would also need attention. Once again, taking one green at a time, Joe and company cut out the herringbone pattern, saved the turf and then trenched the lines. Meanwhile, the customers played on only one temporary green for a few weeks.

Cosmetically, the course has improved tremendously over the years. New lakes and ponds were created and recently over 100 cypress trees have been planted to accentuate the waterways and fill the low areas.

"We have had excellent results using Primo growth regulator on our fairways," said Joe. "We apply it at the 16-ounce-per-acre rate since we keep out fairways at 3/4 of an inch. The turf density has improved and we have fewer clippings to clean up. If we do have some clippings because of the early start, we come back

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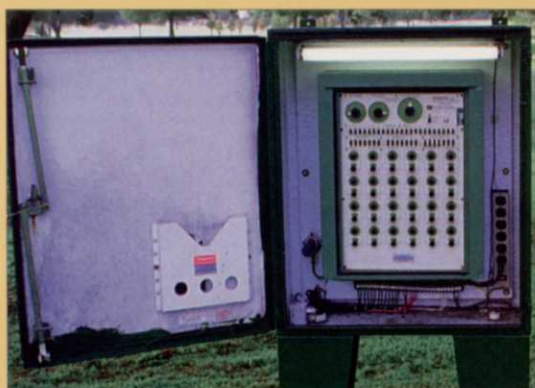
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Safety first! A dense podocarpus hedge is planted to trap possible stray shots on a parallel hole.



Unique and effective — all of Joe's controllers are housed in a second cabinet for maximum protection from the elements.

Winter Pines Tips

Photos by Joel Jackson



To eliminate worn turf on the busy first tee, a railroad tie ramp and landscape beds were installed.



Practical alternative — These artificial mats provide relief for the practice range turf when it needs a rest.



Judicious use of annuals can add color and highlight important features without being labor intensive.



View from behind the 16th green. Photo by Daniel Zelazek.

when it's dry and remove those areas."

Joe has altered his preventive pesticide programs over the years also.

"I used to treat wall to wall in the spring and fall with a preemergent herbicide, explained Joe. "Because we have so much traffic in the winter, I found that the spring application was retarding our transition on many occasions so, I quit the spring application. We just monitor any activity and spot treat as needed and limit the boom sprayings much as possible. Now I just use Barricade on fertilizer in the fall to control poa annua and volunteer rye seed that may get tracked around."

Old asphalt cart paths with their traditional crumbling edges have given way to neatly edged concrete paths. While not able to go wall to wall with paths, each tee and green path have been extended to begin or end in a high and dry area that can handle the traffic.

"The crew came up with a path edging system which works for them," explained Joe. "One guy edges and then a second

person follows with a Flymo. The Flymo chops up the clipped off runners, mows the turf and helps scatter the debris. They follow up with a blower which scatters the remainder leaving nothing to rake or shovel up."

Landscape plantings and railroad tie curbing and steps have been added to upgrade once downtrodden and worn tee and green slopes. The first tee and practice green areas are beautiful focal points and the judicious use of annuals adds a splash of color without being labor intensive.

Dense podocarpus and viburnum hedges have also been cultivated to provide protective screening around some of the tees on the compact layout that sports several parallel holes reminiscent of the old style course architecture.

Blessed with an involved and understanding owner, Joe is able to achieve these improvements and also actively participate in the industry he loves. Because Joe is a key player in the workforce of his club, he must pick and choose

carefully the conferences, classes, seminars and events that he can attend. On the other hand, he is living proof that it can be done successfully.

I have known Joe for almost 20 years now. Hard to imagine it's been that long, but he was practically the only external vice president of the Central Florida Chapter I have ever known. He served faithfully in that capacity for 14 years. That's a lot of FGCSA Board meetings and local chapter meetings.

But there are the rewards of all the friendships, the golf competitions and the learning that make it worthwhile. He has earned the respect of his peers by his unselfish service to his fellow superintendents. Look for Joe's tenure as president to be filled with thoughtful progress and willing participation from those who have come to know him over the years.

Joe's quiet, unassuming manner belies the passion which he harbors for his profession and the game of golf. If you want to know what kind of person he is, just watch him play golf. Thoughtful club

Joe Ondo

Originally from:

Kinsman,
Ohio.

Family: wife of 14

years,
Kathryn; 3
Shihtzu dogs.



Education: Joseph Badger High School, Kinsman, Ohio 1971; A. S. Golf Course Operations - Lake City Community College, class of 1975.

Employment History: During high school and summers, crew member at Bronzwood G.C., Kinsman, OH; 1975-78, Assistant Superintendent, Sharon C.C., Sharon, PA; six months at Lost Tree CC, North Palm Beach until accepting superintendent position at Winter Pines on April 2, 1979.

Professional affiliations/Offices held/Honors/Awards: 1975 Scholarship from Florida PGA for Outstanding Achievement in Golf Course Operations at Lake City Community College. External Vice President of the Central Florida Chapter for 14 years. President of Central Florida Chapter 1985-87. GCSAA member since 1980. FTGA member since 1981.

People in or out of the industry who have influenced your life and career: Jim Bronson owner of the Bronzwood GC gave me my first job on a golf course. I still play the course every time I go home to Ohio to visit. Carl Bronson, superintendent, Eastlake Woodlands. Jim is Carl's father. Carl and I played high school golf together and worked on the golf course. I visited him at Lake City Community College once and decided to attend school there. John Lapika, Superintendent at Annadale GC in Mississippi. I worked for John at the Sharon CC in Pennsylvania and at Lost Tree CC when I moved to Florida. John used to be the superintendent at Winter Pines in the early '70's and helped get me an interview and the job at Winter Pines. Last but not least, my father, Frank Ondo and neighbor Roy Posey. We all started playing golf when they built the Bronzwood Golf Club in the early 1970's.

How did you get into the business? In high school, I earned a golf scholarship to Youngstown State University. I started out as an engineering major, but calculus and physics and I didn't get along. I switched majors to education, but didn't really like it. I visited my friend Carl at Lake City and found a home in Golf Course Operations. I graduated in 1975. Took a job as an Assistant at the Sharon Country Club and I've been at it ever since.

Goals/Accomplishments: I became certified in 1986. It was and is an incentive to keep taking classes and keep up to date with our growing profession.

Philosophy: Plan as best as you can, but take each day separately and deal with what it brings you to best of your ability. Don't be afraid to work hard and put in the hours it takes to get the job done. Good things will eventually happen and you'll be a better person for it.

Personal memorable: I had a hole-in-one on the 3rd hole of the New Course at Grand Cypress during the 1990 GCSAA Golf Championship. Conversely, I got hit in the head with a golf ball one day while out on the course talking to our owner about where to put a new cart path. I spent half a day in the hospital. Now we all wear hard hats on the job!

Hobbies and interests: I try to play in as many amateur golf tournaments in the state as time and money will allow. I like to read about golf, work related subjects, the history of our profession and the history of the game itself, so I subscribe to a lot of magazines and collect books on those subjects.

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On this day, the working superintendent monitors mole cricket "hot spots," and applies a 1% Dursban bait where needed. Photo by Joel Jackson.

and shot selection. Smooth, unhurried powerful swing. Precise accuracy. Consistent and determined execution. Appreciative but humble with the results. Relentless competitor.

The way he plays the game reflects the way he approaches his daily work and his relationships. I'd call him "a natural."

Not surprisingly with those characteristics, Joe is an excellent amateur golfer. Sporting a USGA handicap that hovers around 3 to 5, he traditionally places high in local and state amateur events and at all the superintendent events around the state.

On several occasions he has made the FGCSA national team to represent Florida in the Golf Course Superintendents Association Golf Championship held annually in conjunction with the national conference and show.

Joe is also a voracious reader on any subject dealing with golf. He gets tremendous satisfaction and relaxation from

reading articles and books that tell about the history of the game.

He also reads all the trade journals to keep up with the latest innovations in the business.

He is keen to watch and learn anything and everything he can from a golf outing at another course. If he doesn't get a chance to talk to the host superintendent about something he saw on the course, he will call him within a few days later to discuss whatever caught his attention.

Meanwhile back at Winter Pines, it's always about people and participation. There is a feeling of family and camaraderie. From the regulars flocking to play the course to the banter in the clubhouse over lunch, after golf and after work.

The strong teamwork among Joe, owner Ed McMillin, general manager, Jon McMillin, and head pro John Pohira makes for a facility that definitely rates as the people's choice.

If you want to know what kind of person he is, just watch him play golf. Thoughtful club and shot selection. Smooth, unhurried powerful swing. Precise accuracy. Consistent and determined execution. Appreciative but humble with the results. Relentless competitor.

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No-Fear Computing!



us — not you, me or anyone else — can really grasp the magnitude to which the computer is going to directly or indirectly change the way we work and live our lives over the next few years. We're not talking the Jetsons or Star Trek (as in futuristic) — we're talking about the next two? three? or maybe five years down the road. (Possibly before your favorite jeans wear out.)

• It's also safe to say there is no industry — or ever has been one throughout history — that is evolving as rapidly as the computer

world is today. We're not talking about years (or even months) here. Dramatic changes and improvements in software and hardware are announced virtually every week, if not every day — which will trickle down to our industry.

• Although golf course management is a primarily "outdoor sport," this will change somewhat over time. One of the driving forces will be the integration of very sophisticated technology, including GPS (global positioning systems).

Read that as satellite) and GIS (geographic information systems) technology into irrigation, pest and disease tracking/prediction models, pesticide application and labor management systems.

GPS-based irrigation control software packages and GPS-based pesticide application technology were unveiled at the Las Vegas GCSAA show earlier this year.

Both GPS and GIS technology will allow (and mandate) management of more and more of the golf course from within, either by yourself or one of your staff. As technology evolves, golf course superintendents will spend less time *doing*, and more time *managing* their resources, including information.

• Perhaps the most important reason to take the plunge is evidenced by the growing number of superintendent and assistant job announcements today that specify "advanced computer literacy required." Enough said.

So what is this No Fear! business about?

Having been asked to speak at several of the upcoming conferences and seminars, on subjects ranging from computing in general, to the Internet, to TurfNet Online specifically, I have been forced to try to distill my own personal learning curve over the past few years into its basic elements.

What has allowed me to start from scratch and learn how to use one of these things at (ahem) the gateway to middle age? It boils down to (borrowing a phrase from the athletic apparel company): No Fear!

If you are envisioning mountain climbing, parachuting or hang gliding, that's not the image I meant to portray. Better, picture a four-year-old, perched on a stool, gazing at a computer screen, deftly wielding the mouse, navigating a simple game. That is the essence of no-fear computing!

Kids have no preconceptions or misgivings. It's a toy, with one big button on it. Turn it on, turn it off. Doesn't bite. Doesn't scratch. Doesn't sting. The computer doesn't hurt them, and they, by-and-large, can't hurt it!

BY PETER L. MCCORMICK

TurfNet Associates, Inc.

This is the time of year when the season winds down for many of you around the country. You're on the downswing, over the hump. During this calm before the approaching storm of winter conferences and trade shows, I thought I would take a step away from our traditional format and focus on the mechanics and mentality of using (and learning to use) computers in golf course management today.

Now, before you say, "I couldn't give two flying foxes about computers" and turn the page, read on.

Why computers? Let's start with several assumptions:

• It would be safe to say that no one of

Doing it

Make the decision to do it.

It's a natural first step for anything. Now is as good a time as any. Don't wait for New Year's Day to make the resolution though, because then comes the National, then vacation, then you're back into it before you know it. Take advantage of the off-season (if you have one) for some personal development. Do it now.

Do a little homework.

Pick up a copy of one of the Computers for Dummies series of softbound books, which are good primers for getting started. If you try the library, check the copyright date. Older than last year? Forget it. Find another book. Many magazines will swamp you with jargon.

Buy a decent computer capable of running today's software, preferably for home. Surprise the kids for the holidays. Or, better yet, treat yourself. Don't try to start with someone's castoff from a garage sale. You'll only add to your frustration.

The price is right.

You can buy a Pentium 166 or 200 today with all the bells and whistles (CD-ROM drive, faxmodem, sound card, monitor and all) for less than \$1500. Add a color inkjet printer (or a low-end laser) and tax and you're at \$2000. Half of what that system would have cost 18 months ago. It's plenty to get started, and will more than likely serve you well for several years.

Why buy for home?

The workplace is no place to learn to use a computer — way too many distractions. Set yourself up with a desk in a quiet corner of the house, with a good desk chair, decent lighting and a phone jack nearby. Once things quiet down, power up!

Play a game.

Before you dive into the heavy stuff, fire up the Windows Solitaire game. Beyond entertainment, Solitaire is there for a reason: it's a great way to learn to use the mouse. What's the big deal? The first time you move a mouse with your right hand and try to coordinate it with the little arrow moving around on the monitor, you may wonder if your fingers are actually connected to your brain.

Start simple.

Most new computers today come

loaded with an assortment of software. Many offer one of the "suites" of applications, like Microsoft Office or Lotus Smart Suite, which have advanced word processors, personal information managers (electronic Rolodexes and datebooks), spreadsheets, and database programs.

The advantage of the suites is they have a common "look" and "feel" throughout the variety of applications. The downside for the novice is these advanced programs can be overwhelmingly complex. I doubt even serious users barely scratch the full

potential of Microsoft Word. Not the place to start!

Some computers also have a simpler group of programs, like ClarisWorks, which are generally easier to learn how to use. My best suggestion: start with a very simple word processor, like Windows Wordpad. Compose a short letter, practice changing your margins, highlighting text, changing fonts and text sizes, bolding, italicizing. Then, save your work, and print it.

Learning is cumulative.

One of the fascinating aspects of learn-



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Each of the four individual chambers articulates in two planes, allowing the deck to wrap over hills or flex up a bank. This out-front rotary mows places other rotary mowers cannot.



The Contour 82 can quickly be latched into place for transporting between mowing areas, at up to 15 miles per hour.



The out-front visibility provides for easy trimming around obstacles. Adjustments in $\frac{1}{4}$ inch increments allows for fine-tuning the height of cut between one and four inches.



Contour™ 82 takes rotary mowing where it's never gone before.

Rugged Ultra™ Hydraulic motors drive each of the Contour 82's four 22" blades.



Specifications

- Deck Configuration: Out front deck with a right hand trim offset. Four individual chambers jointed for articulation. Hinges down -20° and up $+20^{\circ}$. One blade per chamber.
- Cutting Width: 82".
- Height-of-Cut (HOC): 1" to 4" by .25" increments.
- Blade Size: Four 22" long by 2.50" wide by .25" thick heat treated steel blades with formed parallel sails.
- Anti-Scalp Features: 11" diameter anti-scalp cups on each blade.
- Discharge: Rear discharge with partial recycling.
- Blade Drive: High efficiency gear pump on the Groundsmaster® 3000 transaxle. Four integrated spindle hydraulic motors.
- Overhang/Trim: 21" on the right and 6.5" on the left, from the outside of the drive tire.
- Safety: Deck and traction unit comply with ANSI B71.4-1990 and CEN standards.
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ing to use a computer (and believe me, the learning never stops!) is that it builds on itself.

I recall the first evening with my first computer four years ago, trying to fumble through WordPerfect. It took me two hours to figure out how to center the text on the page. But I discovered how to do ten other things during the process. And so it goes.

Read the manual.

Do real men ever read a manual? Only if you want to shorten the "exploration" process in the previous paragraph from two hours to about 10 minutes.

Don't attempt to read it like a novel. Your chin will hit your chest in about three minutes. Use it to solve specific challenges.

Better yet, use online help.

One of the downsides of loaded or downloaded software is you often don't get a printed manual at all! Many software manufacturers are building their manuals into the help sections in the program itself.

And that's really better, because it's searchable by topic, and usually much faster to find an answer than thumbing through a manual.

Ask questions.

Leverage anyone you know who knows more than you do. Your assistant, wife, assistant's wife (easy now), crew, neighbors — yes, even your kids. Several months ago, when I first tackled HTML to do our website, I found my Internet service provider to be of great help, dramatically shortening my learning curve. Swallow your pride. Ask!

Take a class?

I really shouldn't comment on this one, because I've never done it. I have heard numerous guys tell me, "Yeah, I'm going to take a computer class one of these days" — but there it ends. You're better off just diving in, rather than procrastinating further by waiting for the time, place and motivation to come together all at once in order to do the class thing.

Safety nets:

Save your work early and often.

I learned the hard way. Too many

times. Start a new project, spend an hour working on it, then go to print it. Before you can hit the PRINT icon, the power goes off.

Poof!

Kiss your hour's work goodbye. The remedy: When you create a new document or file, name it, save it, and save it again periodically. If the program has a "prompt to save every "so many minutes" feature, use it.

Create a "data" directory or folder, and save all your files there. Then, back it up.

It's much easier and simpler to back up (create duplicate copies of) your files if they are all located in one central place, rather than scattered all over your hard drive among your program files. Get a tape drive, or one of the newer ZIP or JAZ drives, to make a backup copy of your important files, in case of a problem.

SITHOAWA

This is perhaps the most valuable

tip of all. A wonderful acronym. When you're stymied, stuck, frustrated, aggravated, or ready to put your fist through the monitor, invoke the SITHOAWA rule:

Shut It The Hell Off And Walk Away!

Learning to use a computer is much like learning to play the piano. At first intimidating, at times frustrating, yet ultimately rewarding and enjoyable. Progress at both is maximized by frequent practice of short duration. But you can't learn either until you sit down at the keys.

Computer geeks and accomplished pianists are no smarter than you or I. They just started a little earlier and perhaps applied themselves a bit more.

To coin another phrase from that athletic apparel company: Just do it!

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Taking care of business

How important is administrative help to a golf course maintenance operation?

BY SHELLY FOY

USGA Green Section

AND ROBIN RABY,

*Administrative Assistant
Royal Poinciana Golf Club*

Times have changed for golf course superintendents. Gone are the days of spending most of your time where you need to be spending most of your time ... on the golf course. Today's superintendent can be found in the office working on budgets, ordering supplies, answering the phone, fielding questions from members, and trying to keep up with mounting administrative paperwork.

A recent poll of superintendents in Florida who do not have administrative help revealed the following:

- On a normal day, there may be 20 phone calls to respond to, and during construction or renovation, as many as 30 to 50 calls daily.

- Many superintendents who need administrative support are still trying to convince their boards or general manag-



ers that there is a need for a secretary or administrative assistant. Depending on the golf course, administrative duties for superintendents are averaging 15 to 20 hours per week, or more.

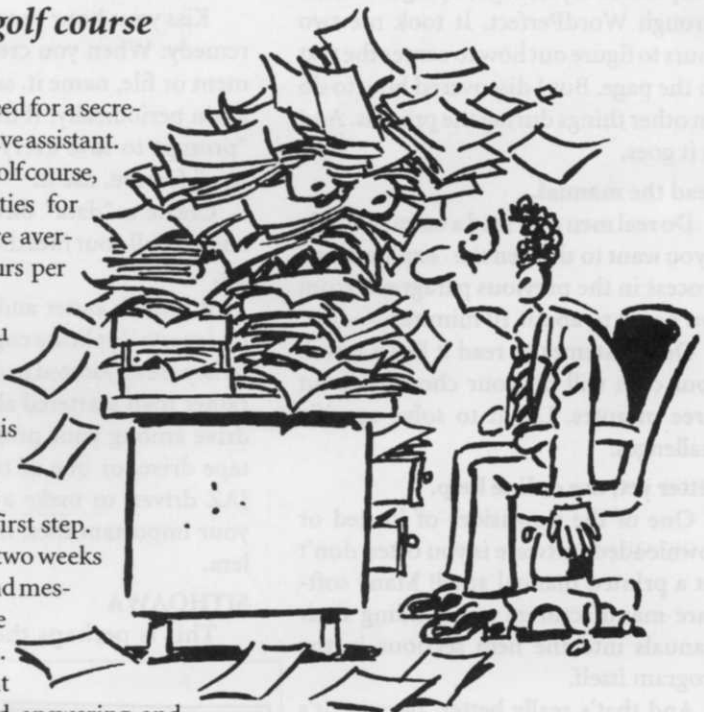
For those of you in need of administrative help, how do you justify this extra support?

Documenting your needs is the first step.

- Keep a log for two weeks of all phone calls and messages you receive during the day. Record the amount of time you spend answering and following up on those calls. Were you able to return the calls in a timely manner, or was it a couple of days before you could get back to them?

- Record the time you spend on paperwork each day. Be sure to include time in meetings with managers or staff, as well as seminars you attend to maintain your certification and licenses. How much time do you spend typing memos, reports, and club newsletters? Who takes care of the office when you are away, another employee, an answering machine or no one?

Before turning in your request to the board or general manager, look over your budget and see if there are things you would not mind giving up to have administrative help. Be willing to



compromise if necessary. Having someone to share the load is worth a little compromise, even if your budget will only allow part-time help.

Another option may be to let an existing employee split their day between the golf course and the office. There may be someone who would not mind spending some of the day inside and taking on a little extra responsibility. One golf course superintendent said that having office help was as important to his golf course operation as the irrigation or spray technician. He also said he would sacrifice one person on his golf course to have administrative support.

Bill Jeffrey, CGCS, expressed great frustration at the lack of administrative help because he is spending more hours at his office just trying to keep up with it all. He spends one hour before the crew comes in, at least an hour and half after they leave, and 4-5 hours every Friday afternoon working on administrative duties. Bill had office help for 12 years at a previous golf course, and now has been 10 years without that help.

"In that 10 years, the amount of administrative work has increased tenfold," says Jeffrey. "When I had office help, I felt like I got more accomplished, was more efficient, and I was definitely less frustrated."

For Bill, who has small children, taking work home is not an option. There is no office space, and no quiet time to do paperwork. "Personal time? Ha, forget it".

Once you have documented the need for office support, the second step is determining the duties and responsibilities of your administrative support person.

The following are suggested guidelines.

1. Review the position; define responsibilities and the required education level for the job. Basic duties may include:

- Processing purchase orders
- Comparing invoices and related documents to determine correct billing for products received

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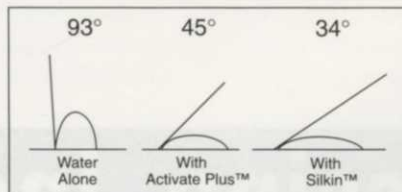
Using Adjuvants In Your Plant Protection Program

Here's how adjuvants can improve the performance and coverage of your plant protection product applications.

Using adjuvants in your turf management program can help you improve plant protection product performance. They can even make the difference between peak and poor performance. The starting point is to find the right adjuvant for the job. The most commonly used adjuvants for turf are: wetting agents; spreader/stickers; spreader/activators; sticking agents, and buffering and compatibility agents.

Wetting Agents

If you've been making thorough herbicide, fungicide and insecticide applications but still aren't getting the control you expect, your plant protection product may not be penetrating plant tissue surfaces. This reduces control and leaves spray residue susceptible to wash-off. The wetting agent Riverside® Silkin™ helps sprays penetrate plant tissue quicker for improved overall performance.



The wetting agent Riverside Silkin and spreader/activator Riverside Activate Plus™ reduce surface tension of spray so that it forms "flatter" droplets, improving coverage and absorption.

Spreader/Stickers

Good control in some areas and poor control in others could mean drift and wash-off are taking their toll on spray performance. During application, spray droplet size varies, reducing adhesion and causing spray to miss the target. To improve coverage and adhesion, use the spreader/sticker Riverside Complex™. It adjusts droplet size for better performance, even under adverse conditions. By reducing surface tension in the spray droplet and keeping the spray mixture suspended, Complex can dramatically improve the efficiency of herbicides, fungicides and insecticides.

Spreader/Activators

Droplet size varies during applications, making retention and distribution more difficult. Spreader/activators work in much the same way wetting agents

do. They deliver more uniform droplet distribution, quicker wetting and increased spray retention on leaf and stem surfaces when used with herbicides, fungicides and insecticides.

The spreader/activator Riverside Activate Plus improves performance and efficiency by moving the spray into plant tissue more quickly. By speeding up penetration, you get increased pest control.

Sticking Agents

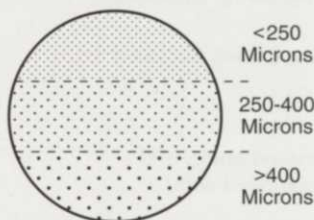
Contact herbicides, and non-systemic fungicides and insecticides can sometimes be washed away by rain, irrigation or even dew. Plant protection product sprays are also affected by drift. The sticking agent Riverside Plex® helps plant protection products penetrate the vegetation canopy and stick to plant tissue. That also helps control drift. Using



Riverside® Adjuvants Maximize Your Pest Control.

Plex will help you make applications that will last longer, even in wet conditions.

Approximate Actual Size



Spray droplets under 250 microns are susceptible to drift and poor coverage. Using Riverside Plex or the spreader/sticker Riverside Complex to control droplet size effectively controls drift and

improves coverage. Both maintain droplet size near 400 microns, ideal for the best application.

Buffering and Compatibility Agents

If you're not getting the control you want but have followed label directions to the letter, it could be a pH problem in your tank mix. The buffering agent Riverside Combine® will help you correct the pH level for maximum performance from your spray mixture. If you're unsure of your pH level, use a pH test kit or, if you don't have one, contact your Terra representative.

Combine® pH use chart.

		Starting pH			
		9	8	7	6
Desired pH	8	2	0	0	0
	7	4	2	0	0
	6	16	12	8	0
	5	20	16	12	8
		Oz/100 gal. water			

A chart like this one makes it easy to adjust pH level for optimum results. For example, if your desired pH is 7 and your starting pH is 9, you would need to mix 4 ounces of Combine per 100 gallons of water to get the proper pH.

In addition to buffering, Combine also works as a compatibility agent. The compatibility agent Combine should be used when: more than one plant protection product is included in a tank mix; when tank mixing different formulations like wettable powders and liquids; or when applying micronutrients or plant protection products with fertilizer. Also, Combine improves spray mix stability and dispersion.

To see if a compatibility agent will help your tank mix, try the jar test. Fill two quart jars each with a pint of water or carrier. Use the same source and temperature as you would in your actual tank mix. Mark one jar "with" and one "without." Add 1/4 teaspoon of Riverside Combine to the jar marked "with" and shake it gently for 5-10 seconds. Add the plant protection product(s) to both jars in the proper volume and sequence according to the label directions. Shake gently before adding each new product. Wait 5-10 minutes. Check both jars. If no gels, sludge, flakes or other irregularities are present, the mix is compatible.

If the jar marked "with" is compatible and the jar marked "without" isn't, a compatibility agent should be added to your tank mix. If the jar marked "with" isn't compatible, the tank mix shouldn't be used.

Wait 30 minutes. If the mixture separates but readily mixes again, the tank mix can be used with proper agitation.

Adjuvants Pay Off

Overall, adjuvants can help you protect the investment you make in plant protection products by making them more effective. Whether you're using wetting agents, spreader/stickers, spreader/activators, sticking agents, buffering and compatibility agents or all five, they can help you overcome some of the common problems faced by turf professionals.

For more technical information on adjuvants, contact your nearest Terra Professional Products representative.



Get maximum plant protection product performance with Riverside® adjuvants. They make spray mixes work harder, perform better and control more.

Adjuvants help you get the most out of your program and protect your plant protection product investment at the same time. Riverside adjuvants make the difference between a good job and a great job. Use them with your spray applications to maximize performance.



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Operations Checklist

Robin Raby, administrative assistant for Royal Poinciana Golf Club, developed the following Organization Checklist for Golf Course Operations:

• Procedures of Interviews and Hiring Practices

- Is application information complete?
- Are proper procedures maintained during oral interviews?
- Is identification reviewed and current?
- Are references checked?

• Employee Handbook

- Does the maintenance facility have its own employee handbook? If applicable, is the handbook available in other languages?
- Do employees sign an acknowledgment for receiving and understanding rules and regulations in handbook?

• Employee Files

Personnel files should be kept in the maintenance facility. Each file should include:

- Application
- Employee Orientation Check-list
- Medical History
- I-9
- W-4
- Emergency Contact Form

- Copy of Drivers License, Social Security Card, and/or Resident Alien ID
- Signed Acknowledgement of Probation Form
- Signed Acknowledgement of Receiving Employee Handbook
- Signed Receipt for Protective Equipment Received

• Drug Free Program

- Is there a program in effect?
- If so, do employees fully understand policy and consequences if policy is not complied with?

• Sexual Harassment Policy

- Is a policy written and posted?
- Is policy reviewed with new employees?
- Do employees understand policy?

• Workers Compensation

- Are copies of completed forms kept in a separate medical employee file?
- Are they signed by employee (if possible), as well as management?

• OSHA 200 Forms

- Are the OSHA 200 forms filled out properly?
- Are they posted, as law requires?

• Payroll

- Is payroll done in office?
- Are backup copies of timecards/timesheets kept if originals are forwarded to main office?

- Sorting and preparing invoices for coding and approval
- Following up on deliveries or services promised by vendors
- Assisting in keeping equipment maintenance histories and inventory
- Keeping employee records up to date
- Taking phone messages and scheduling appointments for superintendent; Responding to questions that do not need the superintendent to answer
- Accurate filing for immediate reference needs
- Computer/Word Processing work (letters, memos, reports etc.)
- Maintaining records for preparation of annual budget
- Maintaining file of applications received

2. Compare salaries, skill levels and experience with those of similar positions in your area. When determining salary, consider the demands of the position and specialized skills required.

For example, a secretary may answer the phone and refer calls to someone else. An administrative assistant may be required to help answer the caller's ques-

tion. An administrative assistant should also be aware of labor laws and hiring practices. Making sure that these are followed will help prevent labor-related legal action against the superintendent and club.

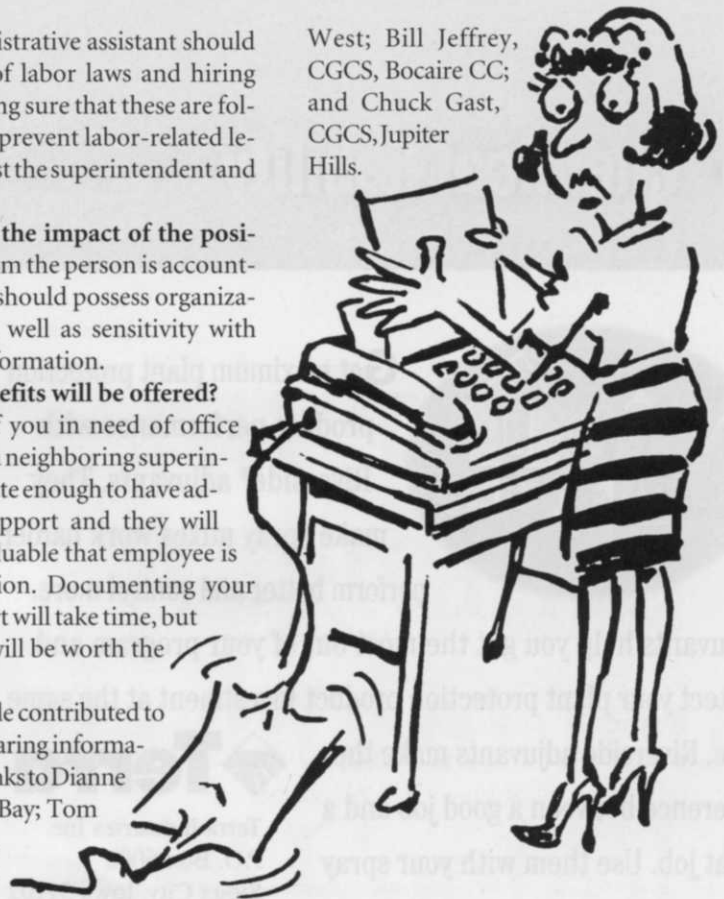
3. Consider the impact of the position and to whom the person is accountable. He or she should possess organizational skills, as well as sensitivity with confidential information.

4. What benefits will be offered?

For those of you in need of office help, chat with a neighboring superintendent fortunate enough to have administrative support and they will tell you how valuable that employee is to their operation. Documenting your need for support will take time, but the end result will be worth the effort.

A lot of people contributed to this article by sharing information. Special thanks to Dianne Radkin, Bonita Bay; Tom Trammel, CGCS, Metro

West; Bill Jeffrey, CGCS, Bocaire CC; and Chuck Gast, CGCS, Jupiter Hills.



• Safety Meetings

- Are monthly safety meetings conducted?
- Is attendance of each meeting taken and topics of meeting documented?
- Are emergency phone numbers posted and updated?

• Vacation and Leave of Absence

- Do employees complete a request in writing for vacation and leave of absence?
- Is there a policy in effect concerning leave of absence and return to work? Do employees understand and sign this request?
- Are forms kept in employee's file?

• Attendance and Tardiness

- Is attendance and tardiness documented and kept in employee's file?
- Is there a monthly sheet kept for all employees?

• Procedures of Termination

- Is proper procedure followed prior to and when terminating an employee?
- Is appropriate paperwork completed?
- Are exit interviews conducted?

• Invoices/Accounts Payable

- Are copies made and kept in vendor files before submitting for payment?

- Are orders complete and prices correct before submitting for payment?

• MSDS

- Is the MSDS book current with sheets for chemicals, herbicides, insecticides, etc.?
- Is there an inventory of all chemicals, herbicides, insecticides and cleaning compounds and solvents in mechanic's shop and maintenance area?

• Insurance

- Are materials readily available for employee's pertaining to insurance coverage?

• Miscellaneous

- Are copies of pesticide license(s) in one main file, as well as in employee's file?
- Are job descriptions written and given to employee pertaining to position and job expectations on the golf course?
- Is a Hazcom Policy in effect?
- Is a Hurricane Preparedness policy written, if applicable? Is it reviewed before each season?
- If applicable, are forms available in Spanish?

Thorough record-keeping at golf courses is required by law. Some superintendents may not be familiar with current laws and record requirements. There may be penalties involved if found negligent from non-enforcement. How many of the above items do you have completed?

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Public relations is part of the job!



You don't see public relations experience high on any list of qualifications for a golf course superintendent. Yet in the long run, the successful superintendents are the ones who recognize and practice good public relations within their clubs. There are several initiatives you should be aware of:

- A series of three syndicated news articles released by the GCSAA focusing on:

- 1) superintendents as community assets,

10 Ways Superintendents Promote

Usually, the superintendent isn't thought of as the marketer for the golf course. But, superintendents *can and do* have a big impact in promoting the golf course beyond providing premiere playing conditions. Here are a few of their public relations efforts:

1. Publish bulletins to local residents about chemical use on the golf course, explain IPM programs and pesticide methodologies and other aspects of golf course management.
2. Post GCSAA's Greentips in the pro shop or club house. This series of fact sheets provides important information to golfers such as golf car use, frost delays, recycling and pesticide use.
3. Provide regular lawn-care tips to the local news paper.
4. Write articles for publication in professional journals, such as Golf Course Management magazine.
5. Give reporters legitimate news, such as information about an upcoming tournament.
6. Invite reporters and other key contacts to play golf at the course.
7. Inform golfers in advance of construction or maintenance practices. Then golfers can schedule guests when the course is in top condition.
8. Invite school children to see what golf courses do for the environment.
9. Provide instructional posters on divot and ball mark repair to the golf professional.
10. Contribute to the community. They speak to garden clubs, environmental organizations, civic and business groups and schools.

Statistics: Fifty per cent of GCSAA members volunteer their time in nongolf community activities and 72 percent donate their time to community golf events.

Reprinted from GCSAA's July August 1997 Leaderboard

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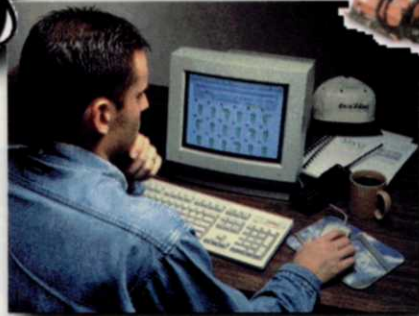
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2) superintendents and the Audubon School Program and

3) superintendents and their importance in the game of golf.

We will be running these articles here so you can clip or copy and use them at your club or in your community.

• FTGA launches pro-turf campaign. Pro golfer, Lee Janzen is featured in several public service announcements. Five huge billboards touting the merits of turfgrass sprouted up in five locations in Florida early this past spring as part of an ambitious public-relations campaign by the Florida Turfgrass Association. The campaign is an effort by the association to create awareness of one of the state's most precious natural resources..

Besides turf's obvious positive benefits for the general livelihood of the populace, the FTGA advertisements and promotional pieces point out that the turfgrass industry in Florida generates nearly \$15 million in expenditures annually. Almost 4.5 million acres of turfgrass exist in Florida, employing 185,000 people.

• FGCSA Video. A recently completed

A recently completed video is being made available to all superintendents for employees, members, owners and the general public.

project by the FGCSA, this video is being made available to all superintendents in Florida to use as an informational tool for employees, members, owners and the general public. It promotes the role of the superintendent in managing golf courses as a community asset and the positive influence a golf course can have on the environment.

Our industry has made public relations a key mandate this year. Use the sidebar on 10 ways superintendents promote and the following "Field of Dreams" syndicated article to do a little public relations on your own.

Superintendents are creating real fields of dreams

Whether you live in a well-developed urban setting, a sprawling suburban tract or a small rural community, it's likely that many of the people you interact with are golf enthusiasts.

Those who enjoy the sport are aware of the key person at the golf course when it comes to providing maximum enjoyment of the game.

A recent survey by *Golf Digest* revealed that nearly 50 percent of its readers indicated the golf course superintendent as the most important individual at their facility. That figure surpassed combined selections of the golf professional, course champion, club house manager and beverage facility personnel.

The golf course superintendent is the professional entrusted with the management and maintenance of the course. It's a responsibility that has grown in impor-

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tance during the past three decades as golfers have come to demand optimal conditions for playing the game.

Those heightened expectations have been largely fueled by expanding television coverage of professional golf events that highlight the nation's top courses. Also, budget limitations, unpredictable weather patterns, governmental regulations and increased participation all have an impact on the superintendents' operations.

"You won't find one member of the profession who doesn't say their career is a challenge," says Paul McGinnis, certified golf course superintendent and president of the Golf Course Superintendents Association of America (GCSAA).

There was a time when a person could climb the career ladder from a maintenance crew member to staff assistant to superintendent through on-the-job training.

But the level of knowledge necessary

The golf course superintendent is the professional entrusted with the management and maintenance of the course. It's a responsibility that has grown in importance during the past three decades.

to manage and maintain healthy turfgrass, administer large budgets and comply with environmental, safety and employee regulations has made education paramount.

The vast majority of superintendents have two- or four-year degrees in turfgrass science, agronomy or biology. This professional background is often supplemented with continuing education courses provided by organizations such as the GCSAA.

"I think most people get into this profession for two reasons," McGinnis says. "No. 1, many of us grew up on a golf course either as a worker or playing the

game. And No. 2, superintendents have a love for the outdoors and environmental stewardship. We understand what it takes to manage a facility so that it is a benefit to the community."

Golf courses also are becoming outdoor classrooms for schools, civic groups and junior golf programs. It's not unusual for people to take to the course, not in search of birdies, but of animals, aquatic life, various plant species, composting projects and nature trails.

"The facilities not only offer recreation, but provide an environmental sanctuary to numerous plant and animal species," McGinnis says.

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Florida's Davis and Grigg serve on EPIC's first advisory board

EPIC of Wisconsin, producer of the videomagazine "Golf & Environment," has created its first professional advisory board. Also, G&E's focus will expand to educational topics while still maintaining an environmental angle.

The new board includes several superintendents — Darren Davis of Olde Florida GC in Naples, Fla.; Gary Grigg, CGCS at Royal Poinciana GC in Naples; Ted Horton, CGCS at the Pebble Beach Co., on California's Monterey Peninsula; Paul Latshaw of Congressional CC in Bethesda, Md.; Ken Mangum, CGCS at Atlanta Athletic Club in Duluth, Ga., and a GCSAA director; and Don Tolson, CGCS at Fox Hollow at Lakewood in Lakewood, Colo.

Association members of the board are Joe O'Brien, chief operating officer at GCSAA; Jim Moore of the USGA; and Ron Dodson, president of Audubon International.

Industry members are golf course architect Rees Jones; Tim Young of Rain Bird Sales Inc.; Bill Rose of Tee-2-Green Corp.; Clair Peterson of John Deere & Co.; Jim Biehl of Excel Communications Inc.; and Jim Becker, Sandy Schmieder and Jeff Litrenta of EPIC of Wisconsin.

-GCSAA Online

Lights, Camera, Action

Peter Jacobsen, Ken Venturi, Dan Quayle top GCSAA Show cast

Casting is complete and the show is almost ready for viewing. Get your tickets now! GCSAA has announced another

star-studded lineup for the 69th International Golf Course Conference and Show.

Leading off will be keynote speaker Peter Jacobsen, a veteran PGA Tour golfer widely known for his humor and family commitment. Later in the week, former Vice President Dan Quayle will be the featured speaker at the Environmental General Session.

Wrapping up the conference will be the presentation of the 1998 Old Tom Morris Award to legendary golfer and television personality Ken Venturi. For a musical climax to the conference, singing star, Trisha Yearwood will serenade the audience.

Between all the superstars above, a cast of thousands will be involved in presenting and attending the greatest show in turf for you the superintending public. Come one, come all, and register and be educated and entertained in Anaheim, Cal., Feb. 2-8, 1998.

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FGCSA joins associations seeking to unite state's golf industry through Florida Golf Alliance

Ten prominent golf associations in the state are attempting to do what the Florida Golf Council couldn't do a few years ago: unite and focus the golf industry in Florida.

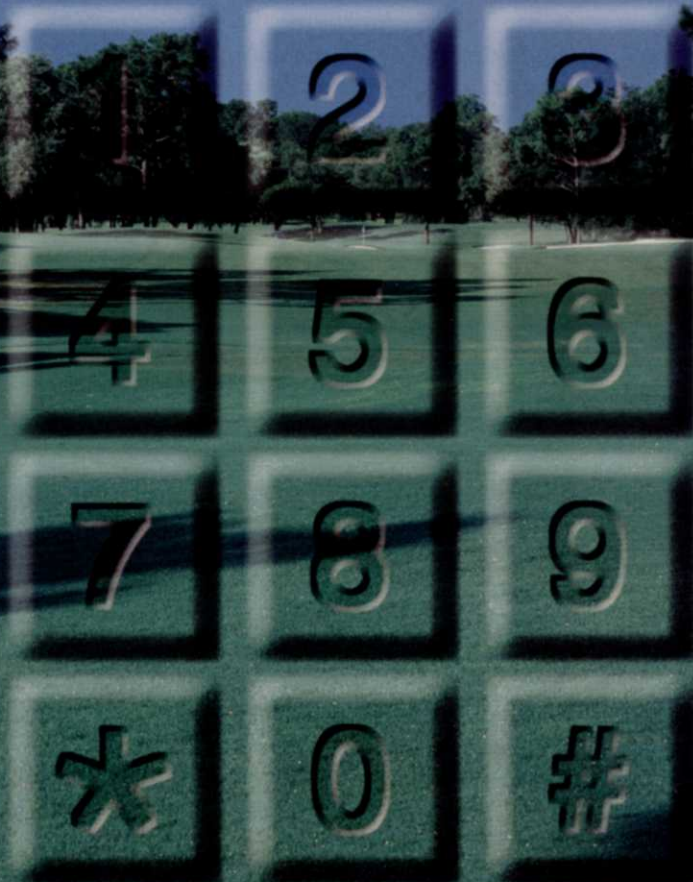
The golf industry in Florida is big business, employs lots of people, pays lots of taxes, but gets very little representation in matters of commerce, tourism and government regulation.

Those of us in the turf management side of the business have been looking for years for a way to marshal the golfers and golf course owners in the fight to protect the industry from unfair regulation and taxation. Perhaps this new initiative will bear fruit in the search for a voice for all of golf in Florida.

Jack Brennan of the Golf Association of Florida has been the point man in handling the preliminary paperwork and organizing meetings.

Founding members who have pledged seed money to form the alliance are: Florida Golf Course Superintendents Association, Florida Turfgrass Association, PGA Tour, LPGA Tour, Tommy Armour Golf Tour, Florida Club Managers Association, Sprint Titleholders Championship, GTE Classic, North Florida Section PGA, and South Florida Section PGA.

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Wear and tear by man, machine and the elements take a toll on the turf and the infrastructure like drainage, irrigation and cart paths. All of these processes disfigure the course from its original design.

Advancements in the game itself of-

ten challenge the owners or members of a course to reroute holes, add or eliminate bunkers, add tees, plant trees or just make overall improvements to the facility to make it attractive to new members and remain competitive in the marketplace.

If your club is thinking of rebuilding or remodeling your course, the American Society of Golf Course Architects has several free brochures that may be of some help in your planning: *Selecting Your Golf Course Architect*; *Remodeling Your Golf Course* and *Golf Course Devel-*

opment Planning Guide. These brochures may be obtained by writing or calling the ASGCA at 221 LaSalle Street, Chicago, IL 6061; (312) 372-7090.

The Golf Course Builders Association of America also has valuable information in its cost and estimating guide. Contact the GCBAA at 920 Airport Rd. #230, Chapel Hill, NC 27514; (919) 942-8922.

Finally, the National Golf Foundation has several useful publications. Contact the NGF at 1150 S. U.S. One, Jupiter, FL 34477; (561) 744-6006.

The Forest Country Club: Starting over from scratch

BY BILL KILPATRICK

Freelance Writer

It isn't often a decision is made to tear up an existing golf course and start over again more or less from scratch.

But that's what the board of directors of Fort Myers' The Forest Country Club decided to do with the 36-hole golf course community's Bobcat course, the result being that as of May 5 of this year it was shut down for what was billed as "an extensive \$1.5 million renovation."

The line between completely rebuilding a golf course and renovating it can be pretty thin, and in the case of The Forest, the Bobcat project is right on the razor's edge. Just about everywhere you look you see and hear the roar of bulldozers and graders, see and hear the ponderous clanking of massive mechanical shovels, see and hear the crunch of ditch-digging backhoes.

"This is the first major overhaul the course has received since it was built over 10 years ago," said The Forest superintendent Rick Tatum, the man ramrodding the project. "We're leaving Nos. 10 through 13 pretty much as is except for enlarging the greens, but the rest of the course is being extensively worked over."

When completed, the revised Bobcat



Going up — When completed, rebuilding project at The Forest will have used 42,000 cubic yards of fill to raise the level of 10 of the Bobcat course fairways, some by as much as 2 feet as shown here on No. 2. Photo by Bill Kilpatrick.



Big noise — The roar, thump and clank of heavy construction equipment has been a summer-long constant on The Forest's rebuilt Bobcat course. Looking back toward the tee, the fairway on No. 16 has been recontoured, its drainage improved. Photo by Bill Kilpatrick.

will feature bigger greens, some of which have been enlarged as much as 50 percent. In addition to being bigger, they'll be somewhat unique.

"USGA specs for a green call for a four-inch layer of gravel," said Tatum, "but we've eliminated the gravel to facilitate percolation of water down through the soil.

"The purpose of the gravel is to enable a green to hold water, but when you're in a geographic area that gets 100 inches of rain a year, holding water isn't exactly something you have to worry about. If you allow the water to be held you risk algae problems, especially in shady areas. Besides, with our sprinkler setup any of our greens can get all the water they need."

Tatum added that doing away with gravel and thus facilitating percolation of water also helps get rid of salt in a soil profile.

Also certain to be noticed on the revised Bobcat will be enlarged and leveled tees.

"The tees will be pointing down the fairways, too," said Tatum, adding that with the Bobcat course such wasn't always the case.

Although some fairways and greens are being recontoured, the changes implemented by Sarasota golf course designer Chip Powell and Clearwater contractor MGI, Inc. are subtle as opposed to dramatic. For example, golfers familiar with the Bobcat of the past will notice that on some greens putts that once curved right will instead curve left. Otherwise, the course will play pretty much as it always has.

But if it's drama you crave, consider that the levels of 10 fairways are being raised to improve drainage, an undertaking that required moving 42,000 cubic yards of fill. The fill was extracted from what will — when the project is completed — be seven acres of lakes, some of them new, some extensions of existing lakes.

One of the most dramatic features of the project overall is raising the level of No. 2 fairway by two feet.

"That fairway's always been a problem," said Tatum. "During the rainy season it often was under water, or if not under water then too soggy for a golf cart to drive over. It was a pain to mow, too."

He said that when all the new drainage

is in place and all grading is completed, the fairways and tees would be planted in GN-1, so-called Norman grass. The greens will be planted in Floradwarf.

"We've given the Floradwarf a thorough test and like the way it performs," said Tatum. "It's resilient, has a high density, and can be mowed to a lower height, as low as 1/10th-of-an-inch. In fact, mowed to that height it has greater density than Tifdwarf mowed to 1/4-inch. They claim it has density comparable to bentgrass, and in every test we've conducted here at The Forest, the claim seems to be right on the money."

Tatum is more than enthusiastic about the potential of the new ultradwarf grasses, and says it's only a matter of time until all South Florida greens are planted in one of the new varieties.

"They grow in faster and they mature faster," he said. "In fact, they could be the best thing that has happened to courses down here in 30 years."

Southwest Florida being where and what it is, Tatum's admittedly overriding concern throughout has been the weather; considering the extent of the work being done, the region's rainy season isn't exactly conducive to the rebuilding of an entire golf course.

"Our target date to open is November 1," said Tatum. "Right now we're about halfway. But if we get a few breaks from the weather, we should be right on schedule."

Rebuilding projects done in-house

BY JOE ONDO, CGCS

Winter Pines Golf Club

Greens

The decision to rebuild our worst greens was based on several factors:

(1) Some of the greens with Tifgreen 328 surfaces were acceptable when

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overseeded, but not in the spring and summer months.

(2) Our play in the summer months was increasing and we wanted to give our players better greens all year round.

(3) The drainage was poor due to the underlying muck soil and low spots developed as the muck settled.

(4) We could not keep consistent ball roll between the Tifgreen 328 and Tifdwarf greens.

We felt that we had nine greens that needed to be improved. Six had "328" surfaces and three were already Tifdwarf, but needed help.

Since we are a public golf course, we decided we would only do one green a year to minimize the impact to our players. We have completed eight greens so far with only one of the "328" greens to go.

After deciding which green we would do first, a temporary green was cut-in and trained on a high and dry spot in the fairway. We made it about 2,500 square feet because we figured we would be using it about three months. The players didn't seem to mind playing one temporary green when they saw the changes we were making to improve the hole.

The only additional equipment we needed for the project was a trencher for the drain lines. We did rent a small dump truck to use on a couple of greens, but our bridges wouldn't handle the weight so we did the bulk of our hauling of greens mix and gravel with our two trucksters, a Jacobsen T-2000 and a EZ-Go GXT 1500 with dump beds. They could haul about 1/3 of a yard at a time. We were able to place some of the materials on nearby empty lots, but it still was a lot of hauling.

The old putting surface sod was cut, stripped and hauled away. Then we trenched in a herringbone pattern drain field with a "smile" drain along the front edge of the putting surface. On the muck-based greens we used choker sand to help drainage and stabilize low areas in the profile. Most greens were already too low so none were cored out. Rather, we built them up and added fill to tie into the slope contour and sodded the banks.

Some of the greens were kept about the same size, but if we felt it too small, we

added mix to make more pin locations. The shaping was done by myself and the crew with a tractor and box blade attachment. Then we went over it with a sand pro till we were satisfied with the look.

Sprinklers were moved if necessary and the soil was watered and packed. Fumigation was done by an outside contractor and the plastic tarp removed a few days later. Then each green was sprigged with Tifdwarf at the rate of 30 bushels per thousand square feet. We grew them in for at least eight weeks unless weather or timing pushed back our opening date.

The problem with doing one green a year was there was no guarantee we would get the same Tifdwarf the next year, but it was an improvement over what we had. Some mutation and contamination has occurred and we have tried to plug some of it out and stay ahead of it as best we can.

For the most part, the crew enjoyed the challenge of the project while still maintaining the golf course for play. Some of the flymow and edging work got put on hold for a little longer than we would have liked, but overall the golf course was kept maintained pretty well.

Tees

The rebuilding of our tee tops has been another continuing project. Some of the tees built in 1968 had become "crowned" from top dressing over the years. They were also too small to handle the wear from our steadily increasing play.

The areas around the tees to be improved were shot with a transit to see how large we could make them. The sod was stripped and stacked nearby to be replaced after we finished the alterations. We used the tractor with box blade to level, widen and extend each tee as needed. We packed the soil and shot it again with the transit to make sure it was level. Then we replaced the sod, rolled it, top dressed it and opened it for play.

Drainage

During the wet summer we had two or three years ago, some of other pushed-up greens that had no drainage began to have problems. We decided to solve the

problem by installing a drain field without rebuilding the entire green. Again, we cut a temporary green but this time only for a day. We cut a herringbone pattern on the green with a sod cutter and saved the sod. Then we brought in plywood to lay along the sod cuts for the rented trencher to ride on.

The plywood made cleaning up the dirt easier and protected the green from being rutted. The pipe and gravel were installed in the trenches and the top of the drain field was kept at least 8 inches below the surface so they wouldn't interfere with future cup setting. An air vent was installed in the drainpipe where it extended into the collar to aid in better drainage flow. Greensmix was used to fill top 8 inches of the trenches and watered and packed. The sod was laid back down as it had come out and then packed.

The green was back open as soon as we were done that day. Some settling did occur, and those areas were hand topdressed as needed. We have done five greens this way so far.

Whether rebuilding greens, tees or adding drainage, everything we do helps make Winter Pines a little better golf course for everyone to play and enjoy.

Pine Tree Golf Club **The Restoration of a Dick Wilson Classic**

In 1961 Dick Wilson created a great masterpiece, the Pine Tree Golf Club, in Boynton Beach. The course quickly gained a national reputation by being honored in the Top Ten of Golf Digest's top 100 courses in the country. The course, virtually untouched since 1961, has consistently held that honor.

This summer, architect Ron Forse, who recently successfully restored Indian Creek in Miami, will bring back Wilson's design at Pine Tree. Working from photos commissioned by Ben Hogan, greens that have risen two feet from 36 years of top dressing will be lowered and enlarged to the original specifications.

The goal is to have a rebirth of the superb layout crafted by Wilson in 1961.

Hogan's desire to have photos made of every tee shot and approach shot on the course is a testament to the caliber of course Wilson designed. Hogan reportedly called it "one of the finest courses in the world."

Arnold Palmer and Dow Finsterwald applied for conventional memberships to the club after playing it. Wilson was also the original designer of the Bay Hill Club in Orlando.

Forse of Forse Design, Inc. of Hopwood, Pa. is an avid restorationist. He even teaches a GCSAA course on classic courses and master architects. His reputation for attention to detail was a key factor in his selection for the project.

Forse says, "The beauty of what Wilson created and still remains, is very rare. This course and the photo documentation should remain as a historical monument to one of golf's greatest architects."

Bulldozers, backhoes, front end loaders and four dump trucks with turf tires have been rebuilding the greens, bun-

kers and lakes with amazing delicacy and minimal sound. Under the intense study of Forse, it is obvious that the intent of all concerned is to pull off something historic and spectacular. Construction has been moving along at a good pace and the reopening is tentatively planned for Nov. 1.

From bentgrass to bermuda and beyond

BY JOEL JACKSON, CGCS

In the mid 1980s, the Isleworth Country Club in Windermere was one a few courses in Florida built with pure bentgrass greens. The others were Golden Eagle in Tallahassee, The Plantation at Ponte Vedra in Ponte Vedra Beach, and Loxahatchee in Jupiter. As of last year, all of those courses have converted to Tifdwarf bermudagrass greens except the Plantation course, which still doggedly pursues the holy grail.

Since I had the challenge of managing Isleworth's greens from 1988 to 1991 during the bentgrass years, I was interested in finding out from superintendent Buck Buckner exactly how the conversion took place, and what other changes the club had made. Buckner, who already had a great reputation for his good greens at the nearby Orange Tree C. C., came on board in 1993 to oversee the conversion.

"The first decision — to replace the bentgrass and rebuild the greens to USGA specifications — was a no brainer," said Buckner. "Having bentgrass in Central Florida is a wonderful dream, but just isn't realistic! As you experienced it, Joel, you could have great bentgrass for six to eight months depending on the weather.

"When it got warm and humid, it could get ugly. The club wanted to make sure we had the best possible playing surfaces all year round, so switching to Tifdwarf was the obvious choice."

"The second decision was harder. Af-



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Isleworth's 12th green: rebuilt and regrassed. Photo by Buck Buckner.

ter we got into coring out the greens and rebuilding them, the members began talking about playability issues and the challenge of the course. The course had always been wide open and player friendly.

"Everyone was looking for a little more challenge.

"So we decided to hire golf course architect, Steve Smyers, to look into what could be done to complement the original layout and instill a little more challenge and excitement. So the relatively simple concept of converting the greens turned into a multi-year phased program of improvements and change."

"Isleworth's vision of challenge included good bunkering. Smyers reworked the existing 26 bunkers and added 64 more for a total of 90. I think he did a good job with them," said Buck.

I had to agree. As Buck and I rode the remodeled course, I had a hard time remembering whether some of bunkers were original or new because they seemed very natural in the rolling layout.

Buck added, "In addition to the bunkers, the greens were all reshaped and #17 and #18 were relocated. The 18th hole was shortened into a challenging par 4 and the 17th lengthened into a gambling, go-for-it-in-two, par 5.

"The high left side of the 7th hole was cut and lowered and we used the fill to

***Having bentgrass in
Central Florida is a
wonderful dream, but
just isn't realistic!***

raise the low areas on the 3rd hole. We also moved tees and built new tees to give more variety for playing length and different sight lines.

"Additionally, we have planted a lot of magnolias, maples, oaks and sweet gum to help define some areas and screen others. If you remember that Brazilian silk floss tree on #13, we harvested two seed pods and have planted many of the resulting seedlings around the course."

"The only real difficulty we had during the project was the record rainfall in the summers of 1993 and 1994. It forced us to do more sodding on areas we might otherwise have sprigged .

"All of the changes have been good, and the members seem pleased with the results. The course is still very playable for golfers of all caliber. I think the new changes may have toughened up the course by a stroke or two overall, but I think they're having more fun and excitement each round with the new looks and challenges."

Super Tips

Cleaning up fairway clippings presents challenge

BY DARREN J. DAVIS

*Golf Course Superintendent
Olde Florida Golf Club*

As a golf professional friend of mine often says, "There are many ways to make par." This philosophy certainly holds true in a golf course superintendent's line of work as well. Every superintendent has their own unique way of doing things and often the same task can be completed many different ways.

It is because of this that I believe one of the best methods for a golf course superintendent to advance his knowledge in the field of turfgrass management is through networking with his peers. It is this interaction among comrades that allow us to pick up on little tips or even completely different styles of management that will help us to a better job on our own "turf".

Beginning with this issue, a new feature in the *Florida Green* will be the "Super Tips" section. The "Super Tips" section will provide tips from your peers that might make your job easier or more efficient.

The first "Super Tip" relates to the clean up of "fairway clippings".

One of the challenges golf course superintendents face today is how to mow the large acreage of fairways with little or no distraction to the golfer. Some have chosen to mow the fairways in the afternoon. Mowing when the turf is dry usually solves the problem of the piles of clippings in the fairways.

However, not many golf course superintendent's have this luxury since it would probably be a hindrance or distraction to the golf play. Therefore, we are usually forced to mow fairways in the early morning hours.

Consequently for southern golf course superintendents, who mow fairways without baskets, mowing in the morning re-

If you have an innovative idea that you feel could help your fellow golf course superintendent, please drop us a line.



sults in numerous piles of clippings that must be dispersed.

Clippings in the fairways can obviously be a distraction. So what is the answer?

On a recent trip to Dancing Rabbit Golf Club in Philadelphia, Miss., I witnessed a unique solution.

Golf Course Superintendent John Mills had attached a fairway drag net, usually seen attached to the rear of a fairway mower, to a golf course utility vehicle. This allowed the fairway mower the freedom to do his job of mowing fairways without the concern of the location of a net attached to the rear of his fairway cutting machine.

By attaching the net to the bed of a utility vehicle, the employee dragging clippings can drive on only the close-cut fairway area.

Having the drag mat attached to a separate unit (utility vehicle) has several advantages:

- First, it takes only one vehicle and one operator. Therefore, there is not a need to send two vehicles and two operators on the golf course with a chain or hose dragged between them, knocking down the piles of clippings. This certainly saves labor dollars.
- Second, the net displaces all of the clippings with one pass over the area and it does so without dragging the net through the rough that often causes un-



sightly standing up of bermudagrass grain.

- Having the net attached to a utility vehicle also gives the golf course superintendent the freedom of dragging the fairways without necessarily having to cut the turfgrass. This may come in handy on a tournament day when mowing is not an option or if you desired to remove the dew on the fairways prior to fertilizing them.

- Having clipping dispersal as a separate job function also gives the fairway mower the freedom to mow fairways without the concern of the location of the net that normally would be dragging behind his unit.

This one-man drag mat mounted on a utility cart drags only in the fairways and doesn't require a second person, like a hose, rope or chain. Photos by Darren Davis.

- Finally, the utility vehicle method allows the net to be folded up and stored in the bed of a utility vehicle in-between dragging of golf holes.

The particular brand of fairway drag system seen at Dancing Rabbit Golf Club, is manufactured by Gold Medal Recreation Products, and is being distributed in Florida by Precision Small Engine in Pompano Beach.

If you have an innovative idea that you feel could help your fellow golf course superintendent please drop us a line at *The Florida Green*, 6780 Tamarind Circle, Orlando, FL 32819, or email us at FLGRN@aol.com.

Getting to the hearts of the children

*Palm Beach GCSA and
Jupiter Farms Community
Elementary School:
Audubon Expansion*

BY JOSEPH HUBBARD, CGCS
*Jonathan's Landing Old Trail
Dickinson Management, Inc.*

Most people do not understand many things in life and no one person has all the answers all of the time. These are givens to our limitations and our domain, and accepted by most.

Yet, when these same people are shown the beauty of natural creations such as trees, streams, insects, flowers, mountains, wildlife, etc. the unification of their resolve to strip away those constraints becomes limitless. Their energy is renewed and their thirst for the knowledge of everything about that environment to be explored is all consuming.

Passion is sorely lacking today for almost any cause, but watch the eyes of children as they wonder in awe when they see an animal from the wilds brought to a school, or as they watch National Geographic specials on TV. They are totally mesmerized by the creatures before them which in turn brings an avalanche of questions.

It is learning in its purest form and can develop that passion at a young age. As I studied the pamphlet, Audubon Cooperative Sanctuary Program (ACSP) for Schools, that Audubon International had sent out, the children's eyes and eagerness to be involved came to my mind.

When you are a superintendent in the golf industry it is very easy to "live" your job and to not be absorbed in the lives of your children day in and day out. The long hours and the heavy demands can weigh you down (Although, you would be hard pressed to find one superintendent who would give it all up).

However, when something of this nature mirrors so close with what you are trying to achieve at your golf course,

Project Naturescope: Children Exploring Their Environment

Five years ago an on-going environmental effort was launched at Jupiter Farms Community Elementary School, which eventually was named *Project Naturescope*. Its initial intent was to utilize the pine flatlands of our campus to carve out a nature trail.

That first year far surpassed that goal when we succeeded in establishing two nature trails and a butterfly garden on our campus without cost to our school.

That first year 60 science students shared their efforts, along with the efforts of their parents, local scout troops, local nurseries and teachers, as they invited the entire school to attend the first of what have become annual Earth Week Tours of our natural areas and butterfly garden.

Project Naturescope has grown into a cooperative effort that continues to utilize student and community talents, as well as occasional assistance from students from the agriculture department of Jupiter High School.

It has operated solely on donated plants and materials since its inception, yet has succeeded in bringing to our school a \$1000 grant from the Community Foundation and \$250 grant of native trees from the Florida Nurserymen's Association.

Last year, recognizing the need to expand our efforts to include several areas on campus that had been sorely neglected by county landscape crews, Project Naturescope students removed approximately 20 badly diseased trees and shrubs and heavily pruned overgrown areas on campus.

These efforts were quickly recognized by Ray Bridges, School Board landscape and grounds supervisor, who offered us unlimited use of the county nursery in Delray Beach. JFES was given approximately \$750 worth of landscape plants, used to replant several areas on campus.

At this time we have been approved for adoption by the Golf Course Superintendents Association of Palm Beach County through the Audubon Cooperative Sanctuary System. We are one of two schools in Palm Beach County chosen for work we have already done in the area of environment science as well as school site.

We hope to receive help soon for acquiring gardening tools and much needed materials. As Project Naturescope continues to grow, more grant opportunities will be available to our school through the Audubon Society of New York State, perhaps to assist in the construction of the environmental center.

As 15 parents, 60 students, and two teachers converged last spring to celebrate Earth Day with a massive schoolwide Earth Day Clean-up, the success of Project Naturescope couldn't have been more evident.

Student "managers," trained all year to appreciate their environment, moved from area to area on campus, removing litter, weeding, pruning, and planting. That same day our application for the President's Environmental Award from the EPA arrived.

-Dianne Hermanski,
Project Naturescope Coordinator and
Third grade teacher
Jupiter Farms Elementary



Naturescope coordinator Diane Hermanski and Buzz Jaskela of Florida Landscape Design discuss the master plan for Project Naturescope. Photo by Joe Hubbard.



One of two nature trails established during the first year of Project Naturescope. Photo by Joe Hubbard.

there can be no other recourse than to get involved with your child's school or any school close by that is making an effort to better the world around them.

One such school is Jupiter Farms Community Elementary School located in the northern part of Palm Beach County, west of Jupiter. It is noted for its rural area, with many horse owners, trainers, dirt roads, wildlife, natural uplands and wetlands.

The school is located in the heart of Jupiter Farms or "The Farms" as it is respectfully called. With an average of 870 students in attendance, grades kindergarten through fifth, 41 teachers try to expand the potential of each child to be an example of community effort for everyone's benefit.

The Palm Beach Chapter of Florida Golf Course Superintendents, proudly adopted the school into the ACSP for Schools program in 1997. We wanted to help make a difference in the kids percep-

tion of the environment by broadening their window of knowledge further than the classroom. Many people do not realize what scope of stewardship superintendents must elevate to in understanding the natural environment of our properties and what it takes to *protect* it at all costs. With the help of volunteers, teachers, various clubs and nurseries, this type of responsibility and love for the environment is what we hope to instill in our children.

With the support of Diane Hermanski, third grade instructor and Naturescope Coordinator (*see sidebar*), principal Marilyn Weisgerber and assistant principal Lela Tolbert, our plans for this school are to start upgrading some of the sorely neglected areas on campus.

Buzz Jaskela, of Florida Landscape Design, and I had an opportunity to identify these areas on our recent visit with Hermanski. A master plan for phase development that Jaskela will help design,



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will enable the school to become an important environmental base for the Jupiter area, while eventually achieving certification with the ACSP for Schools.

There are plans already in the works for several of the 59 acres that encompass the school property. Building a state-of-the-art environmental center in the southern section of land by the wetlands will enhance the ACSP program to another level.

Jupiter Farms' close proximity to superintendent Mike Ballard's course, Cypress Links Golf Club and to my course, Jonathan's Landing Old Trail Country Club will enable us to have a "hands on" relationship with the school. Several other superintendents, including Chip Fowkes at Frenchman's Creek, have expressed a desire to be involved in the development of this program and can help in making presentations to the community on our progress.

According to Audubon International,

the concept of the Audubon Cooperative Sanctuary System was to create an international program designed to help landowners preserve and enhance the environmental quality of their property.

Schools in the program protect and learn about our natural heritage through stewardship projects that enhance wildlife habitat and conserve natural resources on school grounds.

Rather than focusing on field trips or environmental studies of exotic places and wildlife species, the program provides information and guidance to help schools turn part of their grounds into natural areas that attract wildlife.

This program encourages the school to develop an outdoor classroom and adopt indoor conservation projects such as water and energy reduction, recycling and composting.

"By creating a sanctuary at the school, students build a lasting relationship with their environment and are empowered

with the knowledge that their actions do make a difference," explained Joellen Zeh, staff ecologist for the Audubon International. "We welcome Jupiter Farms School's commitment to environmentally responsible property management and environmental education.

By joining and participating in the ACSP, the school will be involved in projects that enhance wildlife habitat and conserve natural resources for the benefit of the community, while offering students engaging environmental education projects.

These projects may include: placing nesting boxes for cavity-nesting birds such as bluebirds and purple martins; using native plants in gardens to attract butterflies, hummingbirds and songbirds; conserving water and energy; composting; and recycling.

"The Cooperative Sanctuary System benefits both people and the environment," said Zeh.

ACSP FOR SCHOOLS

Palm Beach GCSA makes natural link with Kidstown

BY JEFF KLONTZ

Country Club of Florida

The Palm Beach Golf Course Superintendents Association wants to make a difference in environmental education. With funds from our annual Futures of Golf Tournament, we adopted Kidstown Learning Center into the Audubon Cooperative Sanctuary Program (ACSP) for Schools.

Kidstown Learning Center in Boynton Beach has children from infants to 12 years old. The teachers plan to educate students about the environment they live and play in. The Audubon program will enhance children's value to belong with nature and will teach them to respect the earth's natural resources.

Paula Poupore, owner of Kidstown Learning Center, was very interested in working jointly with the PBGCSA to



Using funds from their annual Futures of Golf Tournament, the Palm Beach GCSA helped Kidstown Learning Center build a butterfly garden, aviary, caterpillar garden and a vegetable garden.

incorporate the Audubon program into the curriculum at the school.

The first step was creating a plan.

Since the property was under construction, we enlisted Buzz Jaskela, a landscape architect, to help create a plan of action that would incorporate all aspects of the school program developed by

Audubon International. Before drawing up this plan, we met with teachers to get their input into projects they would like to see developed for the children.

Within 30 days, we had a plan of action that included a butterfly garden, aviary, caterpillar garden, and a project the teachers expressed the most

interest in — a vegetable garden. The PBGCSA also had a special interest in some burrowing owls that were located on the property, and this was also included in the plan.

Our first project, in June, was to recreate the burrowing owl habitat on the property. The owls had relocated to a vacant lot due west of the school. Damian Flaso, superintendent at Villa Delray, Steven Bernard, superintendent at Emerald Dunes, Jim Cassells and myself, helped build and install two perches to be placed on the west side of the building.

We also started two burrows in the ground. This future habitat area is within 20 feet of the building, and the children will be able to watch the owls from the classroom. This required the relocation of some existing cocoplum and the removal of a black olive tree that did not survive the original landscaping.

Within 30 days, we had a plan of action that included a butterfly garden, aviary, caterpillar garden, and a project the teachers expressed the most interest in — a vegetable garden.

Phase two of the plan was accomplished in July.

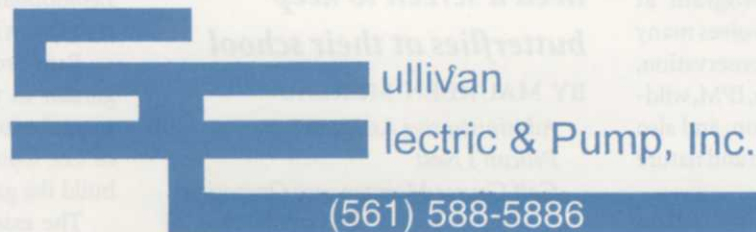
An aviary was created at the far southeastern corner of the property. An area of high maintenance that required weed-eating on a routine basis, the lawn maintenance crew was happy to see us remove the sod and replace it with native plant material.

Karl Schmidt, superintendent at Atlantis Golf Club, Steve Hamilton from Hamilton Grading, Jim Cassells, Buzz Jaskela, Leonardo Flores, assis-

tant superintendent at Country Club of Florida, and myself, installed the garden that included plants such as Beauty Berry, Wild Coffee, Porterweed, Bottle Brush and an Orange Geiger Tree.

Sue Shaw, assistant director of Kidstown Learning Center, and teachers helped to get the children involved by showing them how to plant, fertilize and water the plant material.

The plants were all donated by Boynton Botanical in Boynton Beach.



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The compost was donated from Atlas Peat and Soil. Jim Cassells donated a recycled birdhouse, and we plan to add a birdfeeder and birdbath.

The project took three hours to complete. We want to thank all of our volunteers and suppliers that helped to make this bird aviary a success.

Next phases begin soon

In the near future, we will start the other phases of the project, including a butterfly garden, vegetable garden and caterpillar garden.

Paul Popore would like Kidstown Learning Center to be the first fully certified Audubon School Sanctuary in Palm Beach County.

With the help of the PBGCSA, we plan to accomplish this within two years. We would also like to help other schools get involved in the Audubon school program.

The Audubon school program at Kidstown Learning Center involves many other areas related to water conservation, recycling, energy conservation, IPM, wild-life enhancement and education, and also includes an outdoor classroom and nature trail.

The success of the program depends on teacher participation, and children who want to learn more about the environment. The PBGCSA will continue to act as volunteers, specializing in native plantings and soil amendments.



The butterfly garden at the Spring Creek Elementary School becomes a reality through the involvement of the school, community and Pelican's Nest Golf Course.

Butterfly Extreme
Kids learned they didn't need a screen to keep butterflies at their school

BY MAUREEN MERLAU

*Administrative Assistant
 Pelican's Nest
 Golf Course Maintenance Operations*

The most recent fifth grade class of teacher Pam Schroeder at the Spring Creek Elementary School in Bonita Springs introduced a question after raising butterflies and releasing them September '96.

"Why can't we keep them here?" was

what the children wanted to know.

Pam responded there might be a way. It took some convincing that the garden doesn't need to be screened in to keep the Lepidoptera around. According to Pam, it's a lesson in "build it and they will come."

Pam brought the idea of the butterfly garden to the attention of the environmental education mini grant department of Lee County and requested money to build the garden.

The existing ground cover was inadequate and unsuccessful at attracting butterflies. In February 97, the students' continued enthusiasm and interest, along with a go-ahead from the mini grant department to research the building of a butterfly

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garden, prompted Pam to contact the school's sponsor for the Audubon Cooperative Sanctuary Program.

The Maintenance Operations for Pelican's Nest Golf Course in Bonita Springs was very much interested in supporting the answer to the children's question of how to keep the butterflies at the school.

Jim Leiseberg, superintendent at Pelican's Nest, agreed to coordinate and immediately begin to build the butterfly garden in order to accomplish its completion April 22nd in honor of Earth Day 97. Jim contacted landscape architect Dave Salko of the firm WCI, who designed and provided the landscape plans for the 2,000 sq. ft. garden complete with a mulch walk path.

There were 20 different species of ground covers and trees donated and delivered by two local landscape suppliers, as well as 12 hours of their labor to support this school project. Pelican's Nest donated 120 hours of labor. The irrigation system and the perimeter fence were refined, and the garden was coordinated and developed.

Several teachers at Spring Creek used the appearance of the garden as an opportunity to

enhance the learning process at school as they acclimated their curriculum to the butterfly garden.

It was overheard at many a bus stop, discussions about the elaborate process of how butterflies evolve, as well as debating the times involved for what stages of metamorphosis. Teachers encouraged participation in the associated contests involving butterflies, and over 500 student entries were received for naming the garden.

Students sold T-shirts to raise money to help fund the garden at the school and also competed in poetry, poster and T-shirt design contests. For three days, more than 300 students from pre-K to fifth grade were plucked out of class to work with Jim and several other Pelican's Nest staff to help prepare the soil and plant the nectar and host plants for the butterflies.

Teachers had to be on their toes scheduling student help, and monitors were kept busy attempting to inhibit sneaking back into the garden to work during afternoon exercise and outside time to avoid over stimulation of the plants.

Some students couldn't work in the garden enough. It was evident that participation in the garden's completion was very important to Spring Creek Elementary students.

A few butterflies had already swooped down to check out the garden by the time the students gathered to dedicate and name Butterfly Extreme on Earth Day as projected. The butterfly poems were read, the contest winners were cheered, T-shirts were awarded to merit their talents, and the butterfly garden awaits the children each morning as they get off the bus to go into school.

Not only is the a garden successful learning resource and daily reminder of their part in its beauty but it will provide acknowledgment to students who are privileged to read in the butterfly garden as a reward for academic achievement.

Last year Jim Leiseberg and the golf course maintenance staff appropriated money collected from can recycling to provide Spring Creek with three *Field Guides to Birds* and materials to build a bird feeder and supply seed throughout the year.

Jim foresees a continued participation

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in conjunction with the school and its association with The Cooperative Sanctuary program.

On June 27, 1997 I received a phone call from Pam about the goings on at Butterfly Extreme. The host plants had successfully nourished the eggs and larva, and provided shelter for the pre-emerged butterflies. The timing was impeccable.

School ended for the year on June 12, and the butterflies emerged between June 5 and June 10 as though they were a gift to the children.

Pam was checking the garden, although she has the summer off, and couldn't resist calling me today to tell of the caterpillars again on the host plants. The Queen and Monarch butterflies had returned to lay their eggs and the cycle is repeating.

Butterfly Extreme has established itself as a butterfly garden. The children will be pleased and they will most likely have an increased interest in and appreciation for the butterflies upon their return to school in the fall. 

Certification Update

Audubon Cooperative Sanctuary Program for Golf Courses

The certification process for golf courses has been updated to lessen the turnaround time for reports. These changes will better define the program and encourage more participation.

1. The Resource Inventory and Environmental Plan have been combined.
2. There have been questions added to the certification workbook, and some questions have been reworded for clarification.
3. Minimum requirements have been established for all categories, and checklists are provided to ensure your request is complete.

These changes were effective June 25, 1997. If you have not received this information, call Audubon International, (518) 767-9051 to request the updated forms.

- Remember, when you join the program, you will receive the Resource Inventory/Environmental Plan. You will not receive the certification workbook until you have returned the Resource Inventory/Environmental Plan.



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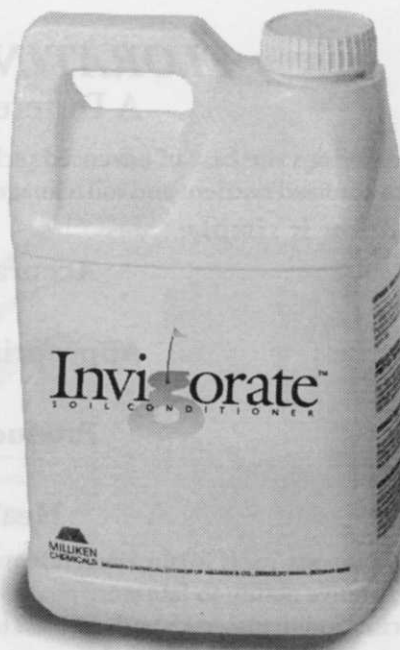
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A Walk on the Wild Side

Three courses at
Bonita Bay are
certified ACSP
Sanctuaries and
another is on the way

BY PAT HEWITT

Gravina-Smith Associates, Inc. and
DIANNE RADKIN
Bonita Bay Golf Maintenance

Bonita Bay is a master-planned golf course community located in Bonita Springs on the coast of Southwest Florida where members are serious about the game of golf.

In 1979, David B. Shakarian, founder of Bonita Bay's 2400-acre community, dedicated his career to healthy living and to his dream of creating an environmentally responsible community. He saw the development team as stewards of pristine resources that include rivers, streams and beaches.

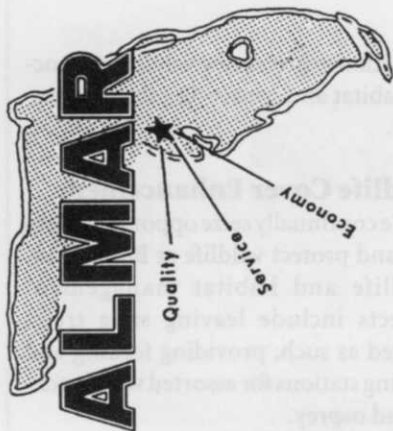
Today, 600 acres of natural preserves, 230 acres of lakes and 700 acres of golf courses provide the ultimate habitat for a variety of wildlife and birds. Bonita Bay is bordered by Estero Bay Aquatic

Editor's Note: In the last issue, Shelly Foy submitted an ACSP Case Study profile of Bonita Bay. In this issue we follow up with how Bonita Bay accomplished its certification and some of the rewards it has reaped.

Preserve, the Imperial River and Spring Creek.

Slough and mangrove preserves that are federally protected, salt flats and wetlands comprise the majority of Bonita Bay. Additionally, three championship golf courses, community parks and resident neighborhoods make up the remainder of the community. Many may not realize that golf courses provide challenging opportunities for golfers, but also provide habitats rich in local plants and wildlife.

Few were surprised when Bonita Bay's golf courses became the fifth, sixth and



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Water enhancement at Bonita Bay includes aquatic vegetation like the spike rush in the foreground which provides excellent cover for wading birds. Photo by Bonnie Vary.

seventh courses in Florida to become certified as Audubon Cooperative Sanctuaries. The program is sponsored by the United States Golf Association and is designed to help golf course superintendents preserve, enhance, encourage wildlife habitats and protect natural resources.

Mark Black took on the responsibility for complying with the program's certification requirements for the first three golf courses at Bonita Bay.

"Our club members and residents have a deep affection for the birds, wildlife and natural surroundings at Bonita Bay. This program is a natural for us says," says Golf Course Operations Director Mark Black, CGCS.

The Audubon Cooperative Sanctuary System "links together" Cooperative Sanctuary areas to form a nationwide system to benefit wildlife and the environment during all seasons of the year. In an organized manner this system will provide habitat for birds during breeding, migratory and wintering periods.

Cooperators are working toward environmental planning, wildlife and habitat management, public outreach and education, integrated pest management, water conservation and water quality management.

"I think it is important to know that the Audubon program is designed to assist golf course superintendents in preserving and enhancing wildlife habitat and to protect natural resources," Black said.

Shelly Foy with the USGA, played a large role in helping us start our Audubon Program. She always made herself available to answer questions and offer support during the certification process.

"Make no mistake, certification is not just a form you fill out and mail along with a fee to join. The program requires hard work, dedication and the desire to become certified. You must give of yourself and involve others." said Black.

Educating our members, residents and friends of wildlife gives us the opportunity to show our commitment and

dedication to preserving wildlife, enhancing habitat and conserving the environment.

Wildlife Cover Enhancement

We continually seize opportunities to save and protect wildlife at Bonita Bay. Wildlife and habitat management projects include leaving snag trees, marked as such, providing feeding and housing stations for assorted woodpeckers and osprey.

Straw collected from native pine trees is used to promote favorable plant growth around surrounding landscape trees and plants. Pine Straw is more consistent for golfers to hit balls out of with minimal disturbance to natural areas.

Flowering vines i.e., Confederate jasmine, flame vine, bleeding heart, attract butterflies and hummingbirds.

Cordgrass, a low maintenance lowland and upland shrub used in many non-play areas provides cover for wildlife and houses smaller animals such as rabbits, quail and fox.

The Bay Island course is currently

home to eagles, nesting on site that has been designated as "eagle habitat."

All wetlands on Bay Island are protected. All exotic plants have been removed from the wetlands and replaced with native vegetation.

Water Enhancement includes aquatic vegetation: spike rush, soft rush and pickerelweed, planted in all man-made lakes.

"We feel these varieties provide excellent cover for smaller aquatic wildlife and feeding areas for wading birds like small blue herons and snowy ibis," Black said.

Integrated Pest Management

Black indicated that "Our IPM program is something we are very proud of." Records are meticulously kept by our licensed specialists. The most current and accurate application of IPM products, biological controls, curative treatments along with recognizing pest threshold levels is continuing.



This habitat-rich natural setting surrounds the 17th green on the Bay Island course. Photo by Bonnie Vary.



- Minimal damage to course.
- Minimal labor to replace bunker sand creates opportunity costs.

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Pest management is scheduled only if needed. Sites are visually checked, soap flushes and cup-cutters are used to check for insects below the soil surface. A kiddie pool with water under a white light at night, alerts staff to migrating pests and insects.

Parasitic nematodes control mole crickets along lake banks and minimize run-off into lakes. Wildlife that thrives in these conditions help control worms, mole crickets and grubs. Golf course crew members attend seminars to teach them how to identify and control pests.

Our scouting, monitoring and sampling program combined with mapping and charting of all turf pests requiring pesticide control, has enabled us to use pesticides in a most effective and efficient manner. No spray zones have been established around all golf course lakes; most weeds are pulled by hand verses constant spot spray application.

“Our IPM team is constantly updating their knowledge about the environment they protect,” Black said.

Water Conservation

Bonita Bay Club uses a TORO Network 8000 computer to coordinate irrigation of all three golf courses. The system calculates evapotranspiration rates, which convert to a water-as-needed program.

“We have more than 5,000 sprinklers on the 54 holes,” says Jeff Perbix, golf course irrigation specialist. “We have the flexibility to irrigate many zones, any single station and in any combination we need. Watering is generally done in groups, greens one night, collars the next,” says Perbix.

Surveillance and determination of the golf courses’ irrigation needs are determined daily. Watering times are adjusted frequently. Each hole is designed with adjustable arc perimeter sprinklers in addition to full-circle fairway heads.

“This allows us to water our courses from the outside in and greatly reduce sprinkler overlap into lakes, natural areas and sensitive wetlands,” Perbix says. Irrigation water is up to 100 percent reuse, non-potable water, brought in from Bonita Springs Utilities.

The site covers 1,440 acres of sensitive habitat, including woodlands, 900 acres of cypress strands, marshes and improved pasture. Animal residents include whitetail deer, Osceola wild turkeys, Big Cypress fox squirrels, burrowing owls, sandhill cranes and within a few miles, Florida black bear.

Water Conservation Award

Residents at Bonita are eligible to receive an annual water conservation award. The annual award is presented by Bonita Bay Properties, Inc., in conjunction with the South Florida Water Management District (SFWMD), recognizing outstanding landscaping that reflects wise use of irrigation water. The natural landscaping thrives with little outside help or water.

To determine the winner each year, Glenn Van Riper, Bonita Bay’s director of utilities operations, calculates actual irrigation usage for each homesite. “Bonita Bay maintains a dual water system with two meters per home site. Irrigation water is a blend of reclaimed water and well-field supply, so residents don’t even have to be concerned with fertilization,” he said.

Audubon Signature Cooperative Sanctuary

Matt Taylor is the lead golf course superintendent for Bonita Bay’s new off-site golf courses, a non-residential golf facility. The Cypress course, scheduled to open the fourth quarter of this year, is the first of two members-only golf courses being developed by Bonita Bay. The Cypress course, designed by Tom Fazio, is unfolding with the guidance and suggestions of the Audubon Signature Cooperative Sanctuary program reserved for new courses only.

“The Sable course is still in the drawing board stages but we are looking forward to the same cooperative guidance for this course as we have received on all courses in the past,” Taylor says. “Con-

struction is expect to start in the fourth quarter of this year.

“There is no ‘retrofitting’ in the Signature program,” says Taylor, the man responsible for complying with Audubon criteria. “We are advised on what needs to be accomplished, but the accomplishment is left to the development team’s creativity.”

The site of the golf club covers 1,440 acres of sensitive habitat, including woodlands, 900 acres of cypress strands, marshes and improved pasture. Animal residents include whitetail deer, Osceola wild turkeys, Big Cypress fox squirrels, burrowing owls, sandhill cranes and within a few miles of the site, Florida black bear.

Players who challenge The Cypress course will also encounter a variety of bird boxes providing additional habitat to feathered forest creatures like Eastern bluebirds, purple martins, owls, etc. Bird box holes are cut for the size of the bird and the nests are monitored “to make sure exotic birds aren’t invading,” Taylor says.

“We also have screech owl and wood duck boxes. They’re all made out of recycled PVC plastics, all painted white to cut down on heat, and they’re all strategically placed to encourage the desired species,” says Taylor.

How does a golf course superintendent know where to put a bird box? He may not. “That’s a really nice part about this program. Audubon representatives don’t expect you to do it all by yourself, they encourage you to use outside experts to help,” said Taylor.

“An ornithologist, who is part of our

Audubon Resource Advisory Committee, scoured the terrain, identified the species and made recommendations for help enhance bird habitats. "He will assist us with our entire nesting program; all the identification of the species; he'll give tours for Bonita Bay residents on birdwatching and even set up slide programs."

"We had cow pastures here that are now golf holes, where pine trees, cypress trees and live oaks have been planted," Taylor says. "We are recreating pine forest and open pine woods where we have located some of our Eastern bluebird boxes."

The single challenge Taylor sees in working toward certification is cultivating a mindset in all people.

"At Bonita Bay, it is a priority for everyone," he said. "While the Audubon program is beneficial in terms of habitat enhancement, it also provides long term benefits and cost savings."

Recycling had been in effect at Bonita Bay since May of 1994. A significant cost reduction was realized in trash disposal. In real dollars, \$7,000 was saved in the first four months of 1995.

The members play an important part of this savings by recycling their Styrofoam cups and aluminum cans in the designated bins while on the course. We have found that 50 percent of Bonita Bay Club's trash is Styrofoam and 75% of the golf maintenance trash is Styrofoam. We expect similar results at the east courses.

Taylor says, "Audubon helps us direct our efforts toward habitat enhancement and environmental issues. The Cypress course has the same systems in place as the West courses for good reasons. Our attention is focused on preserving our natural habitats, wildlife and on our playing surfaces."

The architectural design of the Cypress course enhances natural land fea-

tures. For example, in the improved pasture area, sandy areas became natural waste bunkers. In non-mow, non-maintenance areas, we planted *paspalum vaginatum*.

"We apply slow release fertilizers that meet Audubon criteria; it's just good sense. Quick release fertilizers leach too readily and produce inconsistent growth rates," said Taylor.

Rewards

Benefits of responsible stewardship reach beyond cost savings and low maintenance for Bonita Bay. Members, residents and employees alike have joined hands in the spirit of the program by counting bird species, erecting bird houses and feeding stations and avoiding designated areas as no hunt zones. They meet to compare notes of sightings and discuss environmental issues and habitat enhancement.

Residents can be seen walking and

Consider yourself a candidate.

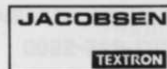
Applications for the 1998 Environmental Steward Awards are available from the August issue of *Golf Course Management*, GCSAA Online (www.gcsaa.org), affiliate chapter presidents, program sponsors and the GCSAA service center (800/472-7878).

We'll look forward to receiving your application by October 31, 1997.

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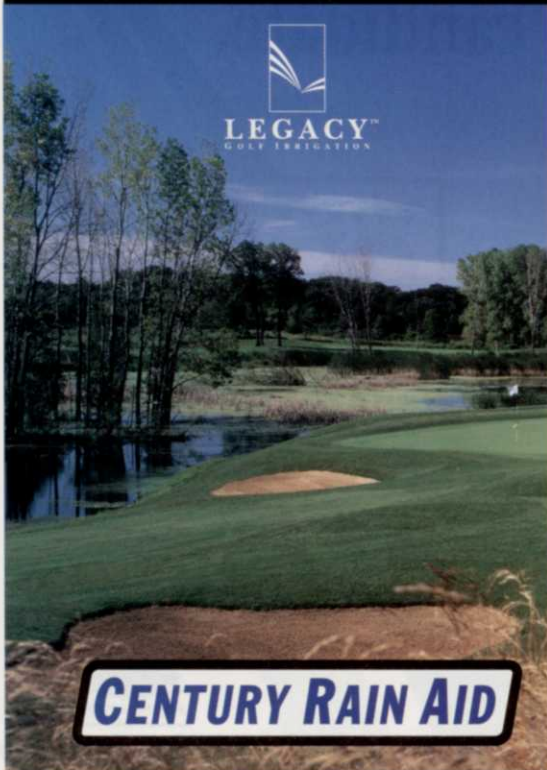
2400 acres of natural preserves, lakes and golf courses are home for a variety of wildlife at Bonita Bay. Pictured is the 12th hole of the Bay Island course.

biking along nature paths and trails. Encounters may include a rare pileated woodpecker, flocks of water birds, deer, hawks, osprey, screech owls, otters and bobcats that live in harmony with residents. On the golf courses, players report wildlife sightings and enjoy watching bird families. It's simply part of the game in this community.

Special thanks to Mark Black, CGCS, golf course director, Matt Taylor, Cypress course lead superintendent, Jeff Perbix, irrigation specialist, Glenn Van Riper, director of utilities operations, Marile Barbe', Bonnie Taylor, photographers, Sue Skytta, administrative assistant, for her diligent proof reading and grammar corrections, Mary Jack, Audubon International and Shelly Foy, USGA for their input and support. Audubon is a program that involves many individuals.

Mark Black said, "you must give of yourself and involve others."

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It is that time of year once again, and in fact, many golf course superintendents may be in the process of overseeding at this time. Overseed discussions quite often are lengthy and varied with few agreements on methodology, timing, choice of overseed grass, as well as rate and method of planting.

Perhaps this short exercise may help to clarify one aspect of the complex overseed process - seed calculations based on the pure live seed (PLS) concept.

Most overseed rates are based on bulk seed per unit area, which certainly vary among grass species. Bulk seeding rates,

Overseed Rates based on Pure Live Seed Concept

Year	Species ¹	Cultivar	Purity		Germination	PLS	Bulk Seed	PLS	Bulk Rate ²
			As Percentage	Count per Pound					
1996	PR	Roadrunner	98.2	94.0	92.3	208,640	192,591	37.4	
	PR	Livonne	99.0	92.0	91.1	324,285	295,541	24.4	
	RB	Fuzzy	97.9	87.0	85.2	1,759,772	1,498,085	9.6	
	RB	Pt A	92.6	93.0	86.1	3,492,307	3,007,505	4.8	
1995	PR	2ET-95	99.0	96.6	95.0	208,640	198,191	36.3	
	PR	GH94	98.9	88.5	87.2	273,165	239,019	30.1	
	RB	Danish Common	92.2	97.0	89.4	1,853,061	1,657,087	8.7	
	RB	Winterplay	99.8	96.0	95.8	2,654,970	2,543,419	5.7	
	CB	Penncross	98.1	91.8	90.0	5,307,037	4,774,744	4.5	
	CB	Penn A-4	99.1	97.0	96.1	7,000,000	6,728,890	3.2	

¹CB = creeping bentgrass; PR = perennial ryegrass; RB = rough bluegrass
²Pounds of bulk seed required per 1000 square feet to produce an average stand of 150,100, or 50 seedlings per square inch of creeping bentgrass, rough bluegrass, or perennial ryegrass, respectively.

Table 1 Variable seeding rates within turfgrass species based on cultivar seed size and quality to effect equal overseed rates based on the pure live seed (PLS) concept.

however, are misleading as variation among cultivars within grass species may vary up to twofold depending on seed number per unit weight along with differences in purity and germination of each seed lot.

In our annual overseed trials at Gainesville, we have seen seed number per bulk pound vary over the years (Table 1).

In our 1996-97 trials, seed number per bulk pound varied from 208,640 to

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Effect of seed quality on Pure Live Seed Concept

Lot	Purity	Germination		PLS	Bulk Seed	PLS Seed	Bulk Rate of Seeding ¹ lb/1000 sq. ft.
		As Percentage					
					Count per Pound		
1	98	95	93.1	240,000	223,440	32.2	
2	90	80	72.0	240,000	172,800	41.7	

¹ Pounds of bulk seed required per 1000 square feet to produce an average stand of 50 perennial ryegrass seedlings per square inch

Table 2 Variable bulk seeding rates of perennial ryegrass based on same seed number per unit weight but different quality to effect equal overseed rates based on the pure live seed (PLS) concept

324,285 for 'Roadrunner' and 'Livonne' perennial ryegrass cultivars, respectively. Similarly, seed number per pound varied from 1.7 to 3.5 million for 'Fuzzy'

and 'Pt A' rough bluegrass cultivars, respectively.

Is seed number per pound only of academic interest? Absolutely not!



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'Livonne' had a much smaller seed than the 'Roadrunner' cultivar. If both cultivars were overseeded on a putting green at a same bulk rate of 20 pounds per 1000 square feet, seeding with 'Livonne' would have resulted in 2,312,900 *more* seed per 1000 square feet than the 'Roadrunner' cultivar, which had much larger seed.

The same logic follows if the *Poa trivialis* cultivars were overseeded at a bulk rate of 5 pounds per 1000 square feet. Because of its smaller seed size, a seeding of 'Pt A' rough bluegrass would have resulted in 8.7 million *more* seed per 1000 square feet compared to the 'Fuzzy' cultivar of rough bluegrass, which had the larger seed.

If one were to use PLS calculations to overseed a putting green with perennial ryegrass at a calculated rate of 50 PLS per square inch, assuming purity and germination of seed lots were equal, it would require 37.4 bulk pounds of 'Roadrunner' compared to only 24.4 bulk pounds of 'Livonne' perennial ryegrass per 1000 square feet (*Table 1*).

Likewise, overseeding a putting green with *Poa trivialis* at a rate of 100 PLS per square inch, would require 9.6 bulk pounds of 'Fuzzy' rough bluegrass to equal only 4.8 bulk pounds of 'Pt A' rough bluegrass. Economic savings should be obvious.

Assuming that agronomic considerations and selling prices per pound are equal, a net savings of 35 and 50% are effected if one chooses to use the smaller seeded perennial ryegrass or rough bluegrass cultivar, respectively.

How does the PLS concept work?

A simple formula using purity and germination is used:

$$\text{PLS}(\%) = \text{Purity}(\%) \times \text{Germination}(\%)$$

Both federal and state seed laws require that all seed lots must have purity and germination information on the seed tag. Unfortunately, seed number per unit weight is *not* on the seed label. You should request this information from your seed supplier.

Assume that two seed lots of perennial ryegrass have the *same* number of 240,000 seed per bulk pound (*Table 2*).

PLS content of Lot 1 is equal to 0.98 (purity) times 0.95 (germination) or 93.1%, while PLS content of Lot 2 is equal to 0.90 (purity) times 0.80 (germination) or 72.0%. Thus, it required 1.1 versus 1.4 bulk pounds of Lot 1 and Lot 2 respectively, to equal one pound PLS. This was calculated as follows:

For Lot 1, $0.931 \text{ PLS content} \times \text{bulk pounds} = 1 \text{ pound PLS}$

For Lot 2, $0.720 \text{ PLS content} \times \text{bulk pounds} = 1 \text{ pound PLS}$

Note that Lot 1 had 21.1% more PLS than Lot 2 which was due to its better purity and germination. Stated another way, it required 1.3 times more seed of Lot 2 to equal PLS content of Lot 1.

What is the bottom line on this? Assuming that both seed lots sold for \$3.00 per bulk pound, there would be a net savings of \$28.50 per 1000 square feet. When calculated over an average putting green of 5,000 square feet on an 18 hole golf course, a savings of

\$2,565 is realized by choosing Lot 1 over Lot 2.

Conclusion

Hopefully this little mathematical exercise has convinced you to consider using the PLS concept when buying or selling seed, as well as when calculating rates of seeding. The PLS concept is a little more complicated than presented here, especially as it relates to seed purity, but this is how it works in general.

To be a smart buyer, request from your seed supplier actual seed number per pound along with percent purity and germination, which by law is required on each seed tag of each seed lot.

Step One: Calculate PLS content of the seed lot using the formula: % PLS = % purity X % germination.

Step Two: Calculate the number of bulk pounds to equal one pound of PLS: ? bulk pounds of % PLS (from Step

The PLS concept makes a lot of 'cents.'

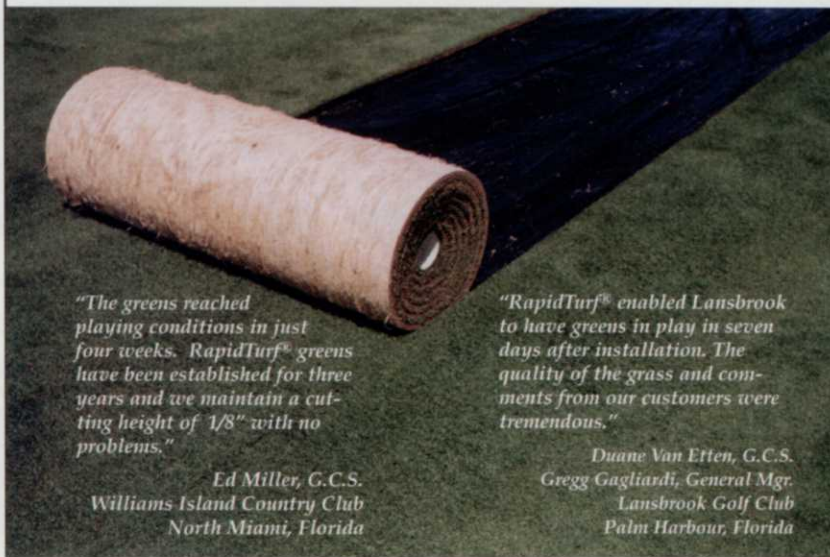
1) = 1 pound PLS

Step Three: Calculate the cost of one pound of PLS:

Answer in Step Two X price per bulk pound = Cost of one pound of PLS.

These simple steps are something all superintendents should follow when shopping for seed at overseed time. Seed size or number per unit weight is important if one wishes to calculate actual seeding rates per unit area. Suppliers, however, should utilize seed number as well as seed quality in their sales methodology, as they should compare and adjust costs not on a bulk pound basis, but rather on a PLS basis. Everyone should use the PLS concept, because the PLS concept makes a lot of 'cents.'

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The PLS concept makes a lot of sense.

PLS = 1 pound PLS
 These Calculate the cost of one pound of PLS.

in step Two X price per bulk pound = Cost of one pound of PLS. These simple steps are something all superintendents should follow when shopping for seeds in oversized bags. Seed size number per unit weight is important to consider in calculating actual seed cost per unit area. Suppliers, however, should utilize seed number as well as seed density in their sales methodology, so they should compare and adjust cost not on a bulk pound basis, but rather on a PLS basis. Everyone should use the PLS concept because the PLS concept makes a lot of sense.

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HOW'S THAT FOR APPLICATION GUIDELINES?

To be a great paper report from your seed supplier, actual seed number per pound along with percent germination, which by law is required on each seed tag of each seed lot.

Step One: Calculate PLS content of the seed lot using the formula: $\% PLS = \% \text{ purity} \times \% \text{ germination}$.

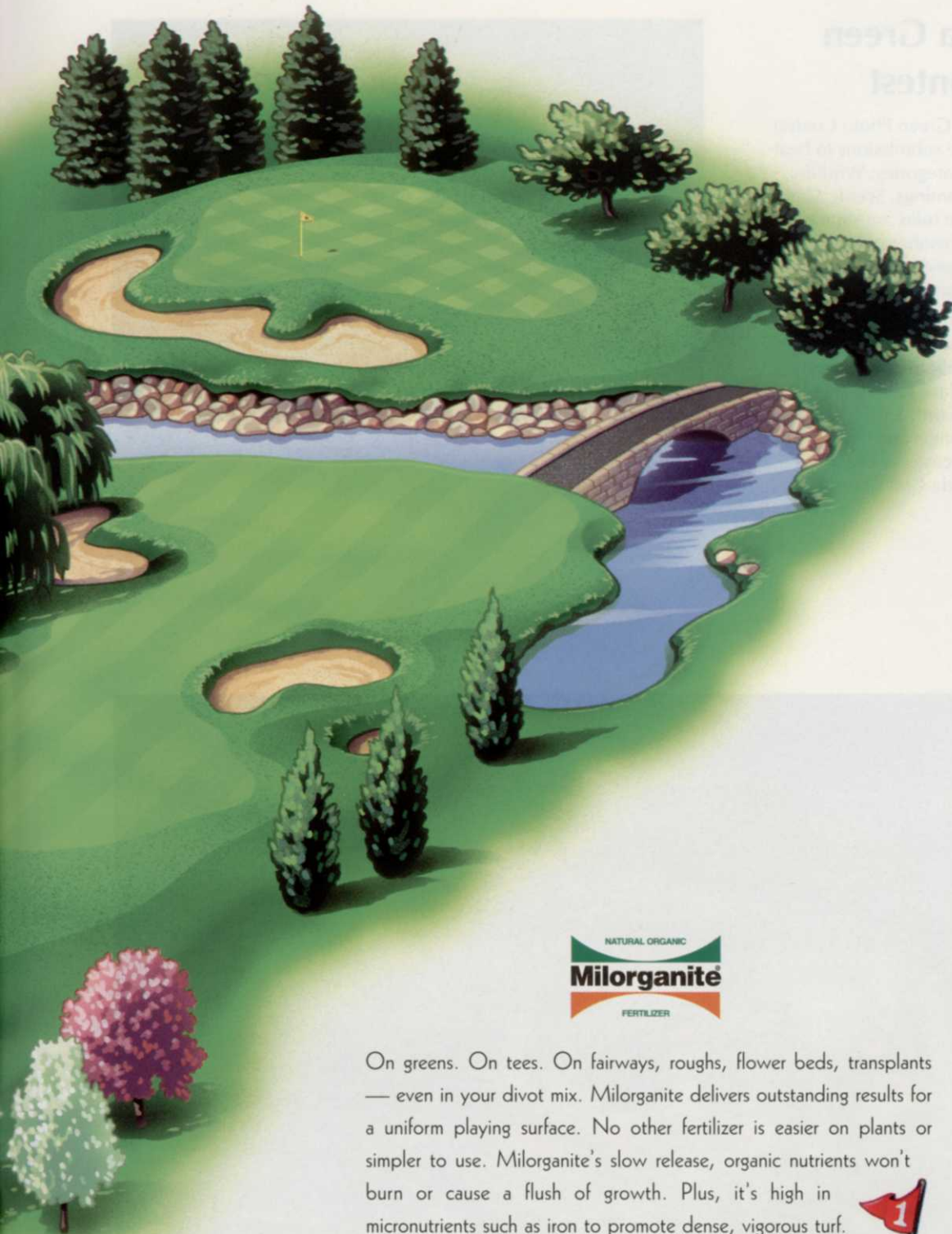
Step Two: Calculate the number of bulk pounds to equal one pound of PLS.

PLS content of lot 1 is equal to 0.88 (purity) times 80% (germination) or 70.4% while PLS content of lot 2 is equal to 0.90 (purity) times 80% (germination) or 72.0%. Thus, it required 1.1 versus 1.4 bulk pounds of lot 1 and lot 2 respectively, to equal one pound PLS. This was calculated on an equal one pound PLS. For lot 1, $1.0 \div 0.88 \text{ PLS content} \times 1 \text{ bulk pound} = 1 \text{ pound PLS}$. For lot 2, $1.0 \div 0.72 \text{ PLS content} \times 1 \text{ bulk pounds} = 1 \text{ pound PLS}$. Note that lot 1 had 21.1% more PLS than lot 2 which was due to the better purity and germination. Seed number per unit weight is important to consider in calculating actual seed cost per unit area. Suppliers, however, should utilize seed number as well as seed density in their sales methodology, so they should compare and adjust cost not on a bulk pound basis, but rather on a PLS basis. Everyone should use the PLS concept because the PLS concept makes a lot of sense.



1997 Florida Green Photo Contest

The third year of the Florida Green Photo Contest brought a host of beautiful photographs to the contest. There are two categories: Professional and Amateur. The Professional category is open to all photographers who are members of the Florida Golf Association. The Amateur category is open to all photographers who are not members of the Florida Golf Association. The contest is open to all Florida residents who are 18 years of age or older. The contest is open to all Florida residents who are 18 years of age or older. The contest is open to all Florida residents who are 18 years of age or older.



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1997 Florida Green Photo Contest

The third year for the Florida Green Photo Contest brought a flurry of last-minute submissions to beat the deadline. There are five categories: Wildlife, Formal Landscape, Native Plantings, Scenic Golf Hole and Editor's Choice. The rules are simple, either a superintendent or a member of his staff takes a photo or slide on a Florida golf course. Mount it on a sheet of paper and send it in!

If originality and effort are counted, Gary Grigg wins hands down. He climbed a nearby tree to snap the First Place Wildlife photo of two great horned owl fledglings. First place earned a \$100 prize and second place was worth \$50.

Congratulations to all the winners and thank you for sharing pictures that showcase the beauty, habitat and creatures on Florida Golf Courses.



Second Place, Wildlife
David Bailey
Delaire CC



First Place, Wildlife
Gary T. Grigg, CGCS
Royal Poinciana Golf Club



**First Place,
Formal Landscape**
Gary T. Grigg,
CGCS
Royal Poinciana
Golf Club



**First Place
Native Plantings**
Bryan Singleton,
GCS
Riviera CC



*Second Place,
Native Plantings
Debra DeMarco
Riviera CC*



*Second Place
Formal Landscape
Jason M. Kubel
Isleworth CC*

Letters..

...to the Editor

Thanks for tribute

I was so proud of the golf course superintendents at Larry's funeral. Please extend my thanks to your staff and to all the superintendents who paid their respects in person or by card or letter.

Larry always treated people the way he wanted to be treated and I know you guys are the same. Please take care and remember Larry is watching over us all.

Thanks with love and prayers,

Vilma Kamphaus



First Place, Scenic Hole
Randy Saul, GCS
The Eagles G&CC

Rub of the Green

The world's 10 most dangerous golf courses

Need a little more challenge in your golf course management — either as a superintendent or a player? Well, here's a list of the 10 most dangerous courses around the world, courtesy of Men's Health magazine:

- Lost City GC, Sun City, South Africa. The 13th green is fronted by a stone pit filled with crocodiles.
- Elephant Hills CC, Victoria Falls, Zimbabwe. The fairways often are pockmarked by craters caused from mortar shells fired across the Zambezi River.
- Compton Par-3 Course, Compton, Calif. Home to two infamous high-caliber gangs — Crips and Bloods.
- Machrie Hotel GC, Islay, Scotland. Virtually every drive and approach on this old-style links layout is blind, played over huge sand dunes.
- Scholl Canyon GC, Glendale, Calif. Built on a landfill, golfers have snagged golf clubs on old buried tires, and divots have unleashed methane gas. The latter is now pumped to a local power company.
- Pelham Bay GC and Split Rock GC, Bronx, N.Y. Thirteen bodies have been found at these remotely located layouts in the last 10 years.
- Singapore Island CC, Singapore. A golf pro, Jim Stewart, once killed a 10-foot cobra in the midst of his round. To his horror, another snake emerged from the mouth of the dead one.
- Beachwood GC, Natal, South Africa. A woman was attacked by an ape as she was hitting out of a bunker.
- Plantation G&CC, Gretna, La. With 18 holes crammed into 61 acres, players often huddle against protective fencing awaiting their turn to hit.
- Lundin Links, Fife, Scotland. This seemingly safe, serene course near St. Andrews had one of its patrons hit by a train while he crossed the tracks beyond the fifth green.

- GCSAA Online

From the Twilight Zone:

Are we strengthened by unity... or conquered by division?

I've just returned from Tampa and the annual FTGA Conference and Show, and still can't announce a turf coordinator for the University of Florida. The optimism that I expressed in this column in the last *Florida Green*, that this issue

would be settled by now, was obviously premature. As disappointing as this situation is, those of us working so hard on the matter are continuing our efforts to resolve it, and actually see positives about the protracted process.

I am typically one who disdains the minutiae and mitigating circumstances of an issue, having to distill things to their simplest formulations. However, peeling back the layers of the University's bureaucratic onion is quite interesting.

Frustrating is another word that comes to mind, but my exposure to this Twilight Zone is short and sweet compared to those living there. We will be meeting again within days to determine our next step.

On a brighter note, one of the most gratifying projects I've ever been involved with has yielded spectacular results! Rick Tatum and I volunteered to contact our various equipment distributors to try to secure equipment desperately needed at the various locations where turfgrass research is conducted, and have been overwhelmed at the response.

Hats off to Nick Crane and Kent Busser from Nucrane Machinery, Tim Kilpatrick and John Swaner at Kilpatrick Turf, James Branstrom and Bryan Riddle of Pifer, Inc., Jeff Hayden and Jim Sartain of Golf Ventures, and Joe Limberg from Hector Turf for donating or lending over \$100,000 worth of turf maintenance equipment to Gainesville, Fort Lauderdale, and Belle Glade.

Others have orally committed to this project and will be recognized in future columns. Thank you, gentlemen! You've always been there for us

and deserve recognition for all your contributions to the turf industry.

I try to avoid climbing on the soapbox very often, but while on the subject, I think it necessary to admonish those superintendents with attitudes of arrogance and disdain for the commercial members of our various golf and turf organizations.

I've heard it and witnessed it for years, and still fail to understand it. Almost every golf outing or industry function is totally or heavily financed by our vendors or other commercial enterprises, but some superintendents still voice their preference for "superintendent only" events, or otherwise show their contempt for our comrades on the commercial side.

I just don't get it!

I do understand the desirability of meetings strictly with your peers for relevance, practicality, confidentiality, and efficiency, but these kinds of meetings can be scheduled as often as needed without offending those who usually foot the bill for most of our activities.

Being a history buff, expressions like "Divide and conquer," and "In unity there is strength," are particularly meaningful to me. We need the support of everyone who has an interest in the golf and turf industry - not the alienation or indifference of a large and important segment.

Though golf is played by 25 million Americans, it is a hobby for them and it is a career for us, and we will have to fight the environmental and regulatory battles.

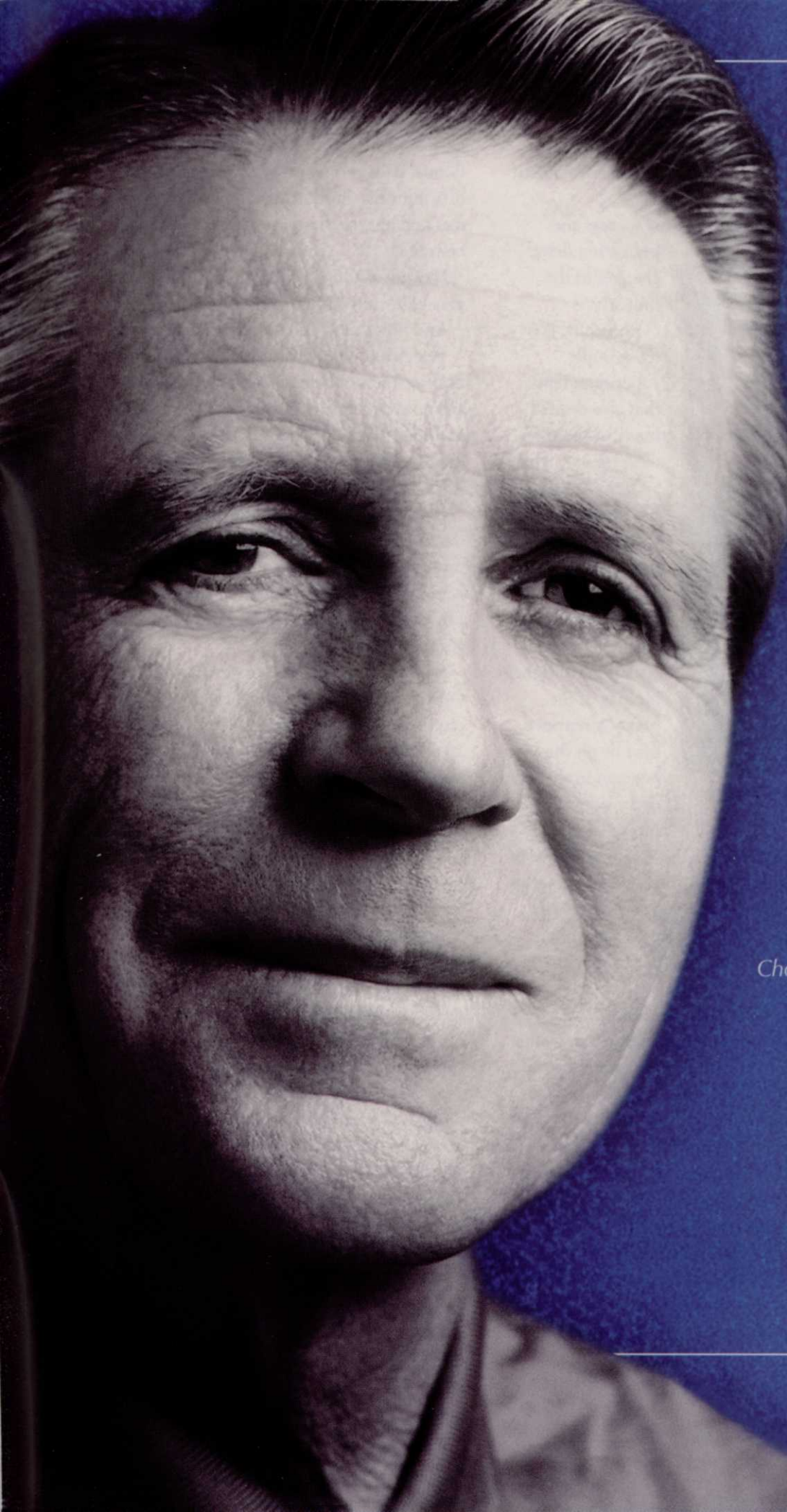
I don't think it too simplistic to say that most of the negative financial, regulatory, and environmental impacts to our industry are a result of our weakness and fragmentation (divided and conquered), while most of our victories (in unity there has been strength) were achieved by working together.

As persuasive and effective as Tom Benefield has been with the water issues, and as much as he deserves the lion's share of the credit for his successes, I doubt he would have been given the time of day if he were representing his own selfish interests instead of the FGCSA and FTGA. Think about it!

Mark My Words



Mark Jarrell, CGCS
Assistant Editor



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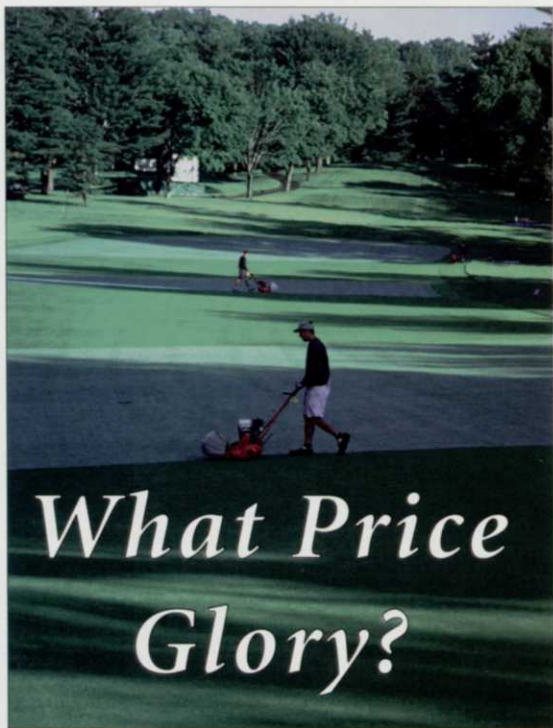
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Why do we do it to ourselves?
While it may be true that a superintendent is often his/her own worst critic, superintendents striving for success and



Hand mowing fairways at the 1997 U.S. Open. Photo by Darren Davis.

perfection drive changes in the industry.

Ironically, it is these same superintendents that also create many of the woes we face.

In the South, we have been living on the edge for the past decade trying to manage 30-year-old grasses to suicidal green speeds beyond the biology of the plant. A reprieve may be on the horizon in the form of a crop of new ultra dwarf

grasses... a case where the turf breeders have been forced by legions of frustrated and often fired superintendents to do something to meet the insatiable demand for speed by today's golfer. It was a matter of survival or lunatic glory.

And now with a glimmer of hope and reason in the form of these new grasses, what do I see superintendents doing on national television? Hand mowing fairways!

I can reluctantly accept the fact that it may be possible at a major event. When over a hundred superintendents, suppliers, friends and volunteers gather to experience the aura and history of a major tournament, reality becomes blurred and your wildest maintenance fantasies can come true. When your fleet of equipment is supplemented by loaners and attended by extra mechanics, the impractical becomes the possible.

These magical mystical events are things

legends are made of. Courses resurrected from floods. Balls rolling off greens from people breathing too hard. Knee deep rough. Greens, tees and approaches pinstriped and checker boarded.

Hey guys, it looks great on TV, but I don't play golf from a blimp.

And now, hand-mowing fairways?

Television is the great instigator. After touting and publicizing hand-mowed fairways at two events this year, the 1997 U. S. Open and the 1997 PGA Championship, the question is already being asked, "What would it take to hand mow our fairways?"

It was a hypothetical question, but the fact that it was asked at all is depressing. Status is a mysterious thing. And money can buy status. And if you have the money, by jiminy, you can hand-mow your fairways to your heart's content.

A quick review of the fairway fiascoes at the Open and the PGA revealed a staff of 25 was required *just to mow the fairways*. Let's see... 25 people at \$6.00 an hour, 4 to 4.5 hours per mowing, three mowings per week, 52 weeks per year = \$93,600 per year in labor alone... *just to mow fairways?*

Where are these people going to park their cars when they come to work? How are the people and equipment going to fit in a maintenance building that is most likely under sized and poorly designed anyhow? How many more mechanics will be hired to service the expanded fleet of mowers and utility vehicles assuming they don't just walk each mower around the course.

And who are these highly dedicated and motivated people and will they be used 40 hours per week? They could make one heck of a bunker and cart path edging crew on Tuesdays and Thursdays. Could your budget take a \$312,000 hit in the labor line item?

This whole discussion is preposterous and yet I know that at some club somewhere, hand mowers will find their way onto the fairways as an everyday routine. Status will demand it, and we will have done it to ourselves again.

Green Side Up



Joel D. Jackson, CGCS Editor

SOMEWHERE THIS YEAR A SUPERINTENDENT PLANTED THE ONE MILLIONTH POUND OF CYPRESS POA TRIVIALIS!

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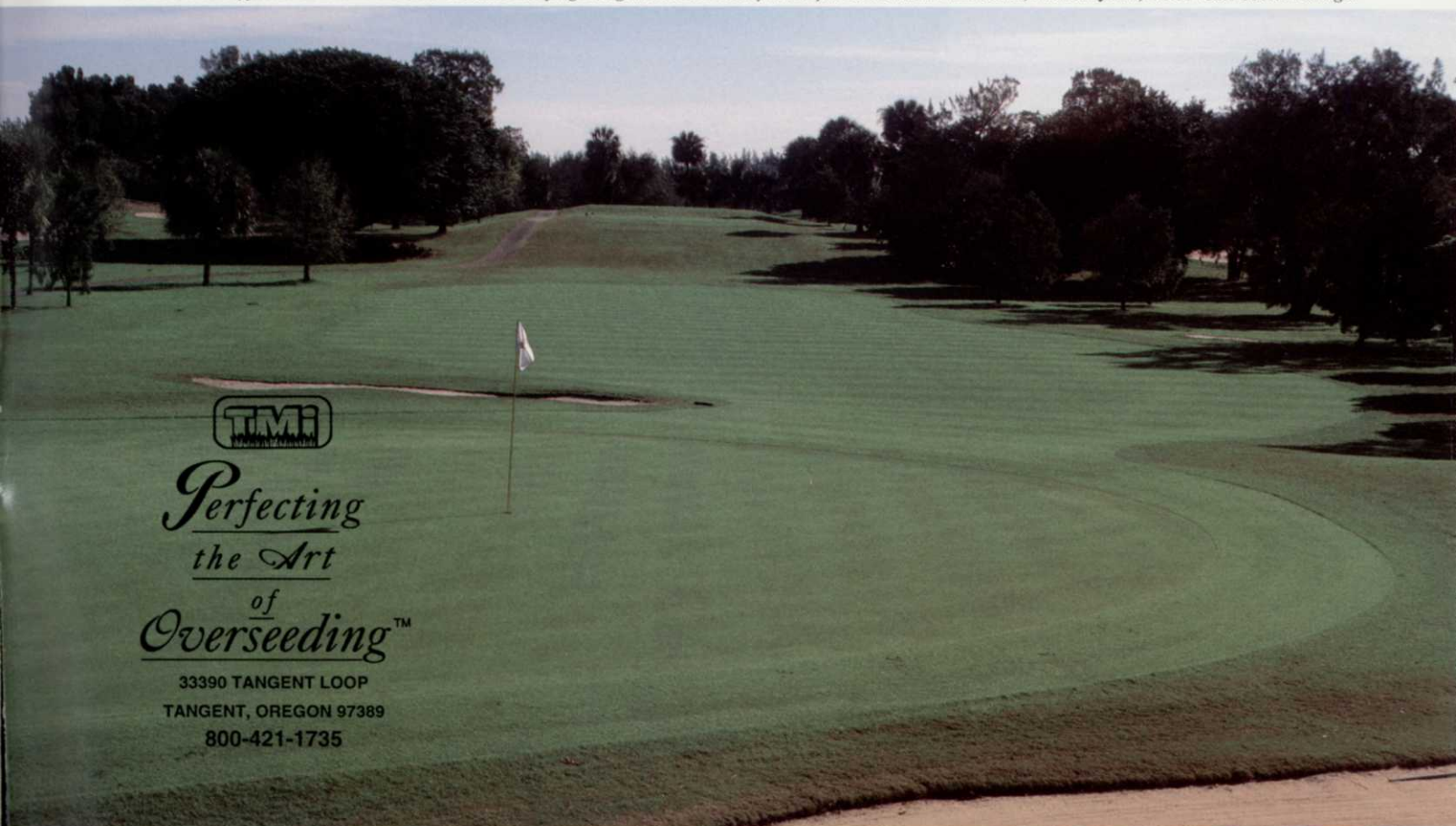


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Photo of 70% Cypress Poa trivialis and 30% Trueline Creeping Bentgrass Green courtesy of Banyan Golf Club in Palm Beach, FL. Dan Jones, CGCS Golf Course Manager



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