



The Florida Green

Summer 1994

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Number Seven

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FORE[®] BEATS 14 TOUGH DISEASES ON NATIONAL TOUR



You didn't read it in the sports section. But Fore fungicide recently wowed course superintendents in 17 states.

Put to the test, Fore showed it was one of the hardest-hitting broad-spectrum fungicides in commercial turf care today. And probably the most economical.

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On tees, greens, and fairways, Fore proved it was more than a match for 14 major diseases. Including such well

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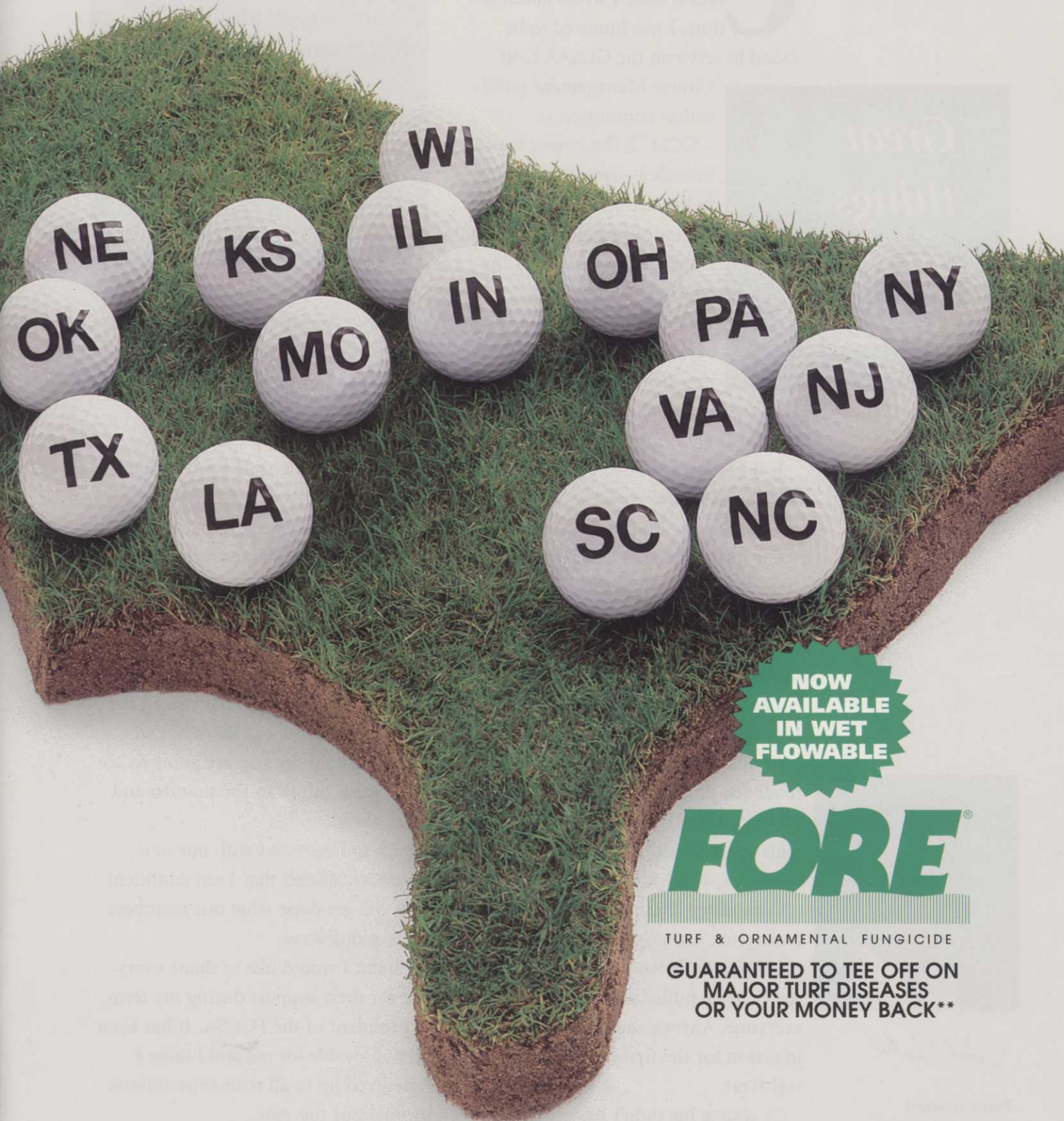
So if you're looking for a proven broad-spectrum fungicide to strengthen your program this year – holler Fore! And duck some of the high cost of turf care at the same time.

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Great things on the horizon!

Continuing with the communication issue I wrote about last time, I was honored to be asked to serve on the GCSAA Golf Course Management publication committee.

GCM is the largest superintendent-owned magazine in the country and is a key communication link for superintendents across the country.

I didn't know what to expect on my first trip to our new headquarters in

Lawrence, Kan. The building is very nice.

Is it too large for our present needs? Without a doubt.

Will we grow into it? Time will tell.

Our present board and new executive officers inherited this building and have plans for the unused space that will benefit everybody — most importantly, the bottom line.

The committee meeting itself was fantastic.

At our open forum, we had superintendents, PhDs and — look at this! — 10 (count 'em!) staff members... all with open minds. And everyone felt free to express his opinion.

Committee chairman Paul McGinnis ran a great meeting. Even more impressive was the way our new COO Joe O'Brien pulled thoughts from everyone. Anyone seeing Mr. O'Brien in action for the first time is in for a real treat.

Of course Joe didn't have much

At our open forum, we had superintendents, PhDs and — look at this! — 10 (count 'em!) staff members... all with open minds. And everyone felt free to express his opinion.

trouble getting me to voice my opinion on GCM. I think you will see some changes to our national magazine in the next year as a direct result of superintendent input, executive direction and the staff's professional skill.

Subject to board approval, the magazine will be modernizing its production facilities, using computers to streamline much of the time-consuming work that had been done the old-fashioned way.

I don't have space to tell you all the good things I saw out there but sit back and hold on: you are going to see some great things in the months and years ahead.

I am so impressed with our new executive officers that I am confident they will get done what our members want and deserve.

Finally, I would like to thank everyone for their support during my term as president of the FGCSA. It has been very enjoyable for me and I hope I have lived up to all your expectations throughout the year.



Paul Crawford

**Paul Crawford
President, FGCSA**



For A Look At The New Mole Cricket Battle Plan, Just Turn The Page.

I had the privilege last month of attending the annual meeting of the Florida Sod Producers Association (FSPA) held in the heart of Polk County. It was an excellent meeting with an educational session, awards presentation and equipment demonstration after the barbecue lunch.

At the morning session an update was given on the status of developing and implementing a state-sanctioned and -regulated sod certification program. All of the FSPA members were very interested in the program, how it would work and what the costs would be. However a major concern was over whether

the customer would be willing to pay more for "certified" sod than they would for non-certified.

This is a very valid point. Will you as a customer insist on using "only" certified sod and sprigs? Will you as a customer for Tifdwarf or Tifway 419 bermudagrass pay three to five cents more per square foot for certified sod or \$1 per bushel more for sprigs over non-certified?

If the answer is "No," then you have just driven the first nail into the coffin of the sod certification program. If the answer is "No," then you have also decided that you are willing to continue accepting the Heinz 57 mixture of grasses coming out of sod fields all over the state.

You see, the sod certification program will not be without its costs to the producers. Those producers who sign up to participate (and not all in the state will) in the program will have no choice but to pass these costs on to you the consumer.

At the same time, there will be the non-certified producers out there. You can probably tell who they are going to be right now. They will be the ones that cut corners on their production costs in order to undercut prices of legitimate producers. You know... a few more weeds in the sod, a few more diseased pallets in the truckload, a few more different types of grasses than the one they are supposed to be delivering. Hell, maybe with a little luck you might actually get some of the type of grass that you ordered.

And then again maybe you won't.

It is an interesting scenario we have here. What we have right now is everybody in the sod business in a gray area. Maybe they have the real McCoy and maybe they don't; there is no way to be sure.

There are no real good guys and no real bad guys, just a bunch of gray guys... no standards, no controls, no criteria and no demands, just grass. Are you ready to step forward and put your money where your mouth is? Are you ready to pay for the real McCoy?

I hope so. You see, the golf course industry is what is behind this FGCSA/FTGA/FDAC effort to revitalize a certification program. It is because of

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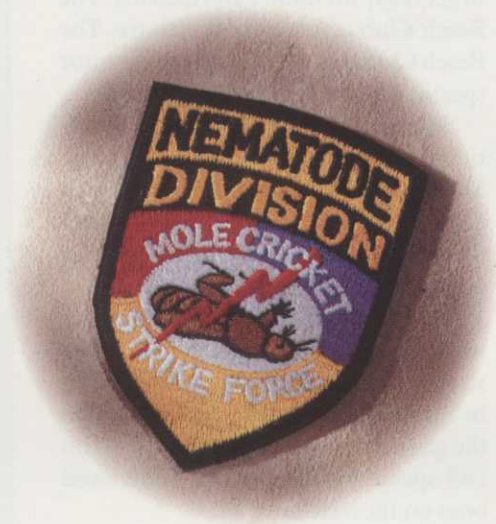
Will you pay for the real McCoy?

Editorial License



Tom Benefield, CGCS Editor

You've Got A Start In The War Against Mole Crickets. Now Send In The Army To Finish 'Em Off.



Introducing LESCO™ Vector® MC.

No pesticide gives you this kind of power.

If the pesticide you're using to battle mole crickets only fights nymphs, you're waging war at a disadvantage.

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Fortunately, there's a fiercer way to fight mole crickets. It's nature's own answer to cricket control – beneficial nematodes. We've packaged them by the billions in LESCO™ Vector® MC.

LESCO™ Vector® MC outperformed the standard chemical treatment in 28 out of 32 evaluations, providing 86% control ten weeks after application. Our ravenous little predators have an appetite for adult mole crickets. They kill, they feast, and then they go looking for their next mole cricket prey. Nematodes take a bite out of the mole cricket life cycle – every adult they devour is another defeated foe that won't be laying more eggs.

But tough as they are, they're gentle on your turf. They don't pose a threat to people, aquatic organisms,

ornamental plants or ground water when used as directed. As a naturally occurring predator, they're exempt from EPA regulations. And they don't have a chemical odor.

So this season, call in the natural guard. Add LESCO™ Vector® MC to your arsenal.

Billions of cricket-eating nematodes in every case. Manufactured by biosys, inc. A leader in biological pesticides.

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Friday the 13th no ill omen as annual Poa Weekend attracts hundreds to Naples

If you didn't make it to this year's Poa Annua Weekend, you missed one of the great social and business events of the year. Every year hundreds of turf professionals and their families flock to the Naples Beach Club for a weekend full of golf, education, great food and just plain fun!

If this was your first year, I'm sure it won't be your last! And if you didn't make it, talk to someone who did. The event which started over 20 years ago seems to get better and better each year.

This year's Poa Annua started on the very unsettling day of Friday the 13th. Superstition and bad luck were nowhere to be found, however, as the FGCSA Seminar with Dr. Michael Coffman was a huge success. A standing-room-only audience enjoyed an informative and extremely important educational session. Those who attended would have to agree; a valuable lesson was learned by all.

If you missed the seminar, look for the book *Environmentalism* by Dr. M. Coffman

The seminar ended at about 5:30 p.m. and we were all ready for some fellowship and fun. Many opted for a beverage at the pool or a stroll on the beach. Either option seemed appropriate, since the seminar took place only about 50 feet from either place.

Many opted for a beverage at the pool or a stroll on the beach. Either option seemed appropriate, since the seminar took place only about 50 feet from either place.

Photos on pages 12 and 13

Still others hustled back to their rooms to get ready for dinner and dancing. The Beach Club offers all of the above. The Beach Club also delivers one of the most spectacular sunsets on the planet.

Saturday morning arrives with the ultimate breakfast buffet and the G.C. Horn Memorial Golf Tournament. David Barnes and Dick Naccarato put on one of the most enjoyable tournaments of the year.

But if you think you're having fun, the wife and kids are having a ball across the street soaking up the sun and swimming in the beautiful Gulf of Mexico. When the game is over, get the bathing suit on and spend some time with your loved ones on the beach.

Saturday night approaches and it's time for the famous Poa Annua Banquet. I hope you took a short nap!

Three hundred of your friends, family and colleagues have gathered to share all of the past year's experiences as well as the weekend's events and a few laughs. The band, a magician and comedian all take turns entertaining you as you feast on the bountiful buffet.

My wife Trish said the mahi mahi was the best she had ever tasted and George Bowling set a new records for trips to the buffet table. In between dances and laughs, we eagerly awaited the raffle and drawings. The Beach Club, Marco Marriott and South Seas Plantations all donated fabulous getaway weekends as well as Hidden Acres Nursery donation of a golf bag and putter.

Susan Zeigler was the big winner, as she will be going on Norwegian Cruise Lines for a three-night cruise to the Bahamas, courtesy of the Everglades Chapter. Since she didn't ask me, I assume she'll take her husband. Just outside the banquet room, the waves keep rolling in and the weekend continues.

Three hundred of your friends, family and colleagues have gathered to share all of the past year's experiences as well as the weekend's events and a few laughs. The band, a magician and comedian all take turns entertaining you as you feast on the bountiful buffet.

Sunday morning hits most of us way too soon as we prepare for the 1994 Poa Annua Classic. Dick Naccarato has his Beach Club layout in championship form and the tournament starts under perfect weather conditions.

As our wives are sleeping in or enjoying their first cup of coffee, we are fighting Dick's tough pin placements and blasting out of traps but having a great time nevertheless. The Everglades superintendents have been working way too hard this spring and fall to keep the coveted cup of Poa Annua.

The Ridge Chapter obviously went to bed early and came to Naples with victory in mind as they walked away with the team championship led by Chuck Rogers winning low net of 65, Ray Cuzzone, Mark Hopkins and Alan Puckett, humbled all the other chapters. Only Steve Ciardullo, a former Everglades president now a mem-

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EcoSoil Systems

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that meet the needs of Florida superintendents

What's Right for Florida Golf Courses



Environmentally Safe ♦ Effective ♦ Competitively Priced

Research conducted by the GCSAA, released at the national conference in February, confirms our findings that golf course superintendents may confront a greater health risk than the general population at-large. Superintendents should not have to choose between maintaining the condition of their golf course or the long-term condition of their health. They should have both! That's why we have developed and now market a complete line of turf management products which improve growing conditions using "organic" or biologically-rich ingredients, rather than harsh salt-based synthetic ingredients.

Our liquid and granular soil amendments and fertilizers — used in conjunction with our state-of-the-art "spoonfeeding" delivery systems and analytical consulting services — substantially diminish the need for the use of pesticides, herbicides and fungicides. This is better for your golf course, your personnel and your golfing patrons. For more information on how you can put this bio-technology to work for your golf course, ask your Helena representative. Also ask for the names of fellow Florida superintendents who use our products and systems. They are our best salesmen.

Our course management products include:

Greens and Tees a comprehensive turf management program which combines lab analysis and premium product formulation specific to your golf course

NutriJect an advanced fertigation system which allows complete automation and customization of liquid fertilizer and nutrient delivery

BioJect a patented, in-line microbial fermentation system which restores important biological activity to soil and substantially improves water percolation through the soil profile

CleanRack a complete equipment cleaning system that yields wastewater which is totally compliant with discharge standards

ClearLake a complete lake management system which incorporates aeration, movement, biological injection, thermal layer breakdown, regular equipment maintenance and consulting services

BioSweep a patented, non-mechanical device that instantly remediates soil which has come in contact with a petrochemical, pesticide or other toxic leak or spill

EcoWash a patented ball-washing device which eliminates the health, maintenance and odor problems associated with most golf ball cleaning equipment

Restore a patented liquid product that achieves better results than wetting agents without problematic salt buildup and side-effects which characterize those products

RediSeed Bentgrass seeds which have been pre-germinated through a patented process to sprout in a fraction of the time and pre-treated to resist common diseases

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Sandoz Poll: Pesticide users share the public's concern for safety

The second annual Sandoz National Environmental Poll surveyed more than 2,000 users of pest control products. Some of the positive findings include:

- Users of pesticides feel a sense of partnership with the public and share its concern for pesticide safety.
- They are taking personal responsibility for improvements, especially by using safer products and improving application practices.
- They also support tough regulations aimed at preventing pesticide misuse.

However, the results were far from a whitewash. The respondents were surprisingly candid about areas in which our industry can improve. They said misapplication occurs occasionally. They admit they don't always wear protective clothing or dispose of containers properly. They also believe there are areas needing more regulation.

According to the golf course superintendents surveyed, the most serious issues associated with the use of pest control

More than three-fourths of the golf course superintendents surveyed said they are dealing with more public concern over pest control and the environment compared to five years ago.

products are safety, environmental impact, proper application and public perception. Safety was the highest response at 33 percent.

More than three-fourths of the golf course superintendents surveyed said they are dealing with more public concern over pest control and the environment compared to five years ago. Almost 70 percent said education is the best way to reduce this concern.

Fifty-three percent said they have not heard any complaints relating to the use of pest control products from the public, their neighbors or customers. Of those who said they have heard complaints, smell/odor was the most frequently mentioned at 15 percent.

Responsibility

Manufacturers, golf course superintendents and government were most frequently mentioned as those who have primary responsibility for correcting problems associated with pest control products. Manufacturers received the highest response at 31 percent.

About half of the golf course superintendents surveyed said their personal level of concern associated with pest control has increased over the past five years, and about half said their concern has stayed the same. Of those who said their concern has increased, they said it is primarily due to personal awareness, public awareness, environmental impact and more government regulations. Personal awareness was the highest response at 32 percent.

According to the following percentages of golf course superintendents surveyed, people in their industry always:

- Use safer pest control products when available 70 percent
- Wear protective clothing 65 percent
- Dispose of containers properly 78 percent
- Follow labels closely 93 percent
- Notify their neighbors when using

pest control products 25 percent

- Attend educational classes 59 percent

While 25 percent said their industry always notifies their neighbors when using pest control products, more than 60 percent said notification is important.

More than 65 percent of the respondents said they are making fewer applications of pest control products.

Almost 60 percent said they are familiar with integrated pest management. Of those, more than three-fourths said they have used such a program.

More than 60 percent said they are doing things differently regarding the use of pest control products compared to three years ago. The most frequently mentioned responses as to what changes are being made were using safer products, using less product and improving application methods. The highest response was using safer products at 37 percent.

The most frequently mentioned reasons as to why changes are being made were:

- Public opinion Safety issues
- New products available
- Personal sense of responsibility

More than 20 percent of the golf course superintendents surveyed said they do not plan to make changes in their use of pest control products in the future. However, those planning to make changes most frequently mentioned encountering more regulations, using safer products, using less product and adopting integrated pest management as changes they expect to make.

More than 50 percent of the respondents said golf course pesticide products are never knowingly applied improperly, and only four percent said misapplication occurs frequently.

Almost 75 percent said the enforcement of penalties for misapplying pest control products is adequate. Mandatory

Continued on page 18

YEARS OF UNIVERSITY TESTS SHOW CYPRESS POA TRIVIALIS AS THE SUPERIOR CHOICE FOR OVERSEEDING!

Since 1991, Cypress Poa trivialis has had a proven record in university trials for being better and different than comparable varieties. Differences such as a darker genetic color, faster establishing rate, and better disease resistance.

Instead of taking our word for it, here is what the experts have to say...



Cypress' prostrate growth habit is apparent in these P.V.P. trials. One picture is worth 1000 words.

TMI will be happy to send to you copies of the complete trial data for any of the trials we have mentioned below.

University of Florida 1991-92 Overseeding Trials Gainesville, Fla.		
	Mean Quality	
	Scores	Color
Cypress	7.2	7.8
Sabre	7.2	5.4

University of Arizona 1992-93 Overseeding Trials		
	Mean Quality	
	Scores	Color
Cypress	5.4	5.3
Laser	5.0	5.0

USGA Stimpmeter tests at University of Arizona revealed a higher average ball speed of 92 inches for Cypress; better than for Laser.

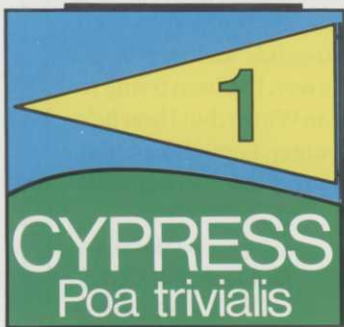
"Although Cypress and Sabre Rough Bluegrass had equal seasonal Turf Quality Ratings of 7.2, the "Cypress" cultivar had better color and less dollarspot disease in May."
Univ. of Florida Gainesville 1991-1992 overseed Trial.

Turfgrass	Monthly and seasonal mean values for turf quality on cool-season grasses overseeded on a 'Tifdwarf' bermudagrass putting green from Dec. 1993 to Mar. 1994 at Gainesville, Fl.				Mean
	Dec.	Jan.	Feb.	Mar.	
	Quality Rating				
Cypress	6.8	8.2	8.0	6.8	7.25a
Colt	7.1	8.2	7.8	8.5	7.19a
PT-GH-92	6.3	7.8	8.0	7.1	7.19a
LPT-CT (Loft)	6.6	7.8	8.0	6.8	7.16a
PT-GH-89 C11 (Dark Horse)	8.1	7.3	7.8	7.0	6.97a
Danish Common	7.5	8.2	7.5	5.8	6.94a
LPT-HWY (Loft)	6.6	7.7	7.9	8.2	6.88a
Winterplay	6.6	7.5	7.8	6.3	6.88a

Quality mean based on eight visual ratings on a scale of 1-9 where 9 = best

Establishment rate of Poa trivialis varieties overseeded on dormant bermudagrass in Florida (data from Dr. A.E. Dudeck, Univ. of Florida)			
days:	7	14	21
	—% ground cover—		
1991			
Cypress	2	23	79
Sabre	2	17	70
1992			
Cypress	87	93	86
Laser	36	58	83

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To all, a fond farewell...

Two years ago, with a strong sense of apprehension, I accepted the position as editor of the *Florida Green*. I saw a void which needed to be filled and made a commitment to the association and to myself to do my best in helping out. I knew there were big shoes to fill and a proud tradition to uphold.

I also knew that I by myself could not make the *Florida Green* successful. I knew the key to success was held in the hand of the rank-and-file membership. Its success came. It came primarily not from my efforts but the efforts of hundreds of caring members... members who would write columns for the magazine... who would send in photos for the articles... who would talk to other members and encourage them to take part in making their magazine the envy of other industry publications.

And it worked. You, the members, have molded, shaped and cultured the finest turf maintenance magazine avail-

able. It is a publication which we can proudly show to our club officials and owners. It is an avenue to learn the best ideas from the brightest superintendents in the business. It has character, color and occasional wit and it is all because you care so much.

As for me, I have simply been a caretaker of the *Green*. I have had the privilege to be associated with such a fine and prestigious publication. And I have grown quite fond of being the editor. But, alas, all things must come to an end. After this issue, I will no longer be the editor of the *Green*. I have enjoyed it immensely and publicly thank you for allowing me this opportunity to serve my association and my friends. Hopefully if the Lord permits I may one day again be able to be of assistance.

A special thanks goes to Marie Roberts whose patience, understanding and efforts have also played a big part in the success of the *Green*. The new editor of

the *Green* is an old friend answering the call to duty. Joel Jackson will take this magazine to new heights if you give him the same support you have given to me... his vision and leadership will be a fresh viewpoint that will guide the direction of the *Green*.

The changing of the guard will serve as a reminder to all of us that no one is indispensable. As Napoleon said, "The graveyards are full of indispensable people."

Time marches forward. Only the romantic and naive are afforded the luxury of reminiscing on the past.

Finally, let me say I have enjoyed your help, your friendship and your fellowship. I hope in some small way I may have added a little humor, hope or wit when it was needed. Until we meet again, may God bless and keep you safe.

TJB

Would a rose by any other name...?

Dear Joel:

It's not nice to fool with Mother Nature.... Your most recent treatise is a sample of Florida reality but contains one slight inaccuracy that we should have clarified with a Milorganite plant tour when you were up at our Wisconsin Turfgrass Symposium several years ago.

You state you were in deep Milorganite. Most of the world laughs at the mention of our product because we have not done a good job of informing people what our product is really made of and from.

The usual perception of our product is Milorganite is, uh, well, do-do, stuff, kaka; but it is not. Milorganite is produced in a process where the naturally occurring, microscopic bacteria, unicellular animals, plants, and the free-swimming ciliates that consume the food sources that come to us in the waste water, are dried and form our fertilizer. It is these bio-solids that are the

Now, if you want to be in deep Milorganite, we've got some real nice distributors who'd be more than pleased to take your request.

true source of Milorganite.

Now, if you want to be in deep Milorganite, we've got some real nice distributors who'd be more than pleased to take your request.

You're always welcome to come up here at any time of year and interview a perma-

nent Wisconsin resident, Old Man Winter...

Please feel free to call if I can assist.

Sincerely yours,

Terry W. Ward

Sales Manager, Milorganite

Dear Terry,

No aspersions were intended toward such a venerable and respected product like Milorganite. Say Milorganite and the world laughs with you. Say bio-solids and you laugh alone! By the way, I've been trying to reach Old Man Winter, but I hear he's out of the country. Something about a lot of bad press in Wisconsin this spring!

Sincerely,

Joel Jackson, CGCS

Asst. Editor

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120 attend seminar on environmental leadership

On Friday, May 13, at the Naples Beach Club, about 120 golf course superintendents and other concerned professionals attended a seminar led by Dr. Michael Coffman.

The focus of the seminar centered around the elite leadership in the environmental movement. This leadership probably comprises less than five percent of those people involved in environmental activism.

Dr. Coffman exposed the political

and quasi-religious agenda behind this small but powerful group. They have been very effective in promoting legislation that has had significant impact on our lives, the economy, and amazingly, even to the detriment of the environment, without having to demonstrate any peer-reviewed scientific evidence or proof.

To counteract the emotionalism, extremism, and fanaticism (that incidentally provides good material for the me-

dia), we must fight this battle on a grass roots and local basis. It must be done using the truth, solid scientific evidence and an ongoing commitment to environmental sensitivity and public education relating to our own operations.

If you're concerned about your profession, free enterprise, private property and government growing out of control, please call 207-945-9878 to obtain a copy of Dr. Coffman's book, *Saviors of the Earth?*

Poa Weekend a professional, social success

Continued from page 10

ber of the Ridge Chapter, showed any mercy on the field.

A net 69 on a tough day is a score to be proud of so you can imagine how happy David Oliver of the Treasure Coast Chapter was with his gross 69 good for a four-shot victory over Mark Hopkins. It was Oliver's third victory in

the past four Poa Annuas. Dick Harrell won the Suppliers Division with a solid, even-par 72 followed by Gary Whilhelm. A cookout lunch followed the tournament as wives and children congratulated or consoled their favorite linksters.

It almost seems unrealistic to have so much fun and still make money. Over \$10,000 was raised this year for the turfgrass industry.

Of course, a get together like this takes a lot of hard work and great sponsors. The Naples Beach Club and Dick Naccarato were fabulous as always. The sponsors all deserve our respect, our thanks and our business. On behalf of the Everglades board of directors, it was simply a labor of love for our proud Poa Annua tradition.

Poll: 87% say current safeguards adequate

Continued from page 14

education and certification for users, easier-to-understand labels and pesticides prescribed and applied only by licensed applicators were the most frequently mentioned solutions for preventing misapplication of pest control products.

Almost 50 percent said there is an area

regarding the use of pest control products that should be regulated more to prevent practices that are unsafe or risky. Application methods and homeowner use of pest control products were the most frequently mentioned areas needing to be regulated more.

More than 87 percent said they agree the safeguards already in place are suffi-

cient to ensure safety to the environment, the public, animals or wildlife and actual users of pest control products.

At 41 percent, wearing protective clothing was the most frequently mentioned pest control regulation/practice that contributes the most to the safe use of pest control products. Record keeping also was mentioned frequently.

Benefield: Are you willing to pay for the real McCoy?

Continued from Page 8

horror stories from you the superintendent that this work is being done.

And it is up to you the superintendent to assure that the program succeeds. If you don't insist on "certified" sod and sprigs when you rebuild or re-grass your course,

the program is doomed. If you go to non-certified producers because of their lower price you deserve what you get as far as the grass quality goes.

The larger injustice however will be that you will have let down your profession.

You have an obligation to support those programs endorsed by the professional association you belong to which are progressive and of merit. This is one of those programs. It needs your support and help. Don't be penny wise and pound foolish.



The Treasure Coast Wildlife Hospital received more than \$9,000 from the Treasure Coast GCSA as proceeds from its inaugural Blue Pearl tournament at Loblolly Pines Golf Club in Hobe Sound. From left are John Sullivan, owner of Loblolly Pine GC, David Hitzig of the Treasure Coast Wildlife Hospital, and Tim Cann, TCGCSA president.

Treasure Coast's 'Blue Pearl' event attracts 150 community leaders, raises \$9,000 for wildlife hospital

The inaugural Treasure Coast Golf Course Superintendents Association "Blue Pearl" golf tournament was a huge success. Over 150 people participated in the event.

The majority of the participants were from outside of the golf industry with bankers, lawyers and local business owners quickly buying up most of the available player slots. These folks were also instrumental in providing door prizes and tee sponsorships.

The tournament was held at the environmentally sensitive and prestigious Loblolly Pines Golf Club in Hobe Sound.

Golf course owner John Sullivan played an important role in the success of the tournament by donating the use of

his club's facilities.

Named the "Blue Pearl" by the tournament committee, the tournament is meant to be a fundraising avenue for the environment we all live in on this planet which looks like a blue pearl from outer space. The beneficiaries will be local charitable organizations who share common goals with golf courses.

The first event raised and donated over \$9,000 to the Treasure Coast Wildlife Hospital. TCWH is a non-profit organization which receives and treats wounds of endangered wildlife that have been injured. The major goal of TCWH is to release the wildlife when they are healthy enough to go back into the wilderness.

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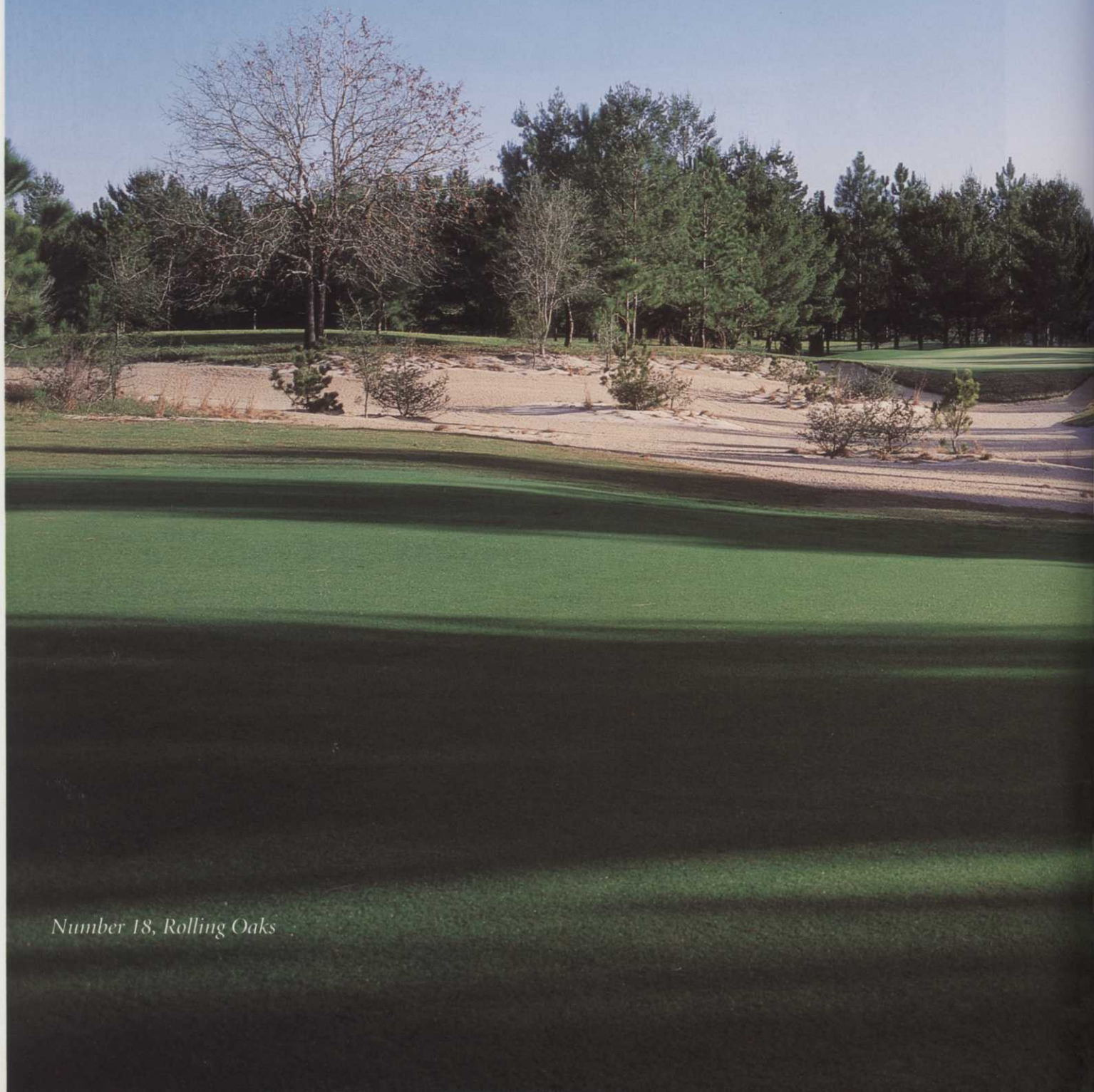
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If you go down to the 'V'



Number 18, Rolling Oaks

Woods' today . . .



BY JOEL D. JACKSON, CGCS

If you go down to the woods today, you're in for a big surprise. If you go down to the woods today, you won't believe your eyes...

Those lyrics are from a song called The Teddy Bears Picnic and were part of the theme song for a 1950's Saturday morning radio show.

Well, If you go down to the woods today on US Highway 98 between Brooksville and Homosassa Springs, you will be in for a nice surprise in the form of the World Woods Golf Club. You won't believe your eyes as you ride through this beautiful golf

venue. It is another Fazio Design Group triumph located in West Central Florida just a hop, skip, and a John Daly drive from Fazio's renowned Black Diamond Ranch golf course.

The World Woods Golf Club, like Black Diamond Ranch, is located in the limestone quarry district of Florida, but this time Mr. Fazio and company molded their designs to fit the rolling sandy hills, piney woods, and oak forests of the World Woods site. There are a few rocky outcrops accenting the landscape to remind you that the quarries are nearby.

What the golfing guests will find are two strikingly different 18-hole courses — Pine Barrens and Rolling Oaks — and a 70-acre

World Woods

between
Brooksville and
Homosassa Springs



Name: World Woods Golf Club Location: Between Brooksville and Homosassa Springs, Florida

Owner: Mr. Yukihiisa Inoue, Nagoya, Japan

Acting General Manager: Stan Cooke

Golf Professional: Mark Richards

Playing policies: Public play

Designed by: Fazio Golf Course Designers, Inc.

Construction: Pine Barrens Course by Central Florida Turf. Rolling Oaks Course and the Practice Facility by Wadsworth Golf Construction

Opened: February 1993

Two 18-hole championship courses, Pine Barrens and Rolling Oaks. A state-of-the-art Practice Facility consisting of a 9-hole short course; 3 practice holes; a 22-acre, four-sided practice park; and a 55,000 sq. ft. putting green.

Total Acreage: Pine Barrens (105 with 20 acres in bahiagrass); Rolling Oaks (126 with 30 acres in bahiagrass); Practice Facility (60 with 7 acres in bahiagrass).

Tees: Pine Barrens (3.4 acres, 79 tee boxes.); Rolling Oaks (5.8 acres); Practice Facility (5.7 acres). All tees are Tifway 419 hybrid bermuda. They are maintained at a height of 1/2 inch. All tees are overseeded with Lesco's Eagle I Blend at a rate of 15 lbs. per 1,000 sq. ft.

Greens: Pine Barrens (2.8 acres, average 6,200 sq. ft.); Rolling Oaks (3.8 acres, average 6,400 sq. ft.); Practice Facility (Short Course and 3 hole Practice Course - 1.7 acres, average 6,010 sq. ft.); Putting Course (55,000 sq. ft.). All greens are Tifdwarf hybrid bermuda. They are maintained at a height of 5/32 - 9/64 inches. Green speeds range from 9.0 in the winter to 8.0 in the summer. All greens are overseeded in the fall with Pennlinks bentgrass at a rate of 6 lbs. per 1,000 sq. ft.

Fairways: Pine Barrens (55 acres); Rolling Oaks (38 acres); Practice Facility (29 acres). All fairways are Tifway 419 hybrid bermuda. They are cut at 1/2 inch. The 15-acre practice park fairway is not overseeded. The rest of the fairways are overseeded with Lesco's Eagle I Blend at a rate of 300 lbs. per acre.

Roughs: Pine Barrens (25 acres); Rolling Oaks (50 acres); Practice Facility (13 acres). The rough areas are a combination of Tifway 419 bermuda mowed at 1 1/2 to 1 3/4 inches, and bahiagrass transitional areas (Pine Barrens - 20 acres) mowed at 3 - 4 inches in the summer. Rolling Oaks is the only course that overseeds its roughs using Transtar Intermediate at 250 lbs. per acre. There are approximately 40 acres of native sand "waste bunkers" on the Pine Barrens course. There is also approximately 3 acres of centipedegrass used to contrast the bermuda and bahia areas on the Short Course and Practice Course. It is mowed at 2 - 3 inches during the summer.

Irrigation System: Toro Network 8000 with 61 satellite boxes. Head to head coverage provided by 3,100 Toro 640, 650, and 680 heads. There is a dual head system around the greens so the putting surfaces can be watered individually according to USGA guidelines. There are over 350 quick couplervalves which were used heavily during landscape installation.

Pumping System: PSI Variable Frequency Drive @ 4,000 GPM.

Water Source: Three 10 inch wells.

Staff: 41, which includes:

Superintendents: Bob Wagner, Pine Barrens; Steve Hritsko, Rolling Oaks

Assistant Superintendents: Bob Roessing, Pine Barrens; Ryan Weaver, Rolling Oaks; John Hoffman, Practice Facility.

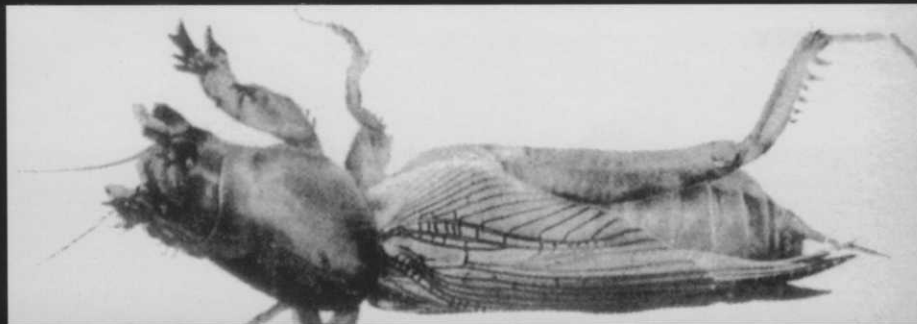
Head Equipment Technician - Brian Scull; Asst. Equipment Technicians - John Dottori; Brian Layle; Neil Pare'.

Spray Technicians: Brian Schaffer, Pine Barrens; Rory Mudge, Rolling Oaks; T. J. Orednick, Practice Facility.

Irrigation Manager, Mark Tooker, Rolling Oaks; Irr. Technician: Andrew Ryan, Pine Barrens.

Administrative Assistant: Valerie Omelian. "This lady does an outstanding job of coding and tracking expenses in our "Blue Book." In addition, she is an expert at screening calls and unannounced visitors. We would be lost without her!" — Bob Wagner.

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Number 15, Pine Barrens

parcel simply called the Practice Facility. This Practice Facility has every course owner/operator and teaching pro green with envy.

The Practice Facility consists of a 55,000-sq.-ft. putting green called the Putting Course; a three-hole Practice Course for lessons; a nine-hole Short Course made up mostly of par-3 holes with a couple of short par 4s mixed in for variety; and the piece de resistance is the four-sided, 22-acre Practice Park.

This park/range has clusters of tees around the perimeter. They are separated by landscaped beds and trees to break up the usual monster tee look. The landing areas of the park/range are also designed with target greens, sand bunkers, and trees. Additionally, there is an irons-only range located between the two first tees of each course, and a putting green at each of the first tees.

The total facility is well planned, well

built, well equipped, and well staffed. The owner, Mr. Yukihisa Inoue, is to be commended, because he went to the “well” the right amount of times. It is refreshing to see an operation that has made the commitment to invest in total quality from the ground up. It will pay dividends in the future.

At Mr. Inoue’s insistence, there are no homesites along the courses. Future residential and guest areas will be located nearby, but out of sight from the course. Golfers who visit right now are served by a temporary pro shop and an open-air grill, but everyone seems to be charmed by the rustic “golf only” atmosphere for a

The total facility is well planned, well built, well equipped, and well staffed. The owner, Mr. Yukihisa Inoue, is to be commended, because he went to the “well” the right amount of times. It is refreshing to see an operation that has made the commitment to invest in total quality from the ground up. It will pay dividends in the future.

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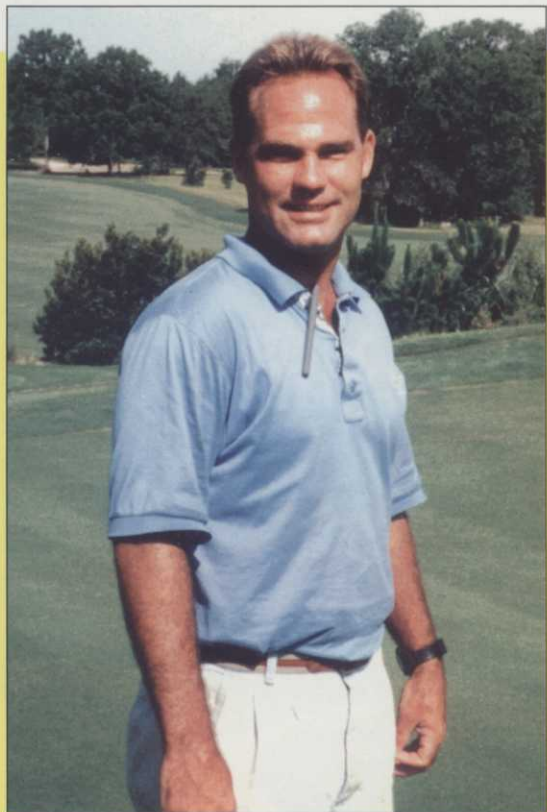
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*Silver crabgrass, crowfootgrass

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**Bob
Wagner**
Brooklyn,
N.Y.

Origin: Brooklyn, NY. Relocated to Pinellas County in 1981.
Family: Single. Faithful companion, Satchmo, an Italian Greyhound.
Education: A.S. Degree in Golf Course Operations from Lake City Community College.

Class of '87 ("The Stolons")

Previous employment: Crew member, Innisbrook Resort, The Island Course. 1981-1984; Asst. Supt., Tampa Palms G & CC. Construction and grow-in. 1987-1988; Asst. Supt., Bardmoor CC. 1988-1989.

Supt., Wentworth GC, Tarpon Springs. Construction, grow-in, opening. 1989-1991; Supt., World Woods GC, Pine Barrens Course. Construction, grow-in, opening. 1991-present.

Hobbies and Interests: Golf. Wildlife. Blues music. Diehard N.Y. Mets, Rangers, and Knicks fan.

Goals: Become a certified superintendent in 1994/95. Become more involved in the Seven Rivers Chapter.

Memorable moments: (1) Member of the undefeated LCCC softball team, The Stolons, in 1987. "It was a good time in our lives. We still keep in touch and follow each other's progress in the industry." (2) Getting my first Asst. Supt. job upon graduation, and then realizing my education was just beginning! (3) Opening day from three clubs: Tampa Palms, Wentworth G.C., and World Woods. I have always had a sad feeling of loss the night before the openings. A special time is ending, but it is soon replaced with feelings of pride when you see players enjoying the fruits of your labor." (4) Being part of two very successful Envirotron Golf Classics.

Professional affiliations: Seven Rivers Chapter FGCSA; Florida Turfgrass Association; GCSAA

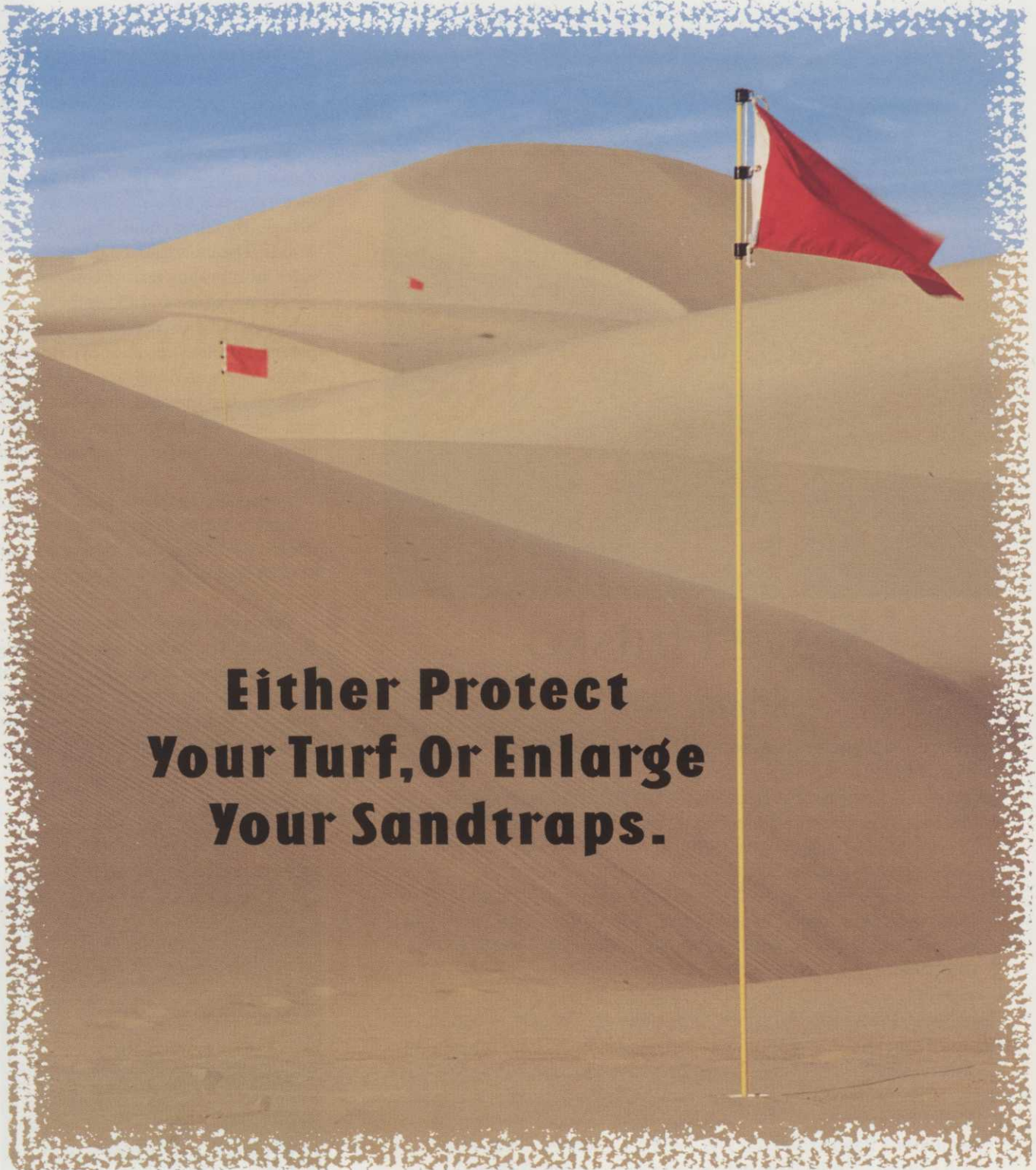
Water resource conservation was addressed in the design by using bahiagrass on tee slopes and transitional rough areas between the fairways and the surrounding woods. The unirrigated bahiagrass provides an appealing texture contrast and allows the tee tops to be watered with smaller heads.

change. A temporary clubhouse will be under construction soon.

Designed With Nature In Mind

Portions of the 800 acres in Phase I are prime gopher tortoise habitat. World Woods has set aside 100 acres to be maintained exclusively for this Florida "species of special concern." During the clearing and construction phases, the World Woods staff held a voluntary tortoise roundup to move the reptiles out of harm's way. After construction was completed, they were returned to their old chomping grounds. World Woods will not use any pesticide with an LD-50 rating of less than 200 to prevent any potential impact to the tortoise.

The maintenance staff will be challenged to keep nematode populations under manageable levels in the sandy soil areas. The staff will be checking the effectiveness of the new sesame seed-based nematicide, Nematrol, as an alternative product. Currently, the courses rotate being closed on



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Steve Hritsko

Ripon, Wis.

Origin: Ripon, Wisconsin. Relocated to Florida in 1984.

Family: Single

Education: University of Wisconsin(1980-1981) studied Business; Moraine Park Tech Institute 1983), certificate in Public Relations; University of Massachusetts(1986), certificate for Short Course for Golf Course Managers.

Previous employment: Spray Technician, Bardmoor CC, Largo, FL. 1984-1985; Asst. Supt., Bardmoor CC. 1986-1989; Asst. Supt., The Bayou Club, Largo, FL. 1989-1990; Supt., Bardmoor North Course. 1990-1992; Supt., World Woods GC, Rolling Oaks Course. 1992 - present.

Hobbies and Interests: All sports, especially golf. Music. Aviation.

Goals: "To purchase a plot of land and design, build, and operate my own facility!"

Memorable moments: (1) The construction, grow-in, and opening of World Woods. (2) The day I was promoted to superintendent at Bardmoor's Bayou Club. (3) The 1988 J. C. Penney LPGA/PGA Golf Classic. "Three days before the event a tropical storm destroyed the course, bleachers, tents, trees, and bunkers. Two days later, a long-time crew member committed suicide. Two days after that, my apartment was burglarized. After that, I became a believer in the adage that bad things come in threes!" (4) Hosting two successful Envirotron Golf Classics.

Professional Affiliations: Seven Rivers Chapter FGCSA; Florida Turfgrass Association; GCSAA.

Mondays to allow time to perform more involved maintenance tasks like spraying, fertilizing, and topdressing without impacting the guests.

Water resource conservation was addressed in the design by using bahiagrass on tee slopes and transitional rough areas between the fairways and the surrounding woods. The unirrigated bahiagrass provides an appealing texture contrast with the bermudagrass and allows the tee tops to be watered with smaller heads. A computer-controlled irrigation system helps prevent overwatering by applying specifically calculated precipitation rates to each area based on its location. Expansive unirrigated native sandy areas are also part of the design.

An ongoing tree-planting program helps to replace storm-damaged trees and to reforest portions of the property that had been cleared pasture land prior to construction.

Temporary signs locate tees and give directions. The staff is diligently looking for natural materials to use for permanent signage. The tee markers are similar to Augusta National's — sawed-off tree limbs with a little dab of paint for identification.

Temporary signs locate tees and give directions. The staff is diligently looking for natural materials to use for permanent signage. The tee markers are similar to Augusta National's — sawed-off tree limbs with a little dab of paint.



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Collier's Reserve Golf Course
Naples, Florida

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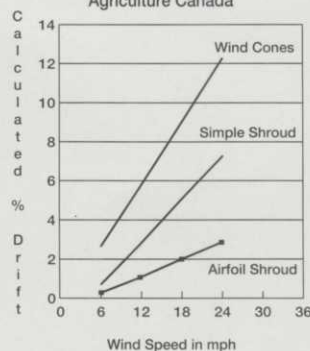
Environmental Leadership

Congratulations to the history making Tim Hiers and Matt Taylor of Collier's Reserve Golf Course, WINDFOIL users that earned the first ever designation as an Audubon Signature Cooperative Sanctuary Golf Course, and to WINDFOIL owners who earned a third of the GCSAA Environmental Stewardship Awards this year. Industry leaders choose the WINDFOIL to protect the environment, their operators, and to improve operational efficiency. **Be a turf industry leader— use a WINDFOIL.**

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Management Leadership

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Or place root zone pesticides, fertilizers, biologicals, soil amendments, separately or together and reduce surface exposure and runoff risk.

Pine Barrens

I had the pleasure of playing Pine Barrens and the Short Course during the Second Annual Envirotron Classic this past April. Pine Barrens is reminiscent of the pictures I have seen of the historic Pine Valley course in New Jersey. Superintendent Bob Wagner suggested that this design may have been Tom Fazio's testimony for his love of that course.

The 40 acres of native sandy "waste" bunkers offer a striking contrast of tan color to the green turf and trees. The bunkers also suggest a "target golf" feel to the design.

Intended to be low maintenance areas for labor, fuel, and water conservation,

some of the bunkers have areas that wash out during heavy rainfall. Bob and his crew have addressed those problem areas with additional drains and reshaping and sodding of the bunker edges.

The Fazio people did comment that some erosion is not bad and alluded to erosion features and footpaths created at Pine Valley that have become unique characteristics of that course.

There is a concerted effort to minimize the use of anything artificial on the course. At first glance, I thought Bob and his staff had done such a great job grooming the course that I couldn't imagine why they didn't notice the grass and weeds growing in the cracks and crevices of the rail-

road-tie steps on some of the tees.

It turns out that the steps were seeded with centipede grass and the encroachment of vegetation is encouraged to help soften the angular look of the man-made steps.

Rolling Oaks

The Rolling Oaks course is more reminiscent of the classic designs of the Donald Ross era. There aren't a lot of forced carries over hazards and the bunkering is more traditional with openings in front of the greens for run-up approach shots.

The eighth hole is the signature hole with a highly elevated tee on a hilltop overlooking a fairway that is bisected and



Number 5, Pine Barrens



FOR BROWN PATCH, "A PROGRAM CENTERED ON DACONIL 2787® ... HAS NEVER FAILED ME."



*Mark Hoban,
Superintendent,
The Standard Club,
Duluth, Georgia*

This summer, Mark Hoban, certified golf course superintendent at The Standard Club in the Atlanta suburb of Duluth, will return to what he knows is his most dependable approach to Brown patch control: a preventive schedule of Daconil 2787® Flowable Fungicide from ISK Biotech Corporation. That's because, last year, he learned a valuable lesson. When temperatures soared to 100° and humidity hovered in the 90% range, he suffered severe yellowing on several of his bentgrass greens. This he blames on a combination of liquid fertilizers and systemic fungicides.

The Standard Club's course offers golfers a dramatic look through all four seasons. Making extensive use of native grasses like bluestem, broomsedge and indiagrass, it incorporates a variety of turfgrasses, too. There's bermudagrass in the fairways, tall fescue and bluegrass in the roughs, zoysiagrass bunker faces, and of course, bentgrass on the greens.

The challenge of bentgrass.

Maintaining bentgrass greens through Georgia summers can be a challenge. "Our critical time is mid-June through September," Mark says. "During the heat stress of summer, we pay particular attention to Pythium and Brown patch on the greens."

After the problems he had last summer, Mark will avoid mixing nutrients and systemic fungicides and return to Daconil 2787 as the cornerstone of a preventive program he's used successfully before. "My intention is to go with Daconil 2787 on a preventive basis," he says. "When I spray every seven days, even using the light label rates, I never have Brown patch. And then I'll rotate a systemic into the program once in a while."

Daconil 2787 for algae prevention too!

Besides the Brown patch control he gets, Mark likes Daconil 2787 because it also prevents algae. Even though algal scum was only just added to the label, he recalls that courses using a regular schedule of Daconil 2787 for Brown patch "had little or no algae."

The Atlanta superintendent sums it up candidly. "I've been in this business since 1971, and a superintendent since '76," he says. "I feel I learned a lot last year, and I'm excited about 1994 and returning to a program centered on Daconil 2787, which has never failed me."

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Number 16, Pine Barrens

bordered by a meandering brook. When you're standing on that tee you could imagine that you were in North Carolina or upstate New York.

Rolling Oaks traverses piney woods and its namesake oak hammock environments. It also occupies portions of old pasture land at its northern limits. The transitional areas between these topographies are the wiregrass areas that support the native tortoise populations mentioned earlier.

Superintendent Steve Hritsko and his crew have earned high praise from the Florida Fish and Game Commission for their management practices to maintain these habitats.

Because of the oak hammock environment and soil conditions, management practices are different on Rolling Oaks. Steve and his staff must contend with denser shady areas and clay and limestone deposits as they manage and groom the turf. One of Steve's projects is trying to maintain a stand of overseeded tall fescue year-round in some shady rough areas. He is trying different rates and application dates to carry the grass through the dog days of summer.

Last year, Mike Mackey, one of Steve's operators, also got creative with the overseeding. He designed and executed an intricate diamond shaped mowing pattern on the 11th hole that became a con-

versation piece among the golfers. Steve says that it attracted so many comments that he will probably have Mike do it again this fall.

The Dynamic Duo

No, I'm not talking about Batman and Robin! I'm referring to the World Woods superintendents, Bob Wagner and Steve Hritsko. The common bond between the two is their friendship. The common trait that each one possesses that makes the operation strong is their professionalism.

Bob and Steve are quick to give high praise to the three assistant superintendents: Bob Roessing, Pine Barrens; Ryan Weaver, Rolling Oaks; and especially John

Hoffman on the Practice Facility who has to deal with their different management styles. He reports to Bob for the nine-hole and three-hole courses, and to Steve for the two ranges and putting green. Bob and Steve also take advantage of the three-hole practice course by collaborating on testing equipment, products, and procedures under normal maintenance conditions.

Bob and Steve also rely heavily on the daily contributions of Brian Scull, equipment manager, and Mark Tooker, irrigation manager, to keep this sprawling layout well groomed and well watered.

Beyond those similarities, meet Mr. Night and Mr. Day! Bob is from Brooklyn, New York and Steve is from Ripon, Wisconsin (population 8,000 when Ripon College is in session). Bob is highly competitive operating somewhere around warp speed, while Steve is more laid back taking the A-train to get there.

Both gentlemen were tested and found

“To be really successful in this profession, this can’t just be a job or a paycheck. I feel you have to take it personally.”

deserving at the Bardmoor proving grounds in Largo, Florida under the guidance of John Luper, Frank Cook, and Tim Sever, whom they both give extensive credit for their professional growth and development.

Bob’s view of the profession includes his philosophy of “taking the job personally” which he admitted he borrowed from a friend. “To be really successful in this profession, this can’t just be a job or a paycheck. I feel you have to take it personally. There are times when management thinks the course is great, but you know you have problem areas that aren’t right.

Solving those problems, whether they are noticed or not, results from getting personal with the job, and that is satisfying to your head.”

Steve offers his own formula for success to would-be superintendents. “First get a job on a golf course. Work at it at least a year. During that time, ask lots of questions and really study what is required of the superintendent and his assistant. If after a year you still have the interest, enroll in a turf management program.

“There is a trend in the industry leaning more and more towards graduates with a four-year degree. I would investi-

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Number 8, Rolling Oaks

gate this option first. If that does not fit your needs, find a good two-year program. After graduation, be prepared to make sacrifices and pay your dues. Nobody gets something for nothing in this business.”

Bob and Steve became good friends while working at Bardmoor. They know each other’s personalities, strengths, and weaknesses, and they respect each other’s management styles. It is a unique personal and working relationship that has been most beneficial for World Woods.


Besides this grand facility on the cutting edge of golf operations, World Woods has established itself as a concerned and committed member of the golf industry. The ownership and management have do-

nated the facility for the past two years as the site of the Envirotron Classic Golf Tournament. By waiving the customary fees and charges, World Woods has helped the Seven Rivers Golf Course Superintendents Association and the Florida Turfgrass Association raise nearly \$52,000 to equip the Envirotron turf research center at the University of Florida.

Few people realize that the combined turf industries in Florida constitute a \$6 billion-a-year business employing around 35,000 people in hands-on and related professions. World Woods has earned a place of honor by its leadership and participation in helping to fund turf research. They have set an example that all golf

clubs in the state, and even in the nation, should follow.

The war chests of the anti-green, anti-golf, anti-agriculture movements that operate under the guise of environmentalism are filled with millions of dollars annually from philanthropic foundations. Their money buys hype, hysteria, and headlines and does little to really help man live in productive harmony with nature.

Balance that against the thousands of dollars our associations struggle to raise every year to find real factual answers to better and safer ways to grow crops and manage turf, and you can see why we are so proud of the contributions made by clubs like World Woods. 

Mole cricket control

The final frontier

BY TOM BENEFIELD, CGCS

Well, maybe controlling mole crickets is not quite like the Star Trek Enterprise mission, but then again it is a never-ending story.

Every year millions of dollars are spent on keeping the mischievous mole cricket in check on golf courses here in our beloved state...well at least I love it.

Matter of fact I am the epitome of the 1968 redneck bumper sticker with the American flag on it and the words "love it or leave it." Well anyhow where was I now, (I think maybe I've been watching too many John Wayne movies lately), oh yeah Mister Mole Cricket.

This tiny creature which God hath created, (and I suspect for good reason) has become one of the most cursed biological enigmas in the golf community. I mean not only does it do tremendous damage to our sacred greens, tees and fairways but it is one bodaciously ugly rascal. And you and I have got to look at this dude all summer long.

About the only people working in the golf industry who actually like these critters are the chemical salesmen. And for good reason, I might add. But then again it's not like these salesmen are running around the state distributing mole crickets. Rather the opposite — they provide us with the tools to hammer the ugly fools with a menagerie of weapons and keep an acceptable level of playing conditions for our members and guests.

So it is with great fanfare that we have as our editorial focus for the summer issue another look at the life, truth and fantasies of mole cricket control. Yes it is true, that you the members asked to have another look at this ugliest of subjects, and yes it is



Severe damage is evident in these untreated areas.

true that we the committee have agreed to your demands.

And in that same line of thinking, we have reached out to some of the great thinkers and tinkerers in the golf community to get their perspective on this age old problem.

As a matter of fact, we have even asked the manufacturers to send us their best mole cricket recipes and best management practices in order to inform you the masters of the greens, the marvels of the tees and the snippers of the roughs of all the available options.

So sit back, grab a Coke and light up a smoke... well I don't know if lighting up a smoke is such a good idea. I mean the FGCSA Board of Directors (whom you elected) unanimously passed a resolution banning smoking at all future board meetings. This was quite a bold move on their part since no one present could even remember the last time someone lit up in the board room. But then again you can never tell when a band of hooligans might get

on the board, anyway just to be safe, don't light up while you are reading this article, and if you have one lit now then put it out.

Seriously the members have responded by sending in some excellent programs and advice. When you see one of them at the next local meeting give them a big pat on the back for a job well done.

A different story

I have a different story to tell. Typically we think of Florida as "Mole Cricket Heaven." My association with mole crickets at two separate country clubs in Palm Beach County over the past 15 years has been intense. Both Boca Greens and the Falls Country Club are geographically located within the bulls-eye of agricultural land, whereby mole cricket activity is tremendous.

Upon my employment at Boca Rio Golf Club three years ago, I discussed with the previous superintendent the apparent success of mole cricket control. I asked what



He is still the ugliest of vermin to attack our sacred greens and fairways.

was his secret formula?

He acknowledged that he was not spraying anything unique or special. With that reply one would assume that he simply did not want to reveal his secret. I really knew he was being honest with me, but it still seemed difficult to believe.

The course went through a major construction with a complete re-grassing. The entire course was fumigated with methyl bromide — including the fairways and rough. This is obviously one effective way to control mole cricket activity. Therefore, my first growing season yielded virtually no mole cricket activity.

The amazing thing occurred during the second growing season. Again, virtually no mole cricket activity occurred.

As this inactivity continued, I kept recalling the comments of the previous su-

perintendent of not spraying anything special. I pondered the success of this program where nothing special is being applied to control the mole crickets yet above-average results continue to appear. This made me realize that there must be other reasons for the reduced mole cricket activity.

Even though most entomologists claim that mole crickets do not communicate or colonize, I find this difficult to accept because typically we find mole cricket infestation intense within concentrated, pocketed areas.

In the past I have seen mole crickets literally devour a 1,000-square-foot area within a fairway, rough, tee or green slope and yet, just a few hundred feet away, absolutely no activity occurs. I have witnessed infestation in areas of intense insect-

icidal application, yet those areas just a short distance away, with virtually no activity, have received absolutely no chemicals!

As colonies become more established in just a few areas such as the higher, sandy mounds of green and tee slopes and various fairway bunker areas, yes chemical control is required. With our typical program of control for nematodes with Nema-cur, control for grubs with Oftanol, and also general sod web worm control with Pageant, the chemical residual has somewhat retarded the mole cricket activity.

However, I must admit that in this current month of June as I write this article, I am witnessing the first rather severe infestation that will require a more intense control program as compared to that of

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the past three years.

I really am not surprised or alarmed at the amount of mole cricket activity that is finally occurring because I have been fortunate to date and it was inevitable that a more intense program would have to be implemented.

Boca Rio is unique as compared to the typical developer-type project because there are absolutely no houses surrounding the property. Instead, our deep forest-type wood surroundings are not as conducive to mole cricket populations.

Couple this with the lack of nearby farmland and wide expanses of divided highways (Palmetto Park Road to the north and the Florida Turnpike to the east) which provide a somewhat beneficial buffer zone to prevent nearby fly-ins.

The third contributing factor is the uniqueness of the Boca Rio soil. The property was actually excavated as a rock pit in the 1960s. There is less than a foot of adequate topsoil throughout the entire



Damaged areas can look like miniature battlefields tilled by hundreds of tiny mortars.

property, hence very little soil for mole crickets to adequately tunnel through and feed on the bermudagrass root system.

Couple this with a poorer type of drainage where field capacity or super saturated

soil profiles even lessen the root system, thereby further preventing any tunneling opportunities for the mole crickets.

Some of the most severe activity now occurs in the bunker floors. We generally

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Then I began listening to fellow superintendents talking about mapping heavy areas with the idea of getting a jump on them next year (a strategy that I was already using for preemergent weed control for the same reasons mentioned above).

rake all one hundred bunkers daily in the season from October through April which smoothes over any tunneling activity that may occur and renders it invisible.

As the playing season tapered down and bunker raking was reduced to just once or twice a week, tunneling has become intense. I see a need to chemically treat the sand immediately because this is a prime location for mole crickets to harbor.

At my last two places of employment, each course had an island green with bunkers. I recall a mediocre chemical control on the turf yet tunneling was active in the bunkers. It was not until the actual floors were chemically treated did a successful program occur on the islands. Yes, it is amazing how the mole crickets are intelligent enough to perceive the areas treated on the green and collar surfaces yet return to the bunkers for safe harboring during the day.

In review, I feel that perimeter surroundings can influence the populations. Agricultural land versus urban surroundings will reveal different infestations. One of only a very few benefits that I can think of for extensive wall to wall treatment is that even the bunker floors are treated in order to be effective. And, if you still do not have any luck, remember you can always methyl bromide the fairways! But, remember to get your new sprigs ready.

Mike Bailey
Boca Rio GC, Palm Beach Chapter

When in doubt, change courses

Mocap at 75 lbs. of product per acre sliced into the turf did not prove to be as effective for mole cricket control during

the 1993 season in North Florida at the Oakbridge Club. Re-treatment of areas with baits and Orthene was still in order.

The effectiveness of Mocap as compared with the previous year (even after increasing the subsurface rate by 25 lbs. of products per acre) still seemed to wane. Why? I have no plausible explanation. Three strikes and you're out!

On to South Florida and the Broken Sound West course. Change of region, try a different school of thought.

Nematodes/biological control for crickets. Nematodes applied during the third week of March, 30 acres of fairways. Goal was to dispose of egg-laying adult females thereby reducing population potential.

At this time, some beds are beginning to appear but tunneling activity and demise of turf normally exhibited is not occurring.

The jury is still out and we have a long way to go. Again!

Eddie Snipes
Broken Sound Club,
Palm Beach Chapter

Consultant can help

Approximately five years ago we contracted the services of A. Leon Stacey, Ph.D. from St. Simons Island, Ga. to assist us in our efforts to control the mole cricket. We felt that we could reduce our pesticide expenditure and better target our applications to help satisfy environmental concerns. As a result of this work we have developed the following program.

March

Overwintered adults are becoming very active. In the greens and collars we inject Dursban (Pageant DF) in individual tun-

nel areas with a shallow root feeder.

In the more active areas of the roughs and fairways, we apply Mocap 10G at 100#/acre with a granular slit applicator, (Canaan TG-40).

This procedure does an excellent job of controlling the spring adults. It also gives us the added benefit of nematode suppression which is very important in the spring to establish roots on the older varieties of bermuda that are coming out of dormancy.

June

The nymph hatch is in full swing and we respond with an application over the entire property with granular insecticides with the slit applicator. Over the past few years we have used Mocap 10G. This year we plan to use Turcam 2.5G and Crusade 5G in addition to with Mocap 10G. The Mocap will be used in the areas with a history of nematode problems. On the greens and collars we apply Triumph 4E and Orthene.

July/August

Any mole crickets that we missed are active as juveniles. We have found that 1% Dursban bait is very effective and easy to apply. We also apply Orthene mixed with Black Strap Molasses (1 gallon/100 gallons spray volume). Based on information from recent research trials, Coax (a feeding stimulant) will replace molasses in this year's applications, which may allow us to reduce Orthene rates as much as 40%.

September/October

Any mole cricket that we have missed in previous applications are adults now and very difficult to control. We will spot treat areas with Orthene or granular insecticide with the slit applicator to heal any stressed areas before the overseeding operations in late October.

Paul Salmon, CGCS
Ponte Vedra Inn & Club, North
Florida Chapter

Planning is cheaper

As a small public golf course, our approach to mole cricket control had always been on of reaction. Limited budget, limited manpower, and heavy summer plays seemed to dictate this policy. It seemed that I was always waiting and hoping that each year we would have less of a problem. By the time the first nymphs began to hatch,

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(It's about time.)

then it seemed I just moved them around the course. I was generally using the cheapest product on the market, but began to notice that even at higher rates, I was wasting time and money.

Then I began listening to fellow superintendents talking about mapping heavy areas with the idea of getting a jump on them next year (a strategy that I was already using for preemergent weed control for the same reasons mentioned above).

This led me to my present program which consists of a granular product on my tees and greens after my spring aerification and verticut (usually mid May), the same product would be used on other targeted areas. I have had good response with Crusade the last couple of years.

Then right after this application I pump a wetting agent through the irrigation system as I do every month to help get the product into the soil. The balance of the summer I must admit I am back on the hit-or-miss approach.

I do believe that my changing of the chemical helps. I will use other granulars, switch from Orthene to Pageant, and use baits later to get the adults that survived all that.

I have done this cheaper with better success than the old program of spending all my budget by trying to go wall to wall with the least expensive product too late. I am very interested in the idea of biological control but at this time this approach is a little out of my league here.

I will have to let my bigger brothers try this approach first. This may prove to be the most cost effective and environmentally sound approach yet.

Karl Schmidt

Lucern Lakes GC, Palm Beach Chapter

Year-around problem

In South Florida mole cricket control is a 12-month-a-year problem. Control strategies include proper timing of insecticide applications in the spring for control of nymphs, to spot-treating problem areas in summer and fall, and hand-treating active crickets in winter on putting surfaces. The following information will describe the most effective methods I have utilized.

ticide applications in the spring for control of nymphs, to spot-treating problem areas in summer and fall, and hand-treating active crickets in winter on putting surfaces. The following information will describe the most effective methods I have utilized.

Hand treatment on greens

An educated staff and soap flushes are two good tools to assist in timing a spring pesticide application. I have had good experience with Crusade in muck soil conditions over the last couple of years. Target areas typically have been tee tops and slopes, bunker slopes, approaches, collars and green slopes.

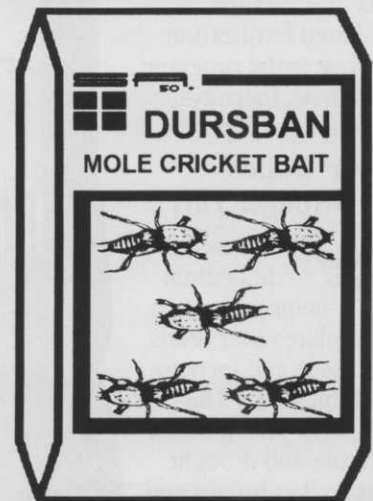
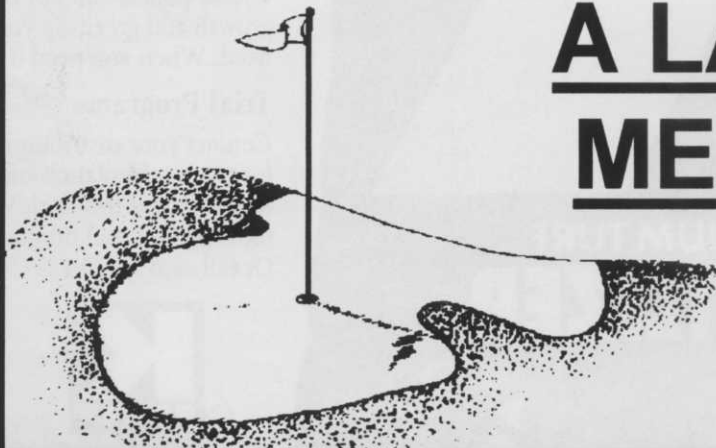
This is also a good time to treat areas that suffered severe damage in rough and fairways in late summer of the previous year.

Spring/summer/fall adult control

A successful mix for me has been: 3 1/3 lb Orthene, 1 qt Coax, per acre This tank mix buffered to a pH of 6-6.5 The perfor-

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mance of this tank mix increased significantly when we buffered the mix to bring down the pH.

High-pressure injection

Dursban, Orthene, Turcam, all provided excellent results when injected with a 550-gallon, 650-psi, PTO-driven injector. Rates of 550 gallons per acre made this a slow application process but the control achieved provided an excellent option for problem areas. (Don't forget to buffer pH)

Proact Nematode for control

I worked at one of the research sites for this project in the late 1980s. Although the research on our course showed the project was a failure, the turf condition in all areas was dramatically improved. These areas previously needed to be sodded annually

at the end of every season and now were providing consistently healthy playing conditions.

Mapping damaged areas

A useful tool for our operation is to post a detailed course map that can be used to identify areas of high cricket activity. Marking problem areas throughout the peak activity season will provide useful tracking that can be reviewed to plan strategies for spring nymph control the following year.

Robert G. Klitz, CGCS

Deer Creek CC,

South Florida Chapter

Begin with mapping

Our mole cricket control program begins with each course mapping out infes-

tations, which usually begins in mid February. This is when the first mating flights occur. Next, weekly soap flushes are performed to monitor the nymph development.

Once a viable population is observed, late afternoon/early evening topical sprays are employed. We like to time these if possible with the full moon or any significant rainfall which increases mole cricket activity. This process is repeated through June.

At this point, any heavy pocket infestations are treated with granular insecticides and watered per label instructions to achieve control. Again, soap flushes are used before and after to determine a rough percentage of control. This process is ongoing.



A trapping station was developed by IFAS to expose mole crickets to nematodes during early trials of the biological control that has since proven successful.



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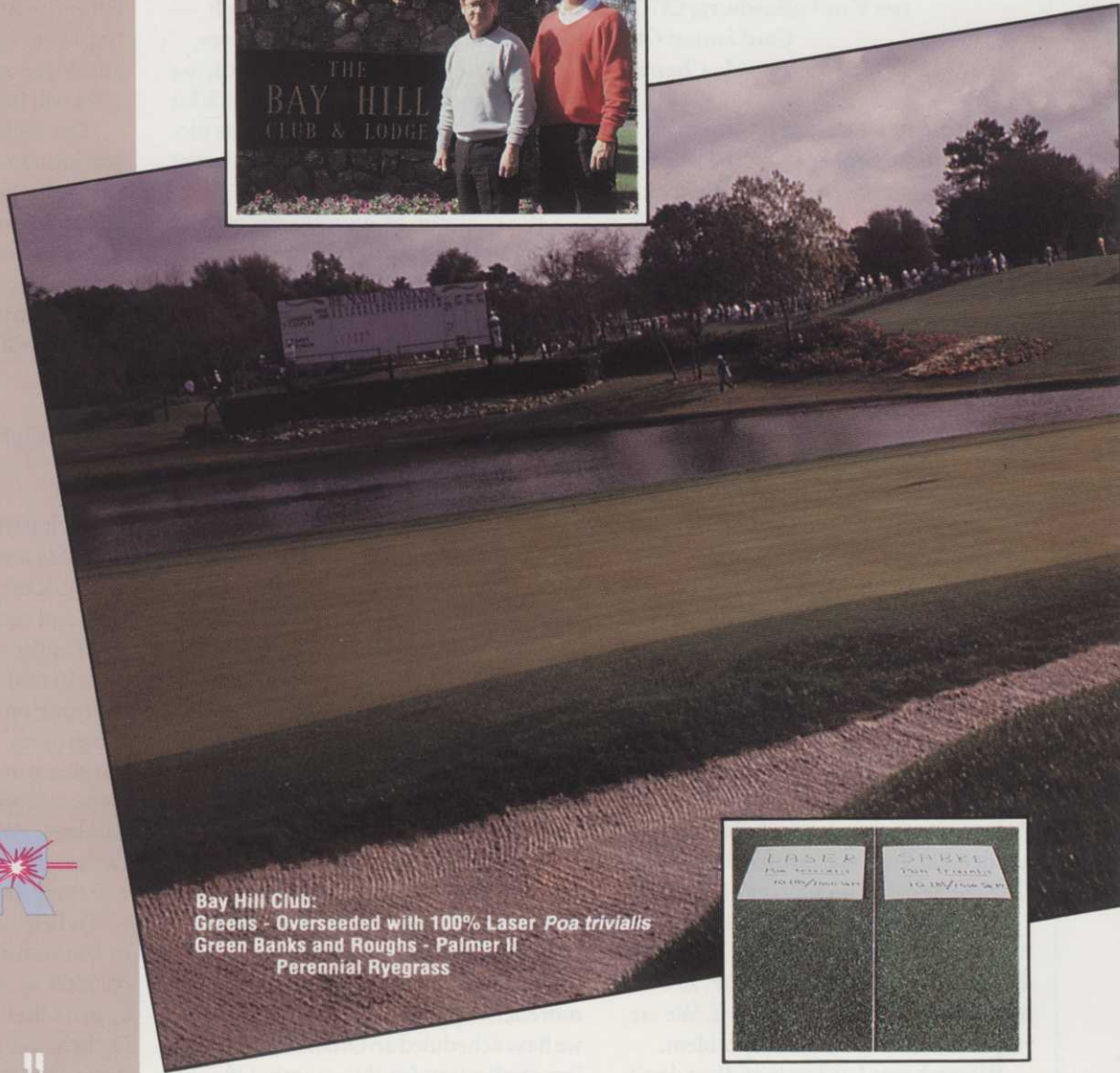
Dwight Kummer, GC Supt.
Bay Hill Club, Orlando, FL



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Bay Hill Club:
Greens - Overseeded with 100% Laser *Poa trivialis*
Green Banks and Roughs - Palmer II
Perennial Ryegrass



Dwight Kummer, GC Supt., Bay Hill Club and Jim Ellison of the Arnold Palmer Golf Management Company follow a very simple recipe for their successful greens overseeding program:

Apply 100% Laser *Poa trivialis* at the rate of 10-13 lbs/ 1000 sq. ft. mid-fall. For heavy traffic courses, like Bay Hill, that receive 250+ rounds per day, you may want to supplement the original overseeding with an additional 2 lbs/1000 sq. ft. on a weekly basis late December through January.

If you want darker color, excellent heat and traffic tolerance, smoother spring transition and proven, tournament-quality performance use Laser for your overseeding program. It worked at Bay Hill, it will work for you.

Note: Laser *Poa trivialis* can also be blended with turf-type perennial ryes, such as Palmer II or Prelude II for Southern overseeding programs.

ing until an acceptable level of control is achieved.

**Lee Van Valkenburg, CGCS
Card Sound GC,
South Florida Chapter**

Work very hard early

At Lake Region we are very fortunate that we do not have a severe mole cricket problem.

We have a piece of property that doesn't have any homes or any development except the club itself. This helps to keep the crickets to a minimum by not having to worry about any fly-ins.

For mole cricket control we use just a few different avenues for treatment.

Over the past years we have made maps of all the areas that get activity early. Usually in May we start to see the hot spots begin to show activity. We will immediately treat these hot spots with Mocap. If we get these spots early, it seems to dictate the rest of our year with crickets.

After that application we keep a close eye out for them and will use Orthene when they reappear. We will treat our greens with Triumph in the summer to help with crickets and nematodes also.

Last year we used some baits, and had good results, but I prefer to use Mocap and Orthene as my main sources of control.

As I have said though, I do not have a major mole cricket problem. If I had a devastated area the size of a carryall bed, that for us would be a huge area. We are very fortunate not to have a problem.

We work very hard early and just don't let them get too far before we go after them.

**Alan Puckett
Lake Region Y&CC, Ridge Chapter**

Program never ends

My mole cricket program really never ends at Colony West.

We start with soap flushes in late April to early May to get an idea of the size and species of mole crickets and to determine when the majority are hatching. We then map the areas of activity to keep a historical record of the location of activity throughout the years.

Two weeks after the majority hatches (about first or second week of June) we apply either Oftanol, Turcam 2 1/2G, or

Crusade to the fairways and roughs.

Also at this time we apply Triumph or — if nematode counts are high — NemaCur 10 G to the greens and tees.

After we make our applications, we return to the mapped areas and check for survivors. This gives a more accurate picture of the effectiveness of the treatment than body counts alone.

We continue to monitor for activity from July to October. If we see an increase in activity, we spot-treat with either baits or Orthene. The best results occur when making this application in the evening, after the noon rains have passed.

From November to March, if all went according to plan, the mole crickets that survived the summer are not in sufficient numbers to cause any damage that would require treatment. We only make treatments during this time of year when damage occurs on the greens.

**Dale Kuehner, CGCS
Colony West CC, South Florida
Chapter**

Hatching earlier this year

Mole crickets this year appear to be hatching earlier than they have in the past.

Normally we have tried to achieve our best control in early July with Mocap or Oftanol. This is the time of the year when we have experienced heavy feeding and we feel most eggs have hatched.

However, this year there seems to be more activity than usual in early June and we have scheduled an Oftanol with fertilizer application for this month. Oftanol has not been used at Isleworth in several years so we anticipate a high level of control.

We will continue to treat hot spots with Orthene through August at which time we will switch to baits. We experimented this past winter with some newer products like the third-generation pyrethins which seemed promising.

Again, we still feel that timing is the most important key. Choosing the right product for the development stage the mole cricket is in will give the best results.

**Buck Buckner
Isleworth GC, Central Florida/
Ridge Chapters**

More biological controls

Control of Mole Crickets for summer, fall and winter of 1993 and spring of 1994 has been very successful. Our plan of attack for summer, fall, and winter of 1994 will be similar to 1993.

The slight modification we plan this year includes more biological control (parasitic nematodes, ProAct), and the addition of Turcam to our arsenal of weapons. I feel that the success of 1993 had a lot to do with the use of parasitic nematodes. We will continue to monitor areas treated Biologically, and will hopefully see great results in 1994.

**Bob Bittner, CGCS
Club at Pelican Bay, Everglades
Chapter**

Knock out the nymphs

At Meadowbrook, we strive to control mole cricket populations by hitting them hard and early in their nymph stages.

We inject Mocap (75 lbs/acre) on fairways in mid June and apply Crusade (80 lbs/acre) on green slopes and irrigated rough areas. Control of mole crickets on our greens is achieved by using Orthene (4 lbs/acre) applied with Down-n-Thru (30 oz/acre). We also keep solutions of Orthene in spray bottles on greensmowers and spray any mounding activity we see.

To help us control the bigger crickets in late summer, we apply Triumph (1.5 oz/1000 sq. ft.) on our greens, tees and approaches. We continue to spray Orthene on any hot spots that turn up during the year.

Since we try to hit mole crickets when they are young, it is imperative to know where they are on the course, therefore we map extensively in the summer and fall. When we have a warm period in the winter, we take special note of any cricket activity. We have found a little activity in the winter signifies extensive cricket damage in the summer and fall.

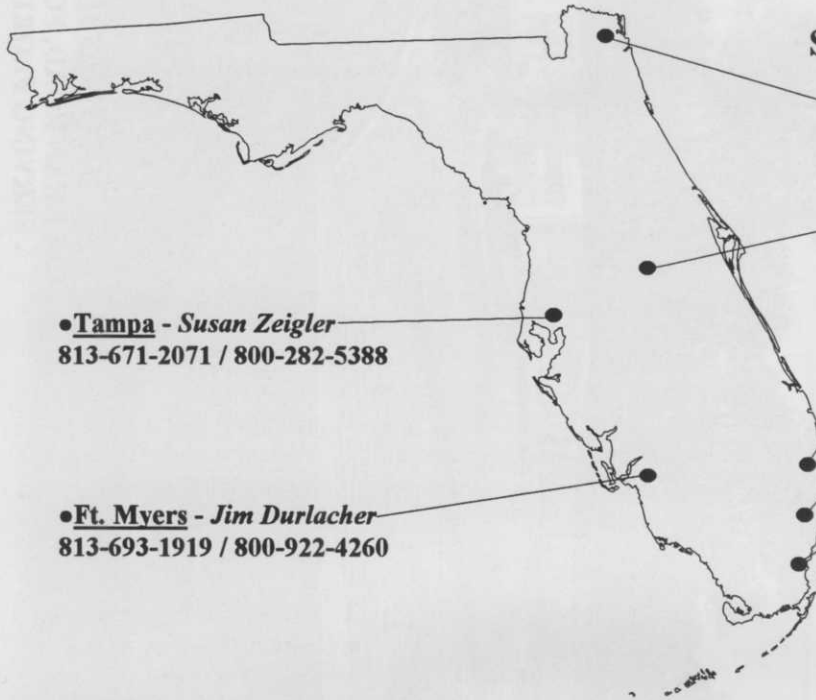
**Craig Boller
Meadowbrook GC,
Seven Rivers Chapter**

Totally changed philosophy

Although mole crickets represent the number-one pest problem for superintendents during the summer months, I have

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The Proven Performers

For 20 years commercial mowing professionals have put Groundsmaster® 300 Series through rigorous tests against time and terrain. And for 20 years the 300 Series continue to be the preferred choice among these same professionals. They have come to rely on these commercial mowers to handle even the most extreme cutting conditions with unmatched productivity.

The *proven* performers. Long on durability. Tight on turns. With power to spare. Today the 300 Series continue to advance your expectations in measures of reliability, efficiency and unsurpassed quality of cut.

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Power-Packed

Service life is optimized with these liquid cooled performers. Durably built engines, either 25 hp—diesel or 45 hp—gas, offer fuel economy yet plenty of power. The powerful 345 gas version has its power regulated and reserved to effectively increase torque and power while reducing noise and vibration. It also equips a Distributorless Ignition System for increased reliability and less downtime.

Fully pressurized lubrication, heavy duty air cleaners, industrial sized radiator and engine protection systems go a long way to enhance



engine efficiencies and keep you on the job.

And routine servicing is so simple it promotes itself. Designed to open wide with conveniently located, easy-to-reach components, saves you time and fosters proper servicing.

Incredible Control

Groundsmaster design continues to evolve in response to the specific demands of today's turf professional, even meeting future expectations. Toro understands that exacting control, superior traction and a comfortable ride improves operator performance making the job easier, faster and ultimately more profitable. To that end, there's front wheel drive, rear wheel power steering, single pedal forward/reverse action, a compact wheelbase and individual drum wheel brakes. All for incredible, smooth control and effortless maneuverability whether trimming close, transporting or trailering.

Traction-Plus

Traction and stability are the emphasis with extra large turf tread tires and, a counterbalance system that automatically transfers weight between the deck and tractor when performance demands additional traction.

For enhanced traction the Groundsmaster 325-D with **4-Wheel Drive** excels in traction where competitive two-wheel differential lock types can't. Toro's 4-wheel drive features an on-demand overrunning clutch that prevents rear wheel skidding in turns and ensures excellent traction.



Operator Comfort

Providing Groundsmaster operators with excellent control lessens the fatigue experienced from a long day's ride. And a comfortable operator's station with

excellent visibility extends to consistent operator performance and productivity.

For ultimate comfort, the high back, foam cushion deluxe suspension seat adjusts to individual operator's weight and length. Armrests afford relaxed steering plus the steering wheel tilts for individual steering preference.



Easy to mount and dismount, the uncluttered operator's station provides plenty of foot room with conveniently located brake and traction pedals.

Independent wheel brakes optimize control and lock together for smooth, even braking power.

A full instrumentation panel offers easy-to-read gauges for monitoring all engine functions and easy-to-reach controls for operator efficiency.

Four link power assist steering with optional cruise control significantly raises productivity.

And upfront implement positioning affords maximum visibility and maneuverability.

Versatile Cutting Unit Family.

Toro's Groundmaster®72" Side or Rear Discharge Cutting Units have a reputation for cutting in areas and at speeds that others can't.

Durably built with 11 gauge steel construction, heavy duty spindle housings, splined spindle, tapered roller bearings and welded blade adaptors; these decks are more rugged, require less servicing and last longer.

Optimally designed, a deep 6" Wind Tunnel® housing and three 25" blades create superior vacuum action for a smooth, even cut,



even dispersion – at no loss of ground speed.

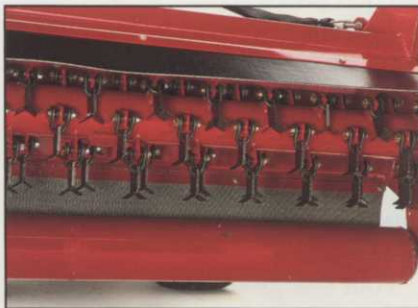
Four solid rubber deck caster wheels optimize ground contour

following. Scalping is virtually eliminated with antiscalp features like oversized antiscalp rollers and adjustable skids.

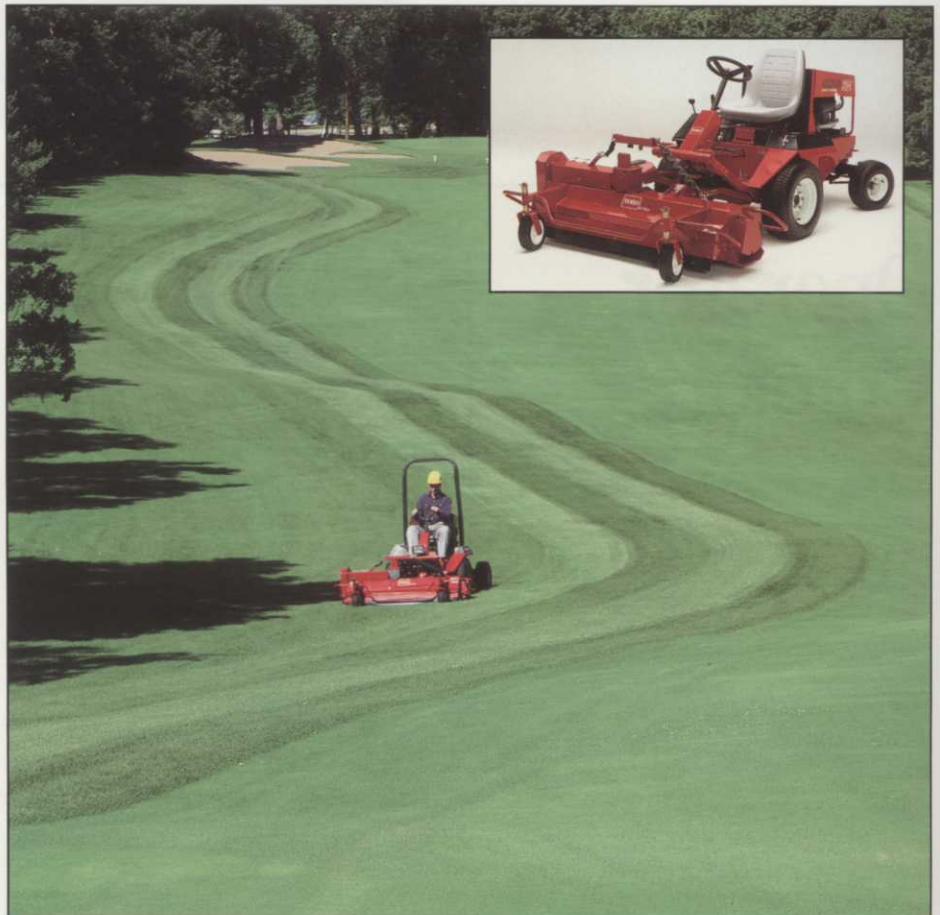
Fine Cut Flail 2760

Named for its high quality of cut and exceptional striping characteristics, Toro's *Fine Cut Flail* is a worthy alternative for mowing your formal and semi-formal turf. The 2760 performs without clumping, not even in heavy wet grass. And, its full width rear discharge further enhances after-cut appearance while it also makes for safer operations.

But its versatility may be its greatest advantage. The same mower that delivers you a praiseworthy cut can serve to



scalp prior to overseeding, break up aeration cores or mulch leaves. All without the hassle of changing or adding attachments.



Durability features of the Fine Cut Flail ensure a lasting performance:

- Built with heavy duty 10 gauge steel and 7 gauge reinforcement braces.

- Floating blades move freely to prevent breakage when striking hard objects.
- Reversible rotor extends blade wear.
- Rotor and roller shafts have greaseable ball bearings.

The Guardian® 72" Recycler®

Another member of Toro's proven cutting unit family provides commercial recycling capabilities that will enhance your performance in areas of safety, productivity and after-cut appearance.

Guardian is a commercial recycler innovatively designed to cut without discharge. With the absence of discharge you create a safer mowing environment.

"No discharge" offers time saving benefits that go a long way to increase your productivity, too! The need to collect and dispose of clippings is eliminated. Trimming maneuvers can be approached from either side. And it's easier to trailer.

Toro's commercial recycler is designed with special deflectors



Excellent mulching capabilities take the "chore" out of fall clean up.



that cycle clippings to be cut and recut, forcing the smallest of clippings back into the turf. This unique vertical discharge system prevents windrowing and provides an after-cut appearance you can be proud of.

Guardian is solidly built to power against rugged conditions. Its patented design includes these features:

- Proven heavy duty spindles
- Anti-scalp cups and rollers for smooth ground following
- Patented rear castor isolation system
- Quick release covers for ease of servicing

All Groundsmaster 300 Series prime movers, except the 327, retrofit to the Guardian 72" Recycler. Take advantage of this deck of the future and experience the safety of no discharge with maximized efficiency for a quality of cut that's unsurpassed.

Toro cares!, and wants to remind you that no product is a substitute for sound safety practices. Always clear away debris and do not mow when people are in the operating area.

Groundsmaster® 300 Series are versatile professionals with year 'round accessories.



Cab With ROPS. Completely enclosed cab loaded w/std. features turns your Groundsmaster into an all-weather vehicle. Heater and light kits optional.



2-Post or 4-Post Roll Over Protective Structure (ROPS). Includes seat belt and optional canopy/sunshade with acoustical roof insulation.



Debris Blower. Forceable winds effectively clean sidewalks, parking lots, tees, greens, fairways.



Aero-Seeder. Drops seed into parallel slits in the ground with adjustable rate and seed size.



Rotary Broom for a variety of uses; sweeps parking areas, walkways and turf of dirt, debris, leaves and snow. Minimizes hand labor.



V-Plow. Rugged, 48" V-plow for snow has front skid and reversible/replaceable scraper blades for low cost snow removal. Requires special mounting kit.



2-Stage Snowthrower. Big 48" two stage snowthrower with adjustable skids. Directional discharge chute is electrically adjusted from operator's seat; 180°. Driftbreaker auger and oversized second stage clears snow in a hurry and prevents clogging.

Speed Control. Lets you set your unit for a continuous operating speed. Automatic override when operator moves drive pedal or operates brakes.

Core Pulverizer. Quickly and efficiently pulverizes cores and topdresses after aeration.

Aerator. Easily installed, self-propelled operation and out-front vision increases productivity. Available with 3/4" tines.

Leaf Mulcher. Made of heavy gauge steel, the leaf mulcher mounts under side discharge decks allowing blades to vacuum and pulverize fallen leaves.

Groundsmaster® 300 Series Specifications*

	GROUNDMASTER 345, 2 WHEEL DRIVE — GAS, MODEL 30789	GROUNDMASTER 325-D, 2 WHEEL DRIVE — DIESEL, MODEL 30788 AND GROUNDMASTER 325-D, 4 WHEEL DRIVE — DIESEL, MODEL 30795
ENGINE	Ford, 4 cylinder, 4 cycle, overhead valve, liquid cooled gas engine with centrifugal water pump. Ford engine rating of 45 hp (33.6 kW); governed to a maximum speed of 3250 rpm. 67 cu. in. (1100 cc) displacement. Distributorless ignition system; spark is controlled by a DIS solid state electronic module. 3.5 quart (3.3 liter) oil capacity; replaceable oil filter. Replaceable fuel filter. Forged connecting rods, cast iron cylinder head and block. Mechanical fuel pump; heavy duty remote mounted air cleaner. Spark arrestor muffler is standard.	Mitsubishi, 3 cylinder, 4 cycle, vertical overhead valve, liquid cooled diesel engine with centrifugal water pump. 25 hp (18.6 kW) @ 2850 rpm rated; governed to a maximum speed of 3250 rpm. 59.7 cu. in. (979 cc) displacement. Three start assist glow plugs; 12 volt (2.0 kW) gear reduction starter with solenoid. Forced lubrication with trochoid pump. 3.5 quart (3.3 liter) oil capacity; replaceable oil filter. Forged connecting rods, cast iron cylinder head and block. Fuel injection pump. 12 volt electric fuel pump with electric fuel pump. Replaceable fuel filter/water separator with 3 micron filtration; bottom drain for water removal. Heavy duty, remote mounted air cleaner. Spark arrestor muffler is standard.
FUEL CAPACITY	6.5 gallons (24.6 liters) unleaded gasoline.	6.5 gallons (24.6 liters), No. 1 or 2 diesel fuel.
CONTROLS	Hand-operated throttle, choke, PTO, hydraulic implement lift and foot-operated traction pedal.	Hand-operated throttle, PTO, hydraulic implement lift and foot-operated traction pedal.
GAUGES & DIAGNOSTICS	Ammeter, hour meter, fuel gauge, coolant temperature switch-gauge (prevents overheating), oil pressure warning light and buzzer.	Ammeter, hour meter, fuel gauge, coolant temperature switch-gauge (prevents overheating), oil pressure warning light and buzzer, glow plug switch/indicator.
ELECTRICAL FEATURES	12 volt battery, 370 amp, cold cranking performance at 0°F (-18°C). Dash mounted ignition switch, 55 amp alternator. Seat, PTO and traction interlock switches.	Maintenance free 12 volt battery, 630 amp, cold cranking performance at 0°F (-18°C). Dash mounted ignition switch, 35 amp alternator, 40 amp manual reset circuit breaker. Seat, PTO and traction interlock switches.
WEIGHT	Approx. 1,300 lbs. (590 kg) dry weight.	Model 30788: Approx. 1,250 lbs. (567 kg) dry weight. Model 30795: Approx. 1,665 lbs. (755 kg) dry weight; includes ROPS.

SPECIFICATIONS COMMON TO GROUNDMASTER 300 SERIES PRIME MOVERS

RADIATOR	Mid-mount industrial radiator with tube and fin construction; 7 fins per inch. Approx. 6 quart (5.7 liter) capacity. Stamped top and bottom tanks with hydraulic cooler in lower tank. Thermally stable water cooled hydrostatic system regulates operating temperature, (adjusts seasonally).
TRACTION DRIVE	Variable speed, axial piston, hydrostatic in-line transmission; charge circuit hydraulics with 25 micron filtration provide hydraulic flow for power and implement lift. Transmission mates to drive axle; 20.9-1 reduction, approx. 5 quart (4.7 liter) oil lubricant capacity. Single foot pedal control of forward/reverse ground speed. Optional Electronic Cruise Control Kit, Model 30677, available. Model 30795: Rear axle is mechanically driven from front axle by a universal shaft. An on-demand overrunning clutch prevents rear tire scuffing in turns and maintains turning radius. Approx. 1.9 quart (1.8 liter) gear lubricant capacity.
IMPLEMENT DRIVE AND LIFT	1-1/8" (2.9 cm) splined PTO shaft driven by a tight-slack double "A" section, torque team V-belt. An anti-side load system protects the crankshaft output bearings. Lift cylinder 2.5" x 3.25" (6.4 x 8.3 cm) actuates a T-bar of 2" (5 cm) square structural tubing with convenient attaching chains for implement lift. Two large torsion springs counterbalance implements for greater stability and traction.
STEERING	Hydraulic power steering with control valve and metering section which regulates pressure and meters flow to steering cylinder. Steering valve features priority flow which automatically goes to steering function. 13" (33 cm) diameter steering wheel. Tilt steering wheel with a 15° range of movement releases and locks by a single lever control.
GROUND SPEED/CLEARANCE	0-9.5 mph (0-15.3 km/h), infinitely variable. Front ground clearance of 7.5" (19 cm). Model 30795: rear ground clearance of 4.5" (11 cm).
TIRES/WHEELS/PRESSURE	Two front traction drive tires — 23 x 8.50-12 tubeless, extra traction tread, 4-ply rating. Demountable drop center rims. Two rear steering tires — Models 30789/30788: 16 x 6.50-8, tubeless, ribbed type, 4-ply rating. Model 30795: 18 x 6.50-8, tubeless, extra traction tread, 4-ply rating. Tire pressures: 21 psi (145 kPa). Optional extra wide tire and rim: 23 x 10.50-12 tubeless, 4-ply rating, Part No. 62-7020; (not applicable when using cutting unit model 30710).
MAIN FRAME	Welded construction steel reinforced with square and rectangular tubing.
BRAKES	Individual 7" x 1.75" (17.8 x 4.4 cm) drum type wheel brakes. Parking brakes on front traction wheels. Dynamic braking through traction drive.
SEAT	Optional: High back cushion seat, Model 30708, or deluxe adjustable suspension seat, Model 30772. (Seat Adapter Kit, Model 30709, required with 30772).
STORAGE COMPARTMENTS	Toolbox with latch down cover located in fender. Operator manual storage tube furnished for attachment to seat frame.
WARRANTY	Two years or 1500 operational hours, whichever comes first. Refer to the appropriate Groundsmaster 300 Series Operators' Manual for further details.
CERTIFICATION	Groundsmaster 300 Series prime movers and rotary cutting units are certified to meet the American National Standard Institute's (ANSI) specifications, B71.4-1990 and applicable Federal and State regulations based thereon.

FULL FLOTATION CUTTING UNITS

	72" SIDE DISCHARGE, MODEL 30722 & 72" REAR DISCHARGE, MODEL 30710	GUARDIAN® 72" RECYCLER®, MODEL 30716	FINE CUT FLAIL 2760, MODEL 44590
TYPE	72" (183 cm) width of cut, three blade, front mounted rotary. Side or rear discharge respectively.	72" (183 cm) width of cut, three blade, front mounted rotary. Recycling capability with no discharge.	60" (152 cm) width of cut, 144 knives rotating at 2300 rpm, front mounted flail. Rear discharge.
MOWING RATE	Mows up to 3.8 acres/hr (1.5 hectares/hr) at 5.5 mph (8.9 km/hr). Mowing rate is dependent on conditions.		Mows up to 3.1 acres/hr (1.25 hectares/hr) @ 5.5 mph (8.9 km/hr). Mowing rate is dependent on conditions.

*Specifications and design subject to change without notice.

Groundsmaster® 300 Series Specifications* (continued)

FULL FLOTATION CUTTING UNITS (continued)									
	72" SIDE DISCHARGE, MODEL 30722 & 72" REAR DISCHARGE, MODEL 30710	GUARDIAN® 72" RECYCLER®, MODEL 30716	FINE CUT FLAIL 2760, MODEL 44590						
TRIMMING ABILITY	Deck offset to the right from centerline: 18" (46 cm). Deck trim width from outside of standard traction tire to trim side — right: 23" (58 cm). Uncut circle — right: 15" (38 cm). Uncut circle with use of wheel brakes: 0". (Rear discharge trims both sides).	Deck offset to the right from centerline: 7" (18 cm). Deck trim width from outside of standard tire to trim side — right: 22" (56 cm). Uncut circle right: 24" (61 cm). Uncut circle with use of wheel brakes: 0". Guardian 72" Recycler trims on both sides.	Flail offset to the right from centerline: 4.5" (11 cm). Trim width from outside of standard tire to right side: 12" (30 cm). Uncut circle on right side: 28" (71 cm). Flail 2760 trims on both sides.						
HEIGHT OF CUT	1-4" (2.5 - 10 cm) adjustable front and rear in .5" (13 mm) increments with spacers on the caster shafts.	2-5" (5.1 - 12.7 cm) adjustable front and rear in .5" (13 mm) increments with spacers on the caster shafts. 2" (5 cm) height of cut not recommended under severe cutting conditions.	0-4" (0 - 10 cm) adjustable front and rear in .5" (13 mm) increments with spacers on the front caster shafts and two bolts on the rear roller.						
CONSTRUCTION	Model 30722: 11 gauge steel, 6" (15 cm) deep with 2" (5 cm) step. Reinforced with 3.5" (8.9 cm) x 7 gauge channel. Model 30710: 11 gauge steel, 4" (10 cm) deep housing. Reinforced with 3.5" x 7 gauge channel.	12 gauge steel, 5.5" (14 cm) deep, welded construction reinforced with 10 gauge channels and plates.	10 gauge steel housing with 7 gauge sides. Welded construction reinforced with 10 gauge channels and plates.						
CUTTER DRIVE	Isolation mounted PTO driven gearbox with 1.26:1 spiral bevel gears. "B" hex section belts to spindles. 1.25" (3.2 cm) diameter spindle shafts, protected by rugged conical spindle housing, turn on two greaseable tapered roller bearings (greaseable from top of deck). A positive splined connection attaches pulleys to spindle shafts for high torque capacity.	Isolation mounted PTO driven gearbox with 1.26:1 spiral bevel gears. Single "BB" section hex belt to spindles. Self-tensioning idler pulleys. 1.25" (3.2 cm) diameter spindle shafts, turn on two greaseable tapered roller bearings (greaseable from top of deck). A positive splined connection attaches pulleys to spindle shafts for high torque capacity.	PTO drive to 1:1 ratio bevel gearbox. Two 3V section belts to rotor. Self-tensioning 4" (10 cm) diameter idler pulley. 1.25" (3.2 cm) diameter rotor shaft turns on greaseable ball bearings.						
BLADES	Three 25" (64 cm) long, .25" (6 mm) thick, heat-treated steel, suction-lift blades.	Three 25" (64 cm) long, .25" (6 mm) thick, heat-treated steel, Recycler blades.	144 heat-treated free pivoting knives rotating @ 2300 rpm.						
SUSPENSION & CASTER WHEELS	Two front and rear caster tires consist of hard rubber and roller bearings. Deck counterbalanced by two torsion springs. Optional Pneumatic Wheel & Tire Assembly, P/N 12-1509, (two required).		Two 10" x 3.25" (25 x 8.3 cm) front hard rubber caster wheels with roller bearings. Flail counterbalanced by two torsion springs. Full width rear roller.						
		<table border="0"> <tr> <td style="text-align: center;">Front Tires</td> <td style="text-align: center;">Rear Tires</td> </tr> <tr> <td>Models 30722 & 30710 10.00" x 3.25" (25 x 8.3 cm)</td> <td>6.25" x 3.00" (16 x 7.6 cm)</td> </tr> <tr> <td>Model 30716 10.00" x 3.25" (25 x 8.3 cm)</td> <td>8.00" x 3.50" (20 x 8.9 cm)</td> </tr> </table>	Front Tires	Rear Tires	Models 30722 & 30710 10.00" x 3.25" (25 x 8.3 cm)	6.25" x 3.00" (16 x 7.6 cm)	Model 30716 10.00" x 3.25" (25 x 8.3 cm)	8.00" x 3.50" (20 x 8.9 cm)	
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Models 30722 & 30710 10.00" x 3.25" (25 x 8.3 cm)	6.25" x 3.00" (16 x 7.6 cm)								
Model 30716 10.00" x 3.25" (25 x 8.3 cm)	8.00" x 3.50" (20 x 8.9 cm)								
ANTI-SCALP FEATURES	Model 30710: One front center anti-scalp roller and left and right skids. Model 30722: one front center and two rear center anti-scalp rollers and RH skid. All rollers are 2-position adjustable.	Anti-scalp cup located on each blade. Three anti-scalp rollers. Adjustable skids.	Anti-scalp shoe located on each side of unit. Full width roller at rear with greaseable 1" (2.5 cm) bearings.						
DECK COVERS	Quick-release covers. No tools required to remove.	Quick-release, high impact plastic covers. No tools required to remove.	Bolt-on covers.						
WEIGHT	Model 30722: 400 lbs. (181 kg) Model 30710: 415 lbs. (188 kg)	465 lbs. (211 kg)	470 lbs. (213 kg)						

GROUNDMASTER ACCESSORIES

2-POST ROLL-OVER PROTECTIVE STRUCTURE (ROPS)		CAB WITH ROPS	
STANDARD FEATURES	Roll-over Protective Structure (2" (5 cm) x 3" (7.6 cm) x 1/4 gauge welded tubing), seat belt and attaching system.	STANDARD FEATURES	Roll-over Protective Structure, seat belt and attaching system. Tinted safety glass throughout. Removable door with locking handle. 1" (2.5 cm) acoustical roof insulation. Steering post filler plate and underseat filler panel, heavy duty floor mat, rubber isolator mounts and hood support.
WEIGHT	2-Post ROPS: 135 lbs. (61 kg). Canopy Kit (optional): 90 lbs. (41 kg), approximate.	ELECTRICAL FEATURES	Two headlights, one rear working light, flashing amber beacon, defroster fan, windshield wiper, wiring harness and toggle switches.
4-POST ROLL-OVER PROTECTIVE STRUCTURE WITH SUN ROOF		WEIGHT	580 lbs. (263 kg).
STANDARD FEATURES	Roll-over Protective Structure, seat belt and attaching system. Sun roof with 1" (2.5 cm) acoustical roof insulation, rubber isolator mounts and hood support.	OPTIONS	Heater Kit. Road Light Kit: two combination signal and flasher lights, controls, mounting hardware and wiring.
WEIGHT	250 lbs. (113.4 kg); shipping weight.	48" (122 cm) SNOW BLOWER, MODEL 44910	
OPTIONS	Road Light Kit: roof mounted flashing amber beacon, two front and one rear working lights, two combination signal and taillights, signal controls and switch panel.	STANDARD FEATURES	48" (122 cm) 2-stage with adjustable skid shoes. Directional chute rotates electrically from the operator's seat, 180°.
		WEIGHT	400 lbs. (181 kg).

*Specifications and design subject to change without notice.

Groundsmaster® 300 Series Specifications* (continued)

IMPLEMENT AND ACCESSORY COMBINATIONS																					
TORO ACCESSORIES																		OTHER MANUFACTURERS' ACCESSORIES**			
	72" SD Deck 30722	72" RD Deck 30710	Guardian® 72" Recycler® 30716	Fine Cut Flail 2760 Mower 44590	Cushion Seat 30708	Deluxe Seat 30772	48" V-Plow 30750	Speed Control Kit 30677	Plug Pulverizer 2560 44892	Debris Blower 2670 (w/o kit) 44524	Aero-Seeder 82 44815	Aerator 75 44890	Snow Blower 150 44910	[2] Wide Tires 23 x 10.5-12 62-7020	Tire Chains (rear) 76-1840	[3] 4-WD Shaft Kit 72-3741	Jack Pad Kit 76-0900	Rotary Broom	2-Post and 4-Post ROPS	Cab w/ ROPS	Grass Collection System
Groundsmaster 345 Model 30789	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	—	—	Opt.	Opt.	Opt.	Opt.	
Groundsmaster 325-D, Model 30788	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	—	—	Opt.	Opt.	Opt.	Opt.	
Groundsmaster 325-D, 4WD, Model 30795	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	2-Post Std.	Opt.	
Seat Adapter Kit Model 30709	—	—	—	—	—	Req.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Armrest Kit Model 30707	—	—	—	—	Opt.	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Leaf Mulcher Kit Model 30733	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
High Lift Blade P/N 23-2410	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
V-Plow Mounting Kit Model 30757	—	—	—	—	—	—	Req.	—	—	—	—	—	—	—	—	—	—	—	—	—	
Tire Chains (front) P/N 11-0390	—	—	—	—	—	—	Req.	—	—	—	—	—	Opt.	—	—	—	—	Opt.	—	—	
Wheel Weight Kit (2-25 lb. (11 kg) wts.) P/N 11-0440	Opt.	Opt.	Opt.	Opt.	—	—	Opt.	—	—	—	—	—	Opt.	—	—	—	—	Opt.	—	—	
Rear Weight (1-35 lb. (16 kg) wt.), P/N 24-5790	[1] Opt.	[1] Opt.	[1] Opt.	[1] Opt.	—	—	Opt.	—	Opt.	Opt.	Opt.	Opt.	Opt.	—	—	—	—	Opt.	Opt.	Opt.	
Rear Weight Kit (2-35 lb. (16 kg) wts.), P/N 24-5780	[1] Opt.	[1] Opt.	[1] Opt.	[1] Opt.	—	—	Opt.	—	Opt.	Opt.	Opt.	Opt.	Req.	—	—	—	—	Opt.	Opt.	Opt.	
Rear Weight Box Kit P/N 62-6590 [4]	Opt.	Opt.	Opt.	Opt.	—	—	Opt.	—	Opt.	Opt.	Opt.	Opt.	Opt.	—	—	—	—	—	—	—	
10" (25 cm) Pneumatic Wheel & Tire (2 req'd) P/N 12-1509	Opt.	Opt.	Opt.	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10" (25 cm) Segmented Tire Assembly (2 req'd) P/N 76-1880 [5]	Opt.	Opt.	Opt.	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Guardian 72" Recycler Low Height of Cut Kit Model 30680	—	—	Opt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Debris Blower 2670 Kit Model 44535	—	—	—	—	—	—	—	—	—	Req.	—	—	—	—	—	—	—	—	—	—	

[1] To comply with ANSI / OPEI B71.4-1990 stability requirements, Groundsmaster 2-wheel drive models 30789 and 30788 require additional rear weight. See "Counterbalance Weight Requirement" chart on following page.

[2] Wide Tires, P/N 62-7020, will not fit with Model 30710 Rear Discharge Cutting Unit.

*Specifications and design subject to change without notice.

**The Toro Company does not manufacture or sell these accessories, nor does Toro guarantee these accessories in any manner whatsoever. The manufacturers of these products are as follows: M-B Company Inc. of Wisconsin, Sweepster Jenkins Equipment Company, Custom Products and PeCo, Inc.

[3] Direct Drive Shaft Kit, P/N 72-3741, is for rear axle — no overrunning clutch.

[4] Rear Weight Box Kit, P/N 62-6590, weighted with suitable ballast, may be substituted for cast weights.

[5] Must order P/N 80-0040 Spacer to complete assembly.

Groundsmaster® 300 Series Specifications* (continued)

OVERALL SET UP DIMENSIONS AND WEIGHTS (approximate)			
	Groundsmaster 345 – Gas Model 30789	Groundsmaster 325-D Model 30788	Groundsmaster 325-D, 4WD Model 30795
WIDTH w/30722 SD Cutting Unit w/30710 RD Cutting Unit w/30716 72" Recycler® Cutting Unit w/44590 Fine Cut Flail 2760	46" (117 cm) (measured from outside of front tires) 85.5" (217 cm) 76.5" (194 cm) 75.5" (192 cm) 69" (175 cm)	46" (117 cm) (measured from outside of front tires) 85.5" (217 cm) 76.5" (194 cm) 75.5" (192 cm) 69" (175 cm)	47" (119 cm) (measured from outside of rear tires) 85.5" (217 cm) 76.5" (194 cm) 75.5" (192 cm) 69" (175 cm)
LENGTH w/30722 SD Cutting Unit w/30710 RD Cutting Unit w/30716 72" Recycler® Cutting Unit w/44590 Fine Cut Flail 2760	91" (231 cm) 112" (285 cm) 115" (292 cm) 117.5" (298 cm) 116" (295 cm)	91" (231 cm) 112" (285 cm) 115" (292 cm) 117.5" (298 cm) 116" (295 cm)	94" (239 cm) 115" (292 cm) 118" (300 cm) 118.5" (301 cm) 117" (297 cm)
HEIGHT	50" (127 cm)	50" (127 cm)	50" (127 cm) w/ROPS 78.5" (199 cm)
DRY WEIGHT w/30722 SD Cutting Unit w/30710 RD Cutting Unit w/30716 72" Recycler® Cutting Unit w/44590 Fine Cut Flail 2760	1,300 lbs. (590 kg) 1,700 lbs. (771 kg) 1,715 lbs. (778 kg) 1,765 lbs. (800 kg) 1,781 lbs. (808 kg)	1,250 lbs. (567 kg) 1,650 lbs. (748 kg) 1,665 lbs. (755 kg) 1,715 lbs. (778 kg) 1,731 lbs. (785 kg)	1,665 lbs. (755 kg) (w/ROPS) 2,065 lbs. (937 k) (w/ROPS) 2,080 lbs. (943 kg) (w/ROPS) 2,165 lbs. (982 kg) (w/ROPS) 2,146 lbs. (973 kg) (w/ROPS)
WHEELBASE	49" (124 cm)	49" (124 cm)	51" (130 cm)

COUNTERBALANCE WEIGHT REQUIREMENT ¹			
	72" SD, MODEL 30722 & 72" RD, MODEL 30710	GUARDIAN® 72" RECYCLER®, MODEL 30716	FINE CUT FLAIL 2760, MODEL 44590
GROUNDMASTER 345, MODEL 30789	105 lbs. (47.6 kg) (1) 24-5780 & (1) 24-5790	105 lbs. (47.6 kg) (1) 24-5780 & (1) 24-5790	105 lbs. (47.6 kg) (1) 24-5780 & (1) 24-5790
GROUNDMASTER 325-D, MODEL 30788	70 lbs. (31.7 kg)	70 lbs. (31.7 kg)	70 lbs. (31.7 kg)
GROUNDMASTER 325-D, 4WD, MODEL 30795	No weight necessary.		

¹ In order to comply with ANSI / OPEI B71.4-1990 stability requirements.

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Commercial Products



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totally changed my philosophy for treatment in recent years.

I used to contract out a wall to wall combination application of Nemacur and Oftanol and had much success in the control of mole crickets. There are many obvious advantages to contract applications: from not having to store the restricted-use chemicals on site, not having crew members apply restricted-use chemicals for mole crickets, basically a one-time control application and the list could go on.

But as everyone should be well aware of, we are rapidly moving into an environmentally sensitive world where golf course superintendents are being perceived as bad guys who just go around dumping toxic chemicals on the ground. I know that this image is wrong and for this reason we have made the following changes at Seminole.

We have decided to accept the fact that some mole crickets are tolerable. Our main goal is to prevent major turf damage from mole crickets by making spot treatments when necessary.

Like most facets of golf course maintenance, this requires constant observation of the golf course so that no area becomes too damaged before treatment. I compare this spot treatment for mole crickets to vs. wall to wall treatment of mole crickets to hand-watering greens vs. using sprinklers to water the greens.

In both cases (wall to wall and sprinkler irrigation), I feel that too much chemical and too much water is being applied.

The big negative to spot treatment is that this control program is harder. It takes more observation time and labor effort to work properly. The trade-off is that we are using fewer chemicals than ever before mainly because we are not trying to control every mole cricket.

As far as chemicals used for the control of mole crickets, we use several chemicals in rotation to maximize control such as: Orthene, Crusade, Dursban and Oftanol. These chemicals are safer to use and are effective whether they are sprayed on or used in bait form.

Timing and proper application are the critical factors in a successful program.

These nematode products will help reduce our mole cricket population when it gets too high and allow us to continue our spot treatment program, thereby reducing total pesticide usage.

Everybody knows the chemicals that are labeled for mole cricket control and the rates applied.

Hal Hicks
Seminole CC, Palm Beach Chapter

Take the IPM approach

Collier's Reserve uses an Integrated Plant Management (IPM) approach to mole cricket control.

The golf course is scouted in a consistent manner (every week). Areas of mole cricket activity are recorded and soap flushes taken. Damaged areas are mapped because the female mole cricket seems to return close to where she was hatched, as a nymph, to lay her eggs.

Crickets taken by means of soap flushes are measured by length and the average size is determined. This data will help us select which compound we will use for their control.

In mapped areas, during the fly-in period, a bait formulation will be used. We chose a bait formulation because at the time of fly-in, mole crickets will be mature, mobile and hungry. With any liquid product, the tank water pH will be adjusted which ensures maximum pesticide efficiency, thereby saving money and time on costly second applications.

At present, we are lucky to have only a small cricket population needing only spot treatment. In some areas where the mole crickets are not too numerous, a soap-and-water flush is used instead of pesticide application. Late season mole cricket fly-in on the greens will be flushed out rather than using a pesticide treatment.

When necessary, we use Crusade 5G for spot treatment and are experiencing excellent results.

Recently, we began looking at all bio-

logical products as an alternative method in mole cricket population control. Two specific biological products we are looking at are Vector and ProAct. These nematode products will help reduce our mole cricket population when it gets too high and allow us to continue our spot treatment program, thereby reducing total pesticide usage.

Our program will change each season to accommodate the variation in mole cricket density; however, we will always map and soap flush to determine what is going on in the field.

Michael Litton
IPM Specialist,
Collier's Reserve CC

DowElanco, BMP

1) Target treatments... Map and record areas of greatest mole cricket activity throughout the year.

2) Control the younger generations

• Scout and soap flush in late spring and early summer.

• Wait until eggs have hatched... Treat 2 weeks after first hatch.

3) Treat with a good residual like Pag-eant* 50DF insecticide or Dursban* 50WSP insecticide (4-5 pounds per acre) or at least 2 pounds active ingredient per acre of Dursban granular.

a) It's best to apply in late evening to moist soil.

b) Irrigate 1/4 to 1/2 inches after application to move the chemical into the control zone.

4) Make spot treatments throughout the year to control hot spots/new hatchings.

5) Bait formulations of Dursban are effective against adult life stages.

John Demaree
DowElanco

BioControl, Inc.

Proact is the biological mole cricket control consisting of the patented beneficial nematode, *Steinernema scapteriscus* (Ss).

This nematode was found by IFAS nematologist Dr. Grover Smart back in

This year, unlike last, the crickets started to come out much earlier. The first soil flush was conducted the first week in May. We counted approximately 30 crickets in a 2 x 4 sq. ft. area.

1985. The nematode was tested for seven years by the University of Florida in both laboratory and field trials, and was made commercially-available by BioControl, Inc. in 1991.

Since then, Proact has been applied on well over 4,000 acres of golf course turf, with at least 80-90% success rate.

Proact is most effective against adult Tawny, Southern and Short-winged mole crickets. When the nematodes find a mole cricket host, they enter the body through the mouth or spiracles and make their way to the digestive tract.

Once in the digestive tract, the nematodes release a bacterium that kills the mole cricket within 24-48 hours. The male and female nematodes then mate inside the body of the dead cricket, with up to 80,000 offspring emerging from the mole cricket cadaver within three to five days.

Ss can survive 8-16 weeks in the soil without a mole cricket host, which represents the minimum residual of Proact (obviously, the offspring nematodes are also expected to survive 8-16 weeks).

Proact is best used as a biopesticide against adult mole crickets during the spring and fall seasons.

With the spring application, the goal is to kill the adult mole crickets before they lay their eggs. As a result, Proact should be applied between February and April for optimal results.

The fall application is meant to dramatically reduce the population of adult and later-stage juvenile mole crickets before they start the overwintering process (i.e. burrowing deep for the winter). For best results, golf courses should perform the fall application between August and November.

The key to success when applying Proact is to get the nematodes into contact with

the mole crickets beneath the soil surface. In other words, water is imperative to attain the desired results.

When applying Proact with a spray rig, BioControl recommends the golf course superintendent irrigate prior to the application to cool the grass and moisten the soil, as well as afterward to water the nematodes into the soil.

The general rule of thumb for sandy soils is 1/4 inch of water before and 1/2 inch after (although some golf courses would flood half of Florida if they used this much water).

A carrier volume of 50 gallons per acre has proven successful for spray applications. As an alternative to the somewhat traditional method of spraying the product, many golf courses are turning to fertigation, especially for larger applications. Fertigation is ideal because it enables the superintendent to water the product in as he/she is applying it.

Mole Cricket Brigade

Each summer we await the arrival of the mighty Mole Cricket.

Recently, we went out as we do each year and conducted soil flushes with soap and water. We start this procedure around the first week of May and continue each week until the crickets start to emerge. Last year the crickets started to come out in the middle of June.

This year, unlike last, the crickets started to come out much earlier. The first soil flush was conducted the first week in May. We counted approximately 30 crickets in a 2 x 4 sq. ft. area.

I thought this is crazy — it is too early for these guys to start coming out. That was the start of our Mole Cricket Brigade.

We started spraying the course in three- to four-hole clusters using different insecticides. Each area is documented

for the product used and evaluated for effectiveness. This continues until we have covered both courses.

At that point we continued to spot-spray hot spots. Our objective is to knock down as many crickets as we can early while they're still small. This has proven most productive and efficient over the years.

This year we have been asked by Miles Chemical — like several other courses in the area — to conduct a test evaluation on a particular insecticide. This is being done with the possibility of adding mole crickets to the label.

We are conducting this test on several plots on our driving range. I hope with the limited insecticides to choose from for cricket control, this one proves to be beneficial for all of us.

John Gallagher
Boca Woods CC, Palm Beach Chapter

Can't use the calendar

A warm winter, like the one that just passed sure helps to evaluate the success or failure of your mole cricket control methods. At our course, the warm winter kept our non-overseeded greens in great shape but it did little of anything to suppress our mole cricket activity.

The best method for control that I have found begins with getting as many nymphs as possible immediately after hatching. This early kill will greatly reduce the amount of adult activity you will receive past the initial hatching.

Every course is different and timing is critical! You can't rely on the timing of the treatment used by the golf course down the road or by using a calendar.

I have heard of treatment dates anywhere from late winter to early summer for this first hatching. Then of course there's the potential for a multiple hatching, an often occurrence in South Florida!

I have found the most successful method for mole cricket control starts with periodically checking the soil temperature, beginning in late winter. When soil temperatures begin to rise, we use soap flushes at a minimum of once a week until we begin bringing up nymphs.

We use the maps that we keep of trouble areas (adult activity sites) to determine where we do the soap flushes. Once the

The best approach: Create raving fans!

In 1978, I had just completed two years of college and was well on my way to achieving a degree in chemistry. It had occurred to me in a philosophy class, where we were pondering the meaning of life, that if I got a four-year degree in chemistry, I could end up in Buffalo monitoring ground water



Scott Wahlin

at Love Canal or reading gauges in a nuclear power plant where my only course of action, should the needle go into the red zone, would be to kiss myself good-bye!

So I took a semester off to determine what it was I wanted to do for a living. I had worked on golf courses since I was 15 years old and decided to look into golf course management for my future. A friend helped me get a job on the greens crew working for Dan Jones, CGCS, at Turnberry Isle in Miami. I felt this would give me exposure to a top professional at a premier operation. During this period, I interviewed a number of superintendents to discuss their careers. I liked the

people I spoke with and decided my future was here.

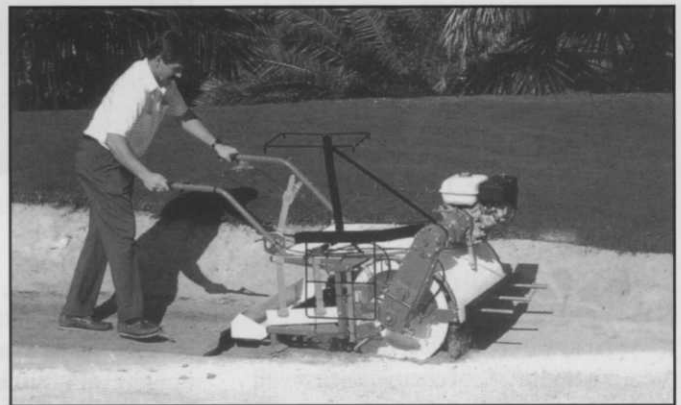
Six months ago, after 12 years in golf course management, I decided to accept the sales manager position at Pifer, Inc. This was a difficult decision because I truly like the people and family who make the Graham Companies, my employer at the time, such a thriving success. I spoke at length with the management at Pifer, Inc., and representatives of our manufacturers. I was very much impressed with their level of commitment and the opportunities available. I knew exactly what we needed to do: create raving fans. (I owe this to Kenneth Blanchard, author of *The One-Minute Manager*.)

How do we do this? By aligning our goals with the goals of those who choose to do business with us. I know from personal experience that it is a hell of a lot easier for a superintendent to do whatever he has to do to get the job done than to explain why the job was not done. No excuse is going to make a failure disappear, so there is no sense wasting time and energy on them. Solutions,

new ideas and heroic efforts make failures fade and sometimes turn to victory.

I was recently at a closing for a Ransomes 300 Fairway Unit. The superintendent liked the machine very much but asked how I could prove my level of commitment was what I said it was. His comment: "Talk is cheap!" I agreed and added, "... we have worked hard for this sale, but the sale of one unit is not going to make or break us — whether or not we create raving fans will. If you choose not to do business with us this time, I would very much appreciate if you would talk to your colleagues who do." He bought the unit.

In the past three months I have been with Pifer, Inc., I have visited more than 200 golf courses and met with nearly as many superintendents. I have come to the conclusion that what I like most about my present position is what attracted me to the golf industry in the first place. I get to spend my time with devoted turf industry professionals who I admire and respect. See you soon.



NOLTE BC 1000 SAND CLEANER

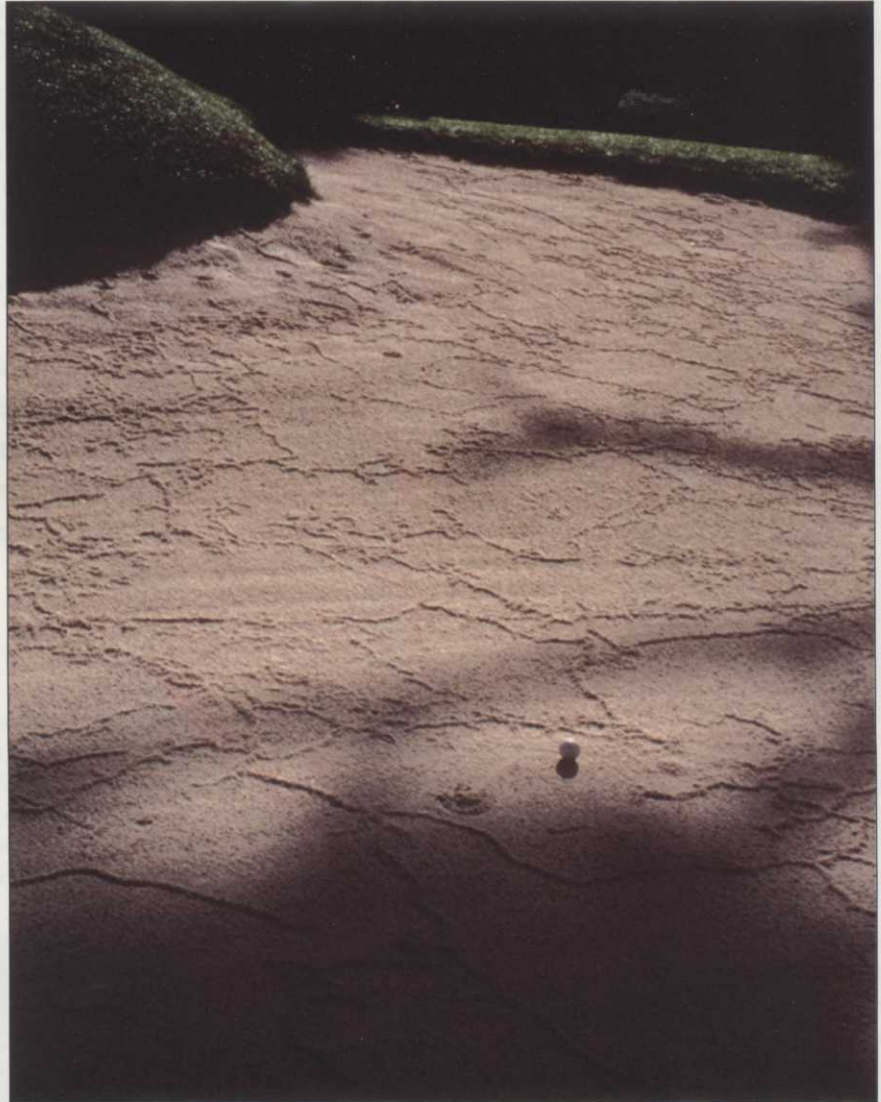
The NOLTE BC 1000 removes rocks and debris from sand traps. Available from:

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'... we have worked hard for this sale, but the sale of one unit is not going to make or break us — whether or not we create raving fans will.'

After this initial slaying, we follow up in trouble areas with applications of good old Orthene tank-mixed with a wetting agent and sometimes a feeding stimulant. We apply this at the label rates as late in the day as possible, on a night that we do not plan to irrigate. We spray only in those areas with current adult activity.



After treating the turf area, we find an explosion in the population of crickets in the bunkers, says Mike Bailey.

nymphs hatch, we treat all the areas with any nymphs.

Unfortunately, depending on the severity of the problem, this can mean treating the entire golf course. The up side to this is, if you do a thorough job with this initial nymph spraying, your adult activity will be less later on. This will then eliminate some of the need to spray at a later date.

As far as what chemical to use, I think there is a multitude of chemicals that will work well, especially at this nymph stage. I have had great success using Pageant for the first blanket application as well as Mocap.

After this initial slaying, we follow up in trouble areas with applications of good old Orthene tank-mixed with a wetting agent and sometimes a feeding stimulant. We apply this at the label rates as late in the day as possible, on a night that we do not plan to irrigate. We spray only in those areas with current adult activity.

I have also had great results with syringing (one head rotation) the area to be

sprayed with wetting agent pumped through the fertigation system prior to spraying with Orthene.

On top of all this, we inspect the tees, greens and aprons daily and treat any adult activity with a solution of Triumph at 1 oz/gallon. We spray the solution directly in to the burrow hole.

We also spray the fairways in this same manner, but we use a chemical that has a label for fairway use. We spray this using a 15-gallon electric sprayer transported around the golf course in the back of a utility vehicle. This method of injecting the spray solution directly into the active burrow has yielded great results.

My last bit of advice would be don't let

the activity get out of hand. Eliminate as many nymphs as possible after hatching and then stay on top of the adult activity later in the year.

Darren Davis
Olde Florida Club,
Everglades Chapter

Grubs affect cricket program

Besides mole crickets, grubs have become a growing concern at Atlantis. After studying the options I changed my program from past years.

First we decided to go with an Oftanol application after dethatching all fairways the first two weeks of May. I have not used Oftanol for three years. We had decent

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Responding to the mole cricket threat and to rising concerns over the environment, researchers are currently developing new techniques to control the pest. These include injecting pesticides into the soil under high pressure and even inoculating soil with insect-killing nematodes. The most promising control method, however, appears to be slit application.

results in the past with Oftanol and fewer grubs. So hopefully we killed two birds with one stone.

At the time of application we were soap flushing and noticed some mole cricket nymphs. As of June 1 we have very, very little activity. My plans call for another application in late June on nymph with either Crusade or Telstar, if labeled at the time.

In October of 1993 I experimented with the Proact nematodes and had excellent results with reduced populations in these areas. We also sprayed historical bad areas in March with Proact. These were all adult activity areas.

This too showed excellent results by lowering populations during egg laying time.

Things look more promising than in past years!

Mark Henderson
Atlantis GC, Palm Beach Chapter

Rhone Poulenc

As golf course superintendents across the South and Southeast know, controlling mole crickets is a never-ending battle.

It's an expensive battle, too. According to some estimates, the bill for controlling mole crickets and repairing the damage they cause runs as high as \$60 million per year in the states of Georgia, Florida and Alabama alone.

Mole crickets range from the coastal areas of the Carolinas well into Texas.

Responding to the mole cricket threat and to rising concerns over the environ-

ment, researchers are currently developing new techniques to control the pest. These include injecting pesticides into the soil under high pressure and even inoculating soil with insect-killing nematodes. The most promising control method, however, appears to be slit application.

Developed in Florida four years ago, slit application of granular products like Chipco Mocap brand ethoprop pesticide has proved a popular and effective way of controlling mole crickets.

Slit application uses a modified slit overseeder to place the insecticide beneath the surface of the turf, reducing the risk of exposing applicators, golfers, pets and wildlife. The process also reduces dust and odor problems.

Coulters or disks spaced 1.5 to 1.75 inches apart cut narrow slits in the sod. Calibrated doses of Chipco Mocap are simultaneously deposited into the slits. Mole crickets encounter the bands of material as they burrow through the root zone.

The slits heal quickly. In fact, the treatment aerates turf, giving it most of the benefits derived from verticutting. Slit application is not recommended for use on greens or tees because the slits might disrupt play. However, the equipment can operate directly over sprinkler heads without causing damage.

As effective as slit application is, you can further maximize the treatment's value by being thoroughly prepared before you treat. Primarily this means regular scouting—both visually and with soap flushes to keep track of mole crickets as they develop.

The optimum time to treat is just after nymphs hatch because it is at this stage that they are most vulnerable to the pesticide. Hatch dates vary according to locale, so treating by the calendar is a bit risky.

Remember, however, that custom applicators usually require that reservations be made in advance. Although locking in a date beforehand may throw your timing off slightly, with regular scouting you will be able to more accurately estimate when peak hatch will occur and be able to plan accordingly.

More and more golf course superintendents throughout the South and Southeast are discovering the benefits of slit applying Chipco Mocap to control mole crickets. However, for maximum return on investment, superintendents should take the time to properly scout for the pest before reserving the services of a custom applicator.

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Ken Lewis, Ph.D.
Rhone-Poulenc Ag Company

The optimum time to treat is just after nymphs hatch because it is at this stage that they are most vulnerable to the pesticide. Hatch dates vary according to locale, so treating by the calendar is a bit risky.

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Environmental planning

Audubon plan for becoming a guardian of nature

BY SHELLY FOY

USGA Green Section

AND TOM BENEFIELD, CGCS

In part two of our series on the Audubon Cooperative Sanctuary Program for Golf Courses, we are going to offer tips on the "Environmental Planning" category.

First however, I would like to back track just a little.

STEP 1: Your course has made the decision to join the ACSP and you have sent in your registration form and \$100.00 registration fee. (Forms can be obtained by calling the Audubon Society of New York State, Inc. at (518) 767-9051 or by calling the USGA Green Section Florida office at (407) 546-2620.

STEP 2: Your golf course then be-

EDITOR'S NOTE: This continuing series of articles is designed to provide ideas which we hope will stimulate interest and creativity in this very positive environmental program. We have asked for help and ideas from superintendents around the state who are either seeking certification or have already received it.

The following segment is made possible by the generous supply of information from three outstanding Florida golf course superintendents. What we have provided are suggestions and ideas. Specific programs should be geared for your particular property and interests. So enjoy the information you are about to receive, for it comes from the best source in the world — you. TJB

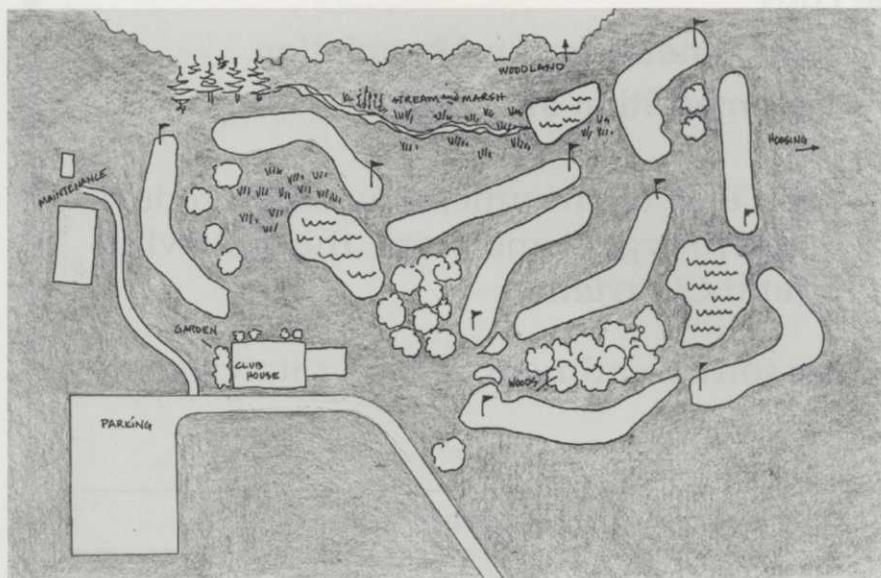
comes a registered member of the ACSP. You will receive a resource inventory handbook asking specific questions about your golf course property (size, existing habitat, etc. Once completed, the ACSP staff will use your resource inventory to provide you with a written report specifically for your golf course. This report will contain suggestions and recommendations on conservation and habitat en-

hancement.

Keep in mind, the ACSP staff only makes recommendations to your course. The final decisions concerning implementation of projects remains with the golf course superintendent and course officials.

STEP 3: You will need to form a Cooperative Sanctuary Committee, or "resource committee." This committee

First, map it out



such as trees, shrubs, woods or grass. Label these the best you can, and be as specific as possible about the types of vegetation present. Next, draw in any special features or distinct environments on your site. These may include water features, wetlands, gardens, steep slopes, or special maintenance areas. Outline surrounding land use that borders the property. Finally, label existing areas of high wildlife activity. Sketches courtesy of the Audubon Society of New York State, Inc.

To get a good picture of what you're starting with and plan appropriate habitat projects, make a simple map of your

property. First, draw in property boundaries, roads, buildings and parking areas. Then add golf play areas and existing vegetation,



could include staff of the golf course, board or greens committee members, golfers, and at least one person from the local community with expertise in the types of projects you wish to undertake.

Choose people willing to volunteer their time and energies to develop and implement habitat enhancement projects. Your committee will serve many purposes, including becoming technical advisers, volunteer laborers, public relations persons, but mostly, their commitment to the land and wildlife of the golf course should remain constant.

Choose people you feel comfortable working with. The Audubon Society of New York State does not specify who needs to be on your committee, nor are there any meeting requirements for this group.

STEP 4: Now you are ready to start documenting your efforts and receiving certificates of achievement for each of the six categories listed below:

- 1) Environmental Planning
- 2) Public Involvement
- 3) Wildlife Habitat Management (Formerly Wildlife Cover and Food Enhancement)
- 4) Integrated Pest Management
- 5) Water Conservation
- 6) Water Quality Management (Formerly Water Enhancement)

*The categories have recently been updated to help clarify and simplify the process.

To achieve status as a Certified Cooperative Sanctuary, all six categories must be reported to the Audubon Society of New York State and the criteria met.

Now, on to Environmental Planning.

The Environmental Planning category is like your blueprint or map. Your plan should include goals and how you plan to achieve them. Check each of the categories and see what you are doing now and what you can do to improve them. Do you have a time frame or deadline you want to set?

You are writing this plan to achieve certification in this category, but by being specific in defining goals, you will be making the process easier for yourself and your committee.

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Protecting nature is guiding rule at Tampa Palms

Since its conception in 1985, the guiding principal of the golf course design at Tampa Palms has been to preserve and protect the delicate beauty of the natural environment.

The property on which the course is built lies within the flood plains of the Hillsborough River and great care was taken during the construction of the course to ensure that the "natural areas" on and around the course were not disturbed. The associated residential community has been laid out in such a manner to preserve 50 percent of its original acreage for the development of parks, green spaces, nature preserves and other important components such as wildlife corridors and buffers.

Our commitment here at Tampa Palms, in the community and on the golf course, to preserve and protect the flora and fauna communities found in this area is not an imposed restriction, it is basic to the original design ideal.

Our plan for the future is to learn more about the techniques and practices available that will allow us to maximize the potential for this property as a sanctuary for the increasingly stressed populations of Florida wildlife.

As development of the Interstate 75 corridor proceeds, we are seeing wildlife populations such as deer and turkey increase as they seek supporting habitat and relief from the stress of sharing space with

All this planning has helped make the golf experience at Tampa Palms a very enjoyable one.

commercial and residential development.

All this planning has helped make the golf experience at Tampa Palms a very enjoyable one. Not only can one play a championship course designed by Arthur Hills, but one experiences a journey through an ancient Florida wetland, complete with encounters of wildlife such as osprey, hawks, alligators and numerous other species of birds and animals. Having blended golf and nature together in harmony at Tampa Palms is something we are proud to have and are working hard to ensure it remains that way.

Suggestions I have for anyone who wants to write their certification program for environmental planning are:

1. Talk with the architect of the golf course and find out what his design concepts were for your course.

2. Talk with the developers of the community associated with your course (if applicable) and find out their intentions for creation of preserves and green spaces within the boundaries of the community.

3. Develop and implement a long-range plan (2-5 years) for golf course projects such as the building and location of nest boxes.

4. Develop and implement a comprehensive IPM program for your golf course.

5. Establish good working relationships with local authorities such as the county extension agencies, local parks departments, County EPC and your respective water management district. Get to know people within these agencies on a first name basis.

6. Conduct your daily operations in a professional manner. Work within the limits that have been established for pesticide and water use. Be responsible for your management practices.

7. Educate your staff and your golfing membership as to the benefits of the Audubon program. Stress to them the importance of managing environmentally sensitive areas in a safe and effective manner.

8. Do a thorough job of documenting your efforts that you put forth when working on projects that you have selected for your course. Remember that a photo will tell a story within itself. Notes and photographs will come in handy when writing your certification program.

Above all, don't get discouraged with the program and think that it is going to take up too much of your precious time that as we already know, all superintendents are short on. You must set some time aside for the start-up program, but hopefully some of your staff can help once the program gets under way.

I would be happy to answer questions that anyone might have about Tampa Palms involvement with the Audubon Cooperative Sanctuary Program. Feel free to give me a call at (813) 972-3375.

Greg Plotner

Tampa Palms Golf & Country Club

Why should my course join the ACSP?

As we all know, there is a growing negative perception about the golf course environment and the management programs practiced. As a member of the ACSP, your course will:

- Receive advice to improve current project efforts and suggestions for new conservation projects.
- Be recognized for its commitment to wildlife and environmental quality.
- Provide wildlife habitat and also add beauty and distinction to the golf course while enhancing the enjoyment of a game of golf.
- Provide financial savings from reduced maintenance costs and conservation measures.
- Help preserve a healthy, diverse and beautiful landscape for future generations.
- Set a positive example for others to follow.



Wetland planting area during construction at Olde Florida Golf Club, Naples

Olde Florida: Environmental concerns are a daily effort

At Olde Florida Golf Club, we are fortunate to have had the time, ability and foresight to give great consideration to the surrounding environment in planning and construction of the golf course.

Now, after the turfgrass is established and the golf course is in full operation, consideration of the surrounding environment remains a daily effort for the maintenance staff and the membership. This effort has transpired into a written plan that details the steps that have been taken, as well as ongoing and future plans.

This written plan is what composes our Environmental Planning section of the Audubon Cooperative Sanctuary Program. This written plan is also one of the six steps that must be completed to become a Certified Audubon Cooperative Sanctuary.

The Environmental Planning category must include information detailing the efforts being made in the following five categories: Public Involvement, Integrated Pest Management, Wildlife Habitat Management, Water Conservation and Water Quality Management.

Below are steps that we have taken in an

attempt to comply with each category.

Public Involvement

Involving the public at our club began with forming a Resource Committee of club members and other interested individuals.

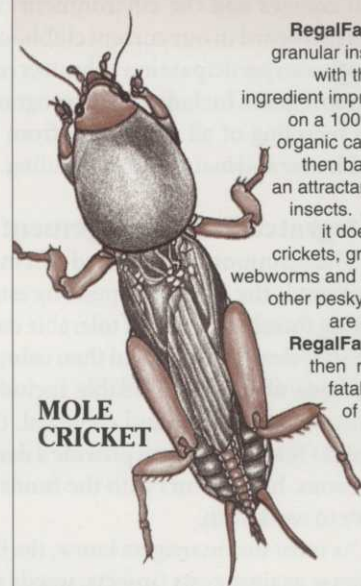
I began by writing an article for our club newsletter explaining the positive impact our golf course has on the environment. The article further explained the requirements for certification as a Cooperative Sanctuary System sponsored by the Audubon Society of New York State, Inc.

I received numerous calls of support and was able to sign up nine members for our Resource Committee. I also included a local fifth grade teacher on this committee who had no connection with the membership or the club. Through the help of the teacher, we arranged a field trip for the fifth grade class to our golf course.

The purpose is an effort to educate the students on the numerous positive impacts that Olde Florida and other golf courses have on the environment and the community. We took pictures of the students on the golf course, combined it with a written explanation and released this

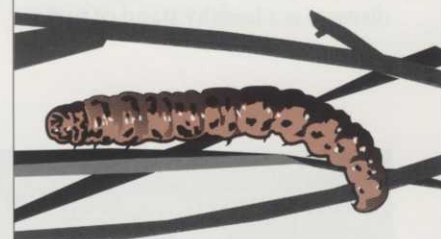
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information to the press in an effort to further educate and inform.

Another effort that takes very little work and can increase public awareness is displaying the certificate of participation in the program in a highly visible area.

Our certificate is on display in the reception area of our maintenance facility. Once we move into our permanent clubhouse, we will post a plaque in the lobby. In the meantime, I post interesting articles about golf courses and the environment on a bulletin board in our current clubhouse.

We also participate in a volunteer recycling program. Included in this program is the recycling of all aluminum from the clubhouse and maintenance building.

Integrated Pest Management

The definition of integrated pest management is the control of pests by establishing threshold levels of tolerable damage (physical & visual) and then using all methods of control available including cultural, mechanical and chemical. Our goal at Olde Florida is to provide a dense, vigorous, healthy turf with the funds we have to work with.

As most turf managers know, the best defense against pests (insects, weeds and disease) is a healthy stand of turf.

A key factor in an integrated pest management program is the ability to correctly identify host plants, key pests and their life cycles that can affect the turfgrass and ornamentals on the golf course.

Part of our integrated pest management program is being aware of individual plant sensitivity to stress (pesticides, mechanical and environmental). Stress could weaken the turf and increase its vulnerability to invasion by pests. A well-trained staff is critical to the success of a properly executed integrated pest management program.

In the original planning stages of the golf course, turfgrass and ornamentals were selected which are indigenous to our site. This practice will continue with any future plantings of ornamentals.

Our site is predominantly Pine, Cypress and Palms. There are also a few scattered Bay trees, Dahoon Holly and Wax Myrtle.

Species currently existing on site will be the only types of plants brought in if additional plant material is necessary. This will result in fewer problems with pests, stress, disease and will decrease pesticide use.

Unfortunately, regardless of how much we would like to not use any pesticides, it is impossible to completely eliminate them. Therefore, to be a successful integrated

pest management manager, it is critical to correctly apply pesticides.

To define this, a written Pesticide Methodology was transcribed and posted at Olde Florida. This methodology includes good record keeping of chemical applications and mapping of troublesome areas on the golf course. By keeping written physical documentation of pest problem areas, chemicals can be applied by spot applications rather than wall to wall chemical applications.

When chemicals are applied at Olde Florida with a boom sprayer, raindrop nozzles (larger particle size) are used, which reduces the potential for drift.

A pre-emergent herbicide can be a valuable tool to reduce the need to apply a post-emergent herbicide. If the pre-emergent herbicide is used with just cause, it can also be a valuable integrated pest management method.

At Olde Florida we have four golf holes that have reached an unacceptable threshold level of goosegrass. After cleaning up these four holes with a selective, post-emergent herbicide, a pre-emergent herbicide is applied. This is done only to these four holes to prevent the germination of additional weed seeds that are inevitably in the soil.

Wildlife Habitat Management

Providing food and cover for wildlife is essential for attracting and sustaining healthy wildlife populations.

There are numerous ways in which we are accomplishing this, one of which is simple and very noticeable to the membership or guests. It is the addition of bird feeders around the maintenance facility and clubhouse. This can also prove to be a very noteworthy public relations move.

A second method that is less noticeable to the membership is the perpetuation of existing native trees that are a very good natural food source.

At Olde Florida, these trees include Cabbage Palms, Pines, Cypress, Dahoon Holly and native Lantana.

Cabbage Palms produce a black fruit that many birds eat and the palm thatch is used for nesting material.

The Cypress trees produce seed cones that squirrels and ducks eat.



Newly planted wetland plants along lake bank at Olde Florida Golf Club in Naples.

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HEADS UP



This is the existing wetland planting at Olde Florida Golf Club in Naples.

Pines provide winter cover and have abundant seeds.

Other plant species on our property that benefit wildlife as a food source is the Dahoon Holly, native Lantana and Wax Myrtle.

These species provide abundant berries for birds and other animals. In addition, they can be aesthetically pleasing. Dahoon Holly was chosen for planting in front of the windows in the maintenance facility and around the clubhouse patio.

The red berries are attractive and also provide food for birds which staff and visitors can see the birds eat from within the building. Any future plantings that occur on the golf course will be from one of the previously listed native plants.

Since Olde Florida is a non-residential golf club, we are very fortunate not to be driven by real estate pressure of golf course views.

This made it possible to establish wildlife corridors between all the golfholes. The wildlife corridors are areas of native vegetation that are selectively cleared to varying degrees. These corridors provide wild-

life with safe freedom of movement around the golf course.

Trees are very beneficial for wildlife cover as well as providing framing and backdrops for the golf course. When construction was complete, a small number of areas on the golf course needed some additional plant material to connect existing natural areas. These areas are being filled in with native vegetation and then mulched to hold in moisture.

Another method of managing woodland areas for wildlife is allowing dead trees to remain standing if they pose no threat to

the membership or employees. These dead trees provide food sources and nesting sites. When these trees fall to the ground, they return nutrients to the soil.

When construction was complete on the golf course, there were hundreds of dead trees that were allowed to remain. In addition, several trees were struck by lightning during construction and their trunks still remain standing.

The dead trees, or “snags,” are abundant with nesting areas and birds such as

Continued on Page 64

A second method that is less noticeable to the membership is the perpetuation of existing native trees that are a very good natural food source. At Olde Florida, these trees include Cabbage Palms, Pines, Cypress, Dahoon Holly and native Lantana.

ACSP environmental planning outline

1. Wildlife Habitat Management:

A. Current: Native saltwater marshes are overgrown with non-native species of Brazilian Pepper and Melaleuca trees.

Future: Plan a non-native tree removal program to enhance the natural wetland area, allowing Red & Black Mangroves growth to provide cover for wading birds. Cary Lewis to monitor. Began 5/93.

B. Current: Clean edges with little vegetation throughout the fresh water lake system on the golf course.

Future: Planting of fresh water aquatic plant material to improve fish population and increase habitat for our many species of wading birds. Mike Swanson to monitor. Began Spring 1994.

C. Current: Few Nesting Cavities.

Future: Initiated and installed a nesting box program (Adopt-A-Box), membership funded, to attract bluebirds, wood ducks and other varieties. Randy Mosley to monitor. Began Spring 1993.

D. Current: Several small areas currently maintained as golf

turf.

Future: Investigate native grasses and wildflowers to possibly plant in these areas to increase habitat. Cary Lewis to monitor. Begin Spring 1995.

2. Water Conservation:

Current: Toro automatic system, using 100% reclaimed water for irrigation of all property. Practice deep watering programs which increase efficiency. Reclaimed source has high sodium levels which causes some salt burn at certain times.

Future: Install an acid injection system that will decrease the soluble salt load and increase water effectiveness. Cary Lewis to investigate and install when funding is approved.

3. Public Involvement:

Current: "Adopt-A-Nest" program for members and guests. We have installed a permanent Audubon Information Center in the Proshop, which includes bird books and a wildlife log.

Future: Native plant tagging program to increase awareness. Tom Pyne to monitor.

Cary Lewis
Stouffer Vinoy Resort

ACSP workshops announced

Florida golf courses are in a position to take a positive environmental leadership role with involvement in the ACSP. Currently, over 100 Florida golf courses are members of this very worthwhile program. Canada is behind us with 74 members and Michigan, Illinois and California follow with approximately 65 each. This program offers a wonderful opportunity to get the word out that golf courses are good for people, wildlife and the environment.

To help golf courses who have already joined this program and want to become certified, the USGA Green Section, the Audubon Society of New York State, Inc., Tampa Palms & Golf & Country Club in Tampa, and Collier's Reserve in Naples, are offering two, one-day ACSP workshops.

The dates are Thursday, August 11 at Tampa Palms Golf & Country Club and Monday, August 15 at Collier's Reserve. The format will be a three-hour workshop in the morning, lunch, followed by golf in the afternoon. The learning process will continue through your round of golf, as ACSP programs implemented throughout the golf course will be pointed out and explained by literature provided.

The cost for this seminar is \$40 and GCSAA CEU's are being applied for. Space is limited at both sites. To register, call

- Greg Plotner, Tampa Palms G & CC 813-972-3375 Aug. 17
- Tim Hiers, Collier's Reserve 813-597-7063 Aug. 15

If you would be interested in hosting a ACSP workshop at your golf course, please call Shelly Foy with the USGA Green Section at 407-546-2620.

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Continued from Page 62

Eagle, Osprey, Hawk, Swallow-tailed Kite, Dove, Owl, Woodpecker and others.

In addition to the natural, native wildlife nesting sites on the property, we are in the process of building artificial nesting structures. These boxes will be placed in open areas, along wood edges and near

lakes to attract a variety of bird species. Osprey feeding in the lakes has also been a common occurrence, so we are mounting an Osprey nesting platform.

Another beneficial form of wildlife cover that takes very little extra effort and that is a common practice at Olde Florida is the disposal of all organic material from the golf course property on site. We take brush,

tree limbs and other material and dispose of it on unused areas of the property.

The disposal of these materials creates new habitats for Fox, Skunk and other small animals.

Water Conservation

I am fortunate in that I was hired early in the project and I was able to assist in the design of the pumping and irrigation systems. We were able to incorporate numerous water saving technologies.

One method was installing part-circle heads on most lake banks and tree lines, eliminating excess water from being thrown into these areas. Dispersing irrigation water into natural areas not only wastes water and fertigation, but increases electricity costs. This also benefits existing native vegetation.

By irrigating native vegetation, you can force decline and encourage unwanted weed competition.

The greens are constructed to USGA recommendations with dual heads installed around all of the putting surfaces. A part circle head irrigates the perimeters on nights that we do not desire to water the greens.

The USGA greens are also a valuable form of water conservation. The perched water table effect allows us to irrigate the greens deeply every three to seven nights, depending on the climate conditions. In between nightly irrigation cycles, only a small amount of hand watering of "hot" spots is needed, thus eliminating the need to water more frequently.

The irrigation system that we chose to install at Olde Florida is a computerized system that includes a weather station. This system allows us to replenish only the necessary amount of water, as determined by the daily evapotranspiration rate that the weather station transmits to the computer.

The computerized system also shortens the necessary time to run the irrigation on the golf course. A rain sensor is also linked to the computer that will signal the shut down of the irrigation cycle in case of rain.

Water conservation at Olde Florida remains an ongoing process. The Irrigation Technician and Assistant Superintendents make continued course checks



Osprey observation perch at Olde Florida Golf Club in Naples.

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A well thought-out environmental planning guide is evident here as the young hatchlings of the Sand Hill Cranes are doing quite well.

Photo by Tim Cain

looking for wet or dry areas and adjusting the run times accordingly.

By adjusting nightly run times on the golf course, the turf remains as healthy as possible without having to do excessive watering of dry areas in the daylight hours. Adjustment on the part circle heads is also periodically checked to insure parameters have not unintentionally changed.

Fertilizer and chemicals that require subsequent irrigation are timed so needed irrigation that follows the application would coincide with a normal scheduled watering. A pre-set schedule is not adhered to for chemical and fertilizer applications. A guideline of these applications is prepared, which is then altered by a few days if necessary to coincide with needed nightly irrigation.

Water Quality Management

The largest, most noticeable form of water quality management is the addition of over 70,000 sq. ft. of planted wetland

vegetation. Some of these areas were planted during construction to comply with Collier County and South Florida Water Management District requirements.

Since this time, more plantings have been added and others are in the process of being added, by utilizing mature plants from the existing well-established wetland planting areas. These wetland plants not only provide a pleasing visual water enhancement, but are a tremendous wildlife cover and serve as wildlife food enhancement areas.

Numerous birds, including a variety of egrets, are a normal site in these areas. Also abundant in these areas are alligators, turtles and fish, all of which use the sites for beneficial cover and as a food source.

Another form of water enhancement is actually a form of preventive maintenance on the lake banks and the water. Fertilizer or granular chemical applications on the golf course are done carefully so as to not throw material into the water.

Instead of using large tractor-drawn spreaders around the water's edge, the lake banks are fertilized by hand using walk behind rotary spreaders. The weeds on the lake banks are hand-picked when necessary so that only a very small amount of pesticide spraying has to take place on the turfgrass in close proximity to the lakes. If spraying is deemed necessary, spot application is used whenever possible.

Environmental planning is more than just a step in the certification process for the Audubon Cooperative Sanctuary Program. It is a way of thinking that includes many avenues that all lead to the same end result. By consciously following a written environmental plan and making your voice heard outside the golfing arena, you can prove that not only can golf courses co-exist with nature, they can greatly improve the environment as a whole.

Darren Davis
Olde Florida Golf Club



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BY SCOTT BELL
Bent Pine GC

Hopefully that won't be you if you are ever visited by the various agencies that govern our industry. To help all of us avoid embarrassing non-compliance, I have compiled a list of items that will help to insure that you are complying with the laws.

This is a step-by-step guide to compliance. Most of these items have been researched by our Government Relations chairman, Tim Hiers and they have also been reviewed by Jeff Wharton of United Horticultural Supply who spoke at the South Florida USGA meeting this spring.

The Board of the FGCSA cannot stress the importance of this minimum compliance.

The old saying is so true that a chain is only as strong as its weakest link and in our business this holds fast.

For example, in Vero Beach most of the courses have now built new maintenance complexes or the courses are so new that the complexes are up to date. While we have all spent or we are spending money to have new, safe, and environmentally friendly complexes that comply with the laws, if one of us slips up, all of the good work of the others will mean less and a negative news article in the local paper will hurt all of us.

Fourteen of the following 15 items are required by law. If you have not developed a policy for these it is in your best interest and the industry's best interest that you do.

Most of this compliance effort costs little more than your time and it should be

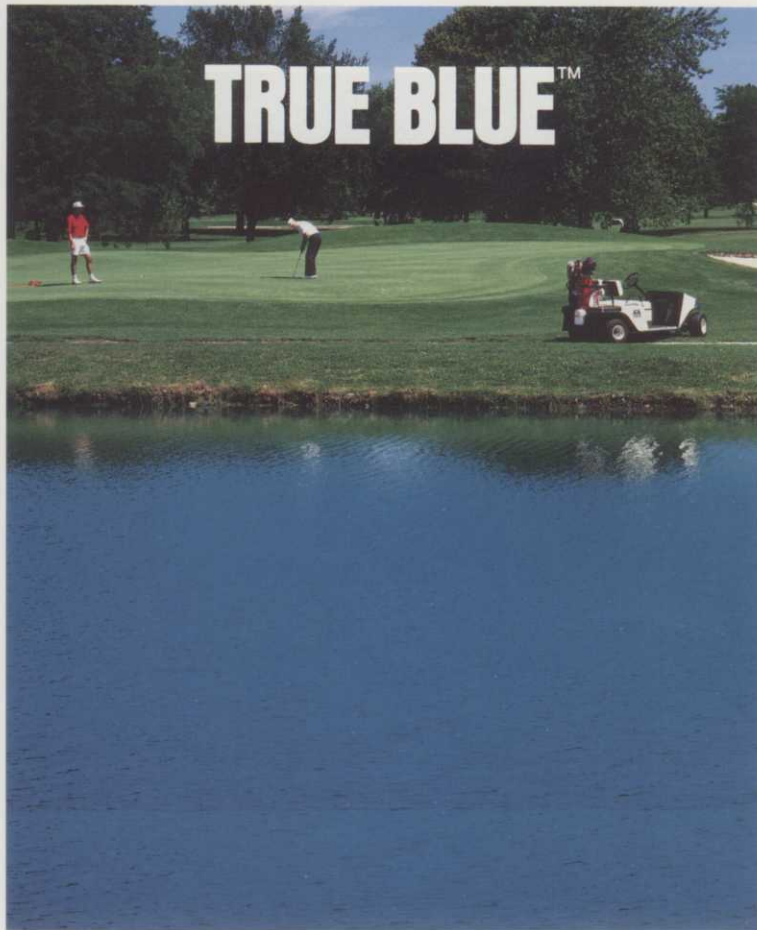
your goal that all Florida courses participate. If you have any questions regarding compliance to any of these, call me or Tim or Jeff and hopefully we can point you in the right direction.

1. SARA Title III Compliance

SARA Title III has been around since the late 1980s and hopefully all of the attention that the association gave it then got all of us in compliance.

Generally, if you are storing Nemacur 3, you may need to review the SARA laws. If you are storing large amounts of diesel fuel or gasoline (over 1700 gallons) then you need to check the laws.

Generally, if you are storing more than 5 tons of any pesticide or petroleum product, then you need to check the laws. If you



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store Paraquat then you really need to check it.

In my opinion, no course should have five tons of any single pesticide on site for safety purposes as well as environmental. If you are storing chlorine gas for a swimming pool then you also need to consider SARA III.

2. OSHA Hazcom – Florida Right to Know

This law has been around since the mid-1980s and is one that you better be complying with.

To comply with this law you must first develop a written program that includes an alphabetical list of all hazardous products in the workplace and their MSDS's. If you don't know what an MSDS is then please call Tim Hiers or myself immediately.

Getting back to the written program, you must also include a description of how to obtain the MSDS in an emergency. The written policy must explain the labeling requirements for hazardous chemicals.

The written policy must also explain many other safety items such as employee training on Hazcom, emergency procedures for exposure or spills, ways to inform visitors or outside service personnel, and the identification of an individual who is the main Hazcom trainer.

Employers are required to explain the written policy to the employees. You should conduct regular training programs regarding the health hazards of the hazardous chemicals. Maintain detailed records of employees' attendance in these training sessions.



Displaying MSDS sheets and right-to-know information is the law – but it is not difficult to comply with.

Finally, all hazardous chemicals should be labeled. The best way to comply is to leave the compounds in the original labeled container.

The Hazcom/Right to Know is fairly easy to comply with if you take some time. GCSAA has seminars on it at the convention, FTGA has information on it, the state of Florida will be happy to send you information.

I have a written Hazcom policy that has

blanks for you to fill in so that it pertains to your place of business. This is a very easy and fast way to begin to comply with the law. Contact me and I will mail you a copy.

3. Chemical storage

Pesticide storage can be a huge liability for you and your club. Inspectors are out there spot checking and answering complaints usually from curious neighbors or disgruntled ex-employees.

Pesticide storage should be separate from your maintenance building in a locked concrete or metal building. If you have a fire in your shop and if there are pesticides stored in the shop, the fire department will probably let the building burn so that there is no pesticide run-off.

A good pesticide storage building will have a fairly impervious floor like metal, concrete or plastic and walls of similar material. The building needs to be properly ventilated and labeled. The shelves should be steel and ventilated, certainly not wooden. The doors should be large and accessible.

Tim Hiers has gotten Steve Dwinell of the Florida Department of Agriculture

A good pesticide storage building will have a fairly impervious floor like metal, concrete or plastic and walls of similar material. The building needs to be properly ventilated and labeled. The shelves should be steel and ventilated, certainly not wooden. The doors should be large and accessible.

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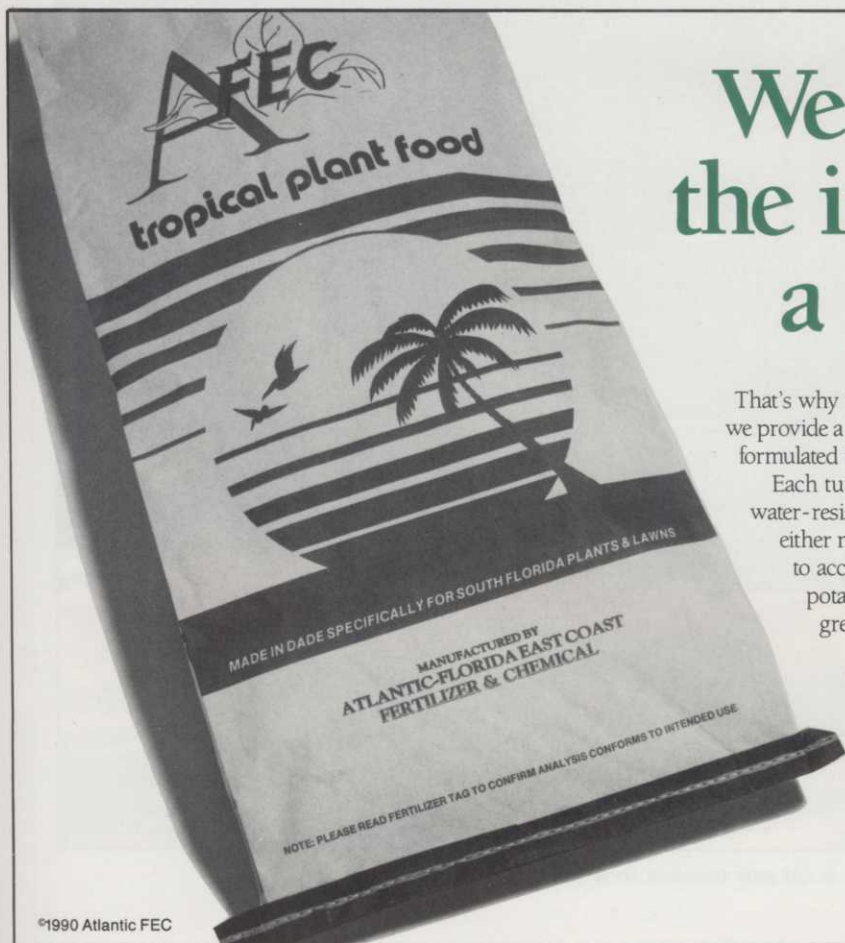
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and Consumer Services to work with FGCSA on chemical storage buildings and mixing sites.

4. Fuel and oil storage

All fuel storage tanks greater than 110 gallons must be registered with the state.

Above-ground tanks must be contained and underground tanks must be properly monitored. Liability coverage is mandatory for underground tanks and beginning in 1995 it will also be required for above-ground tanks as well.

Underground fuel storage require record-keeping of both monitoring wells and fuel inventories. Above-ground record keeping is much less stringent.

Above-ground tanks under 550 gallons do not need secondary containment.

5. Hazardous waste storage and disposal

Some of the byproducts of the equipment maintenance division of your operation are hazardous wastes and they must be disposed of properly.

The landfills do not want your petroleum wastes, so provisions must be made to dispose of them. Obviously your used oil must be saved and hauled off by a state-licensed waste oil hauler.

In years past, the haulers paid a small amount for the oil to the producer. However, recently the producer (golf course)

has gotten used to paying the hauler to take it away.

Used oil and hydraulic fluids are not the only wastes that need to be specially treated. Oil filters are to be stored in a container and they are hauled off to be recycled. In our operation, we use Safety Kleen Corp. to handle our parts washing, waste oil and used oil filters. They are one of the state's licensed haulers and you get the paperwork to release you of the liability of the waste.

Used batteries and tires cannot be disposed of in landfills and your battery and tire suppliers should take your used products when you buy new.

Finally all fluids such as anti-freeze, brake fluids and power steering fluids



Emergency eyewash and shower station at the chemical room is not only common sense but a well founded regulation.

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must be properly disposed of.

6. Rinsate procedure

All empty pesticide containers should be triple rinsed or cleaned with a puncture nozzle to over 99% clean. The container must then be punctured so that it can no longer hold liquid and the container should be flattened.

7. Mix load procedure and site

It has been proven that the greatest risk for pesticide exposure is at the mixing stage.

The applicator is handling the concentrated chemical and is probably holding the container close to his or her body. This means greater risk of exposure to eyes, skin, mouth or inhalation. The applicators must be taught proper procedures while mixing.

It's up to the supervisory staff to insist that the proper equipment is used to insure worker protection. This would include long-sleeved shirt and pants or coverall, a chemical-resistant apron while mixing, chemical resistant gloves and boots, and approved eye protection.

Most of these items should also be used during spraying but to be sure, check the labels regarding worker protection. The worker-protection laws can actually help us as superintendents to protect us and our clubs so long as we abide by the laws and document that the workers have been trained.

The state has finally established and published guidelines for mix/load sites. These mix/load sites help to contain all spillage during mixing so that no excess chemicals are discharged on to your property. Here again, it has been proven that the greatest pesticide concentrations and any significant pesticide pollution has generally been in the mix/load areas.

Your local seed, fertilizer and pesticide

It's up to the supervisory staff to insist that the proper equipment is used to ensure worker protection. . . long-sleeved shirt and pants or coverall, a chemical-resistant apron while mixing, chemical resistant gloves and boots

inspector has the mix/load guidelines as well as a worker protection guidelines and they are free for the asking.

8. Restricted-use pesticide license

Every golf course superintendent should have a Restricted Use Pesticide License. Every assistant superintendent should have a RUP License and every spray tech should have a RUP License or he or she should be working toward it.

You should also know and you should be keeping records of all restricted-use pesticides that are applied to your course. This is the computer age and the state knows or it can find out when you have purchased RUPs. Respirators must be matched in accordance with chemicals applied.

9. Written respirator policy

The respirators that you buy for yourself or your employees should be professionally fit. Some of the suppliers of the respirators offer this as a service when you purchase the mask.

Remember that facial hair disrupts the seal of the respirator giving you an improper fit. Employees who use respirators are also supposed to be tested by a doctor to insure that the employee can breathe properly with the mask in place.

10. Aural protection program

You should be taking steps to help to protect your employees' hearing from the roar of motors that they are subjected to each day. We supply the employees with disposable ear plugs and we require that the plugs are used when any power equipment is used.

We also have the employees' hearing checked and recorded once a year. This is the law and it helps to protect the employee if any gradual hearing loss is detected. It is against the law to have people operating loud equipment without the proper hearing protection.

11. Lockout/tagout standards

These provisions can apply when a person is working on something that is mechanical, electrical, pneumatic or hydraulic and that person cannot be seen at the control point, switch or breaker.

For example, if an electrician is working on something in your shop, he is required to tag the breaker with a warning that the breaker must stay off while he is working on that line.

The same should be done by the irrigation tech if he/she has the power off to the field or the pumps or water off to repair a pipe. Mechanics should use lockout/tagout to keep others from turning on equipment while they are working on it.

12. CPR training

Your staff should be trained in CPR. Check with your first aid supply person to see if their company offers CPR training. If not call the Red Cross or the Heart Association or the Emergency Management department in your county government.

13. Slips and falls

All precautions should be taken to protect workers from slips and falls. Ladders

We also have the employees' hearing checked and recorded once a year. This is the law and it helps to protect the employee if any gradual hearing loss is detected.

should be inspected to make sure that they are in good working order and they should be replaced if they are not.

All work areas should be kept clean and any spilled oil or fluids should be dried up immediately. All tree climbing safety gear and ropes should be inspected.

14. Safety & Health Programs

The Bureau of Industrial Safety and Health offer free inspections of your workplace. If problems are found you are told how to correct them and you are expected to correct them. If you pass all inspections or you make all of the necessary corrections, you could become exempt from OSHA general inspections for one year.

15. IPM

IPM has become one of the major buzzwords of this decade for our industry. Some of the IPM is just smart, common-sense management. Grow healthier grass, use less chemicals. Mow with sharper reels at proper heights and have healthier

turf.

Obviously all IPM is not that easy but it is really not that hard. Use soil tests to determine fertilizer needs. Use more slow release fertilizers since the plant can only absorb so much at any given time. See if you can use less fertilizer in the summer if play is light and members are away.

Scout for dangerous pests instead of just routine spraying products for mole crickets, nematodes and sod webworms. A common industry goal is the judicious use of pesticides and fertilizers.

Education of the golfers and members is a must because they should know you are trying to improve the way that you manage your course so that if an IPM method fails they will know why.

Start small with IPM. Start on small areas to make sure that things will work as you would with any new pesticide or procedure.

There are other safety items that are not necessarily outlined by any laws but they could save you and your staff trouble in the

future.

Back injuries can be debilitating and they can injure someone for life. Try to instruct your staff, especially the younger guys, that it is all right to ask for help when lifting.

Govern your transport vehicles to avoid injuries. Teach the staff about fire safety and the volatility of gasoline. Teach them how to use fire extinguishers.

Part of your Hazcom will be spill confinement. Finally, Burt McKee tells me that it is not a good idea for staff members to transport pesticides in vehicles on public roads without first taking the DOT training course.

It is up to all of us to ensure our industry works toward compliance of the laws and regulations. After we all comply then we can tell another positive story about the golf course industry. The FGCSA will help you in any way to get into compliance with the above subjects. Please feel free to contact myself or Tim Hiers or the FGCSA office for help or information.

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Fishing tournament, moonlight cruise added to FTGA conference & show

An ocean fishing tournament on Sunday and a moonlight cruise on Tuesday are the new events for the 42nd annual FTGA Conference and Show at the Broward County Convention Center in Fort Lauderdale Sept. 18-21.

The events underscore this year's theme — Turf 'n Surf Adventure.

The fishing tournament will be held at the same time as the traditional research golf tournament Sunday. Fishing enthusiasts will sail after billfish, tuna, dolphin, wahoo, kingfish and other game fish off the South Florida coast; golfers will scramble after birdies over the tough Jacaranda CC layout.

Both events will offer individual and team prizes and will conclude in plenty of time for the annual Sunday night corn boil sponsored by Toro and Nutri-Turf, this year set for the University of Florida's Agricultural Research and Education Center in Fort Lauderdale.

Fishing is \$165 per person; golf is \$105 per person. Entry fee for both events includes the corn boil. Tickets for the corn boil only are \$35. All proceeds from these events go to the FTGA's research programs.

Following Sunday's get-reacquainted social events, the conference gets down to business Monday with concurrent education sessions in three categories: golf/sports turf, general turf, and governmental regulation/environmental policy.

The trade show — the largest warm-season turf show in the Southeast — opens at 1:30 p.m. Monday, immediately following the annual business meeting and awards luncheon. The trade show remains open until 6 p.m. Monday and exhibitors may remain in the hall for a reception that runs until 7 p.m.

The Bill Wagner Memorial Prayer Breakfast begins Tuesday's events at 7 a.m. The prayer breakfast is open to everyone at no charge, but advance reservations are required.

Research Reports — the payoff for all

Conference and Show Schedule	
Sunday, Sept. 18	
7am-4pm	Exhibitor set-up
9am-11am	FTGA Board of Directors Meeting — Marina Marriott
10am-2pm	Pre-Registration Packet pick-up — Convention Center
10:30am-12:30pm	Golf Tournament Brunch — Jacaranda Country Club
1pm-6pm	Research Golf Tournament — Jacaranda Country Club
6pm-9pm	Toro Corn Boil — AREC, University of Florida IFAS
Monday, Sept. 19	
7am-6pm	Registration Open — Convention Center
8am-12noon	Concurrent Educational Session — Convention Center Rooms 301, 302, 304 & 305
12noon-1pm	Annual Meeting/Awards Lunch — Convention Center — Ballroom "A"
1:30pm-	TRADE SHOW GRAND OPENING
1:30pm-6pm	Show Open
6pm-7pm	Exhibitor Reception inside hall
Tuesday, Sept. 20	
7am-5pm	Registration open, Convention Center
7am-8am	Bill Wagner Memorial Prayer Breakfast — Convention Center
8am-10am	Workshops — Convention Center Rooms 203-218
10am-12noon	Research Reports (CEUs pending) — Convention Center Room 304
12noon-5pm	Show Open
12noon-1pm	Lunch in hall (concessions)
1pm-3pm	Workshops — Convention Center Rooms 203-218
3:15-5:15	Workshops — Convention Center Rooms 203-218
7:30pm-12:30am	President's Reception — SEASCAPE
Wednesday, Sept. 21	
7am-8am	Past President's Breakfast — Convention Center
8am-10am	Workshops — Convention Center Rooms 203-218
1:00pm	FTGA Board of Directors — Marina Marriott

the FTGA research fund-raising activities throughout the year — fill Tuesday morning's schedule. Highlights are expected to be updates on the Envirotron and the Turf Survey and Economic Impact Study.

The ever-popular hands-on work-

shops also begin Tuesday morning. A total of 33 two-hour sessions will be conducted through Wednesday afternoon.

The trade show opens for another five hours at noon Tuesday, giving attendees lots of time to get ready for the 7:30 p.m. Presidents' Reception aboard the cruise

Prior to Aug. 19, registration for the conference and show is \$175 for members and \$200 for non-members.

Registration fee includes the show, conference sessions, awards luncheon and president's reception.

ship Seascope. The cruise, featuring full buffet dinner, entertainment and gambling, will last until shortly after midnight. Jackets are required for the cruise.

Workshops and business meetings fill Wednesday's agenda. The presidents might cruise until after midnight, but they'll be up before 7 a.m. if they want to attend the annual past presidents' breakfast. The FTGA board of directors meets at 1 p.m. and workshops run from 8 a.m. until 12:15 p.m.

Prior to Aug. 19, registration for the conference and show is \$175 for members and \$200 for non-members (\$335 including membership). Registration fee includes the show, conference sessions, awards luncheon and president's reception. Prices are higher after Aug. 19. Additional meal tickets are \$15 for the awards luncheon and \$35 for the president's reception.

Workshops are \$35 per session and are limited to full-paying registrants only. They are not included in the basic fee. Golf, fishing and the corn boil also are not included in the registration fee.

Daily tickets for the trade show only will be available at the convention center for \$10 each.

The Fort Lauderdale Marina Marriott is the official convention hotel. The special rate of \$85 per night, single or double, is good Sept. 16-23. Marriott telephone number is 305-463-4000.

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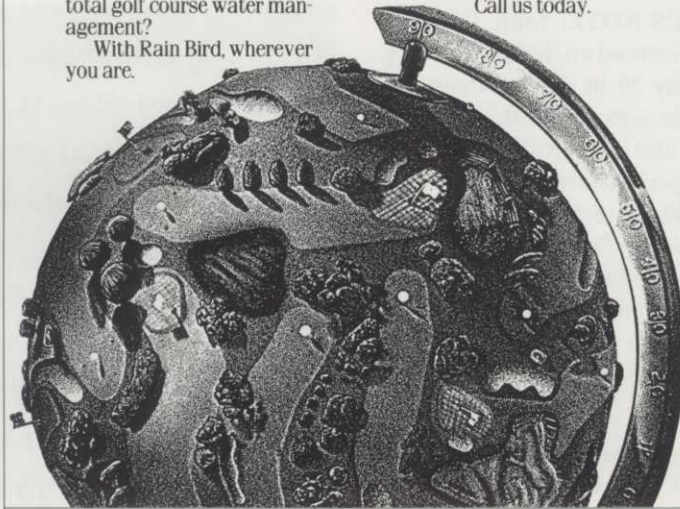
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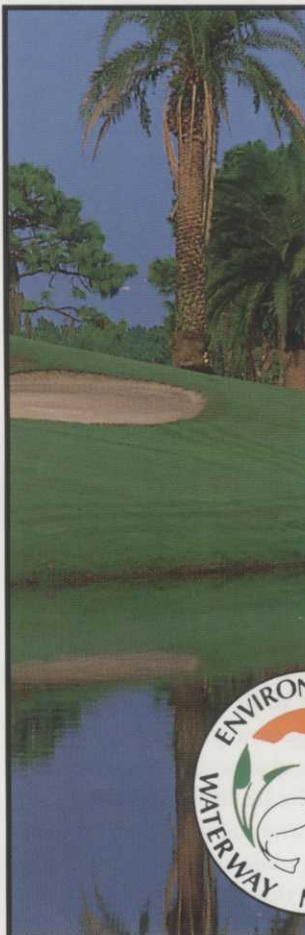
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Superintendent discusses pesticides on network TV... and lives to tell about it!

EDITOR'S NOTE: John Carlone, CGCS, was featured on the CBS Evening News on May 30 in a story about the perceived risks associated with golf course use of pesticides and fertilizers. Carlone has been superintendent at Middle Bay Country Club, an 18-hole private course in Oceanside, New York, for almost nine years. In the following interview with GCSAA *Government Relations Briefing*, Carlone explains why he agreed to appear in the CBS segment and how he prepared for it.

Q: How were you approached to appear on the CBS broadcast?

A: The article that appeared in the May 2 issue of *The Wall Street Journal* in which golf courses were denounced as health hazards disturbed me, and I faxed a copy of it to the GCSAA headquarters.

Evidently one of the CBS executives, who happens to be an avid golfer, also saw the article and suggested to a CBS producer that she do a story on it. She called GCSAA and was given my name, since I originally responded to the article with some interest. So she called me, and I agreed to do the interview.

Q: Why did you agree to do it?

A: The number-one reason was because I feel that golf courses are continually and wrongly accused of endangering the environment with misuse and over-application of pesticides and fertilizers, when — in fact — I think we are the most judicious users of those products in the world. I thought we should get some positive publicity out of it.

Q: What did you do to prepare yourself for the interview?

A: I only had 24 hours. The producer called me the day before, and we basically talked about everything that she would ask me about in the interview. I responded with the knowledge that I had acquired through my own research and reading. A lot of that material had come from GCSAA, as well as other golf- and agri-

If another superintendent or any individual in this field ever has a chance to go before the media to make our profession look better, he or she should go for it. Don't be scared of the media...

culture-related periodicals, particularly the *USGA Green Section Record*. I also have learned a great deal from university research, which is often presented at local and regional educational seminars.

Q: Explain your position on pesticide and chemical use on the golf course.

A: I believe that most — if not all — superintendents apply pesticides only when they have to.

We're just waiting and watching and making applications when we need to, instead of making blanket scheduled applications. The benefits of this are twofold: 1) we save our employer money; and 2) it's safer for the environment.

Q: Why is it important for superintendents to do what you did?

A: We are the ones who are using pesticides and fertilizers, and we are trying very hard to be professional about our jobs. The general public does not see us preparing and educating ourselves. All they see are the beautiful results of our work. That's why the more we put ourselves in the public arena, the more the public will see that turf management is a

sophisticated science and that golf course superintendents are professional about what they do.

Q: Were you nervous about the interview?

A: No. I would have been had they walked in with their cameras and immediately started taping, but they were here from 2 p.m. to 6 p.m., and they didn't start to interview me until after 5 p.m. So by that time I was very comfortable with these people. They knew nothing about golf. The producer wouldn't have known a green from a bunker, so they relied on me to guide them. The only thing they knew for sure when they arrived was that they wanted a picture of my spray equipment applying pesticides to the course.

Q: Do you think the producer was fair?

A: She was very fair. She wasn't negative at all. I was unhappy however, that the other two women who were interviewed didn't have any data to support their claims. I cited several studies that proved that pesticides are not a danger, including the Cape Cod water study and a Cornell University study in which 36 miniature greens are bombarded with pesticides and fertilizers and then irrigated to encourage leaching. Both of these studies show that the danger to the groundwater or the environment is minimal.

The media tends to blow these things out of proportion. Our studies are backed up with sound scientific evidence.

Q: What type of reaction have you received from the segment?

A: Superintendents from all over the country saw it and called me. All of them have been favorable, even though the overall segment was somewhat negative. It had to be negative to make the news. Still, the small amount that I was shown and also the light in which other superintendents were mentioned was somewhat positive.

Q: Would you advise other superintendents to take a stand as you did?

A: If another superintendent or any individual in this field ever has a chance to go before the media to make our profession look better, he or she should go for it. Don't be scared of the media; be careful what you say, but don't be scared. When I read something, I don't think of it as coming from an individual, I think of it as more of a profession-wide position.

Q: Was your club supportive of your decision to do the interview?

A: The club was very supportive. They wanted me to do it. They wanted me to look as good as possible. But, they didn't want their name mentioned. I even asked the president of my club before I agreed to do it. With all the lawsuits that are being filed against private clubs these days, they just didn't think it was a good idea to have the club's name mentioned. I agree with them.

Interview conducted by Laura Schaffer for the July 1994 issue of GCSAA Government Relations Briefing. Reprinted with permission.

Groups sue EPA over inert ingredient list

WASHINGTON (AP)—Two private groups filed suit against the Environmental Protection Agency on May 18, accusing the agency of breaking the law

by refusing to release the names of all ingredients in pesticides.

The EPA allows pesticide manufacturers to keep some inert ingredients off pesticide labels by claiming they are trade secrets, said the Northwest Coalition for Alternatives to Pesticides and the National Coalition Against the Misuse of Pesticides.

Inert ingredients can be any of more than 2,300 substances, including chemicals that are active and, possibly, toxic, the groups said.

A substance qualifies as "inert" if it plays no role in killing the pest the product was designed to eliminate, they said.

The suit asks the court to declare the policy illegal and order the agency to give the groups a list of all ingredients six pesticides: Roundup, Aatrax 80W, Tordon 101, Weedone LV4, Velpar and Garlon 3A.

"This is one of few laws that precludes access to basic information about toxic ingredients," said Jay Feldman, NCAMP executive director. GCSAA members who attended the 1992 New Orleans Conference and Show may remember Feldman from his presentation at the first-ever Environmental General Session.

"People have a right to know when it comes to exposure to toxic substances," Feldman said.

EPA Administrator Carol Browner was named as a defendant in the suit, which was filed in U.S. District Court in Washington.

The groups asked the EPA for a list of ingredients in the six pesticides in April

1991, under the Freedom of Information Act.

The EPA initially denied the request, saying the ingredients were "confidential business information" and exempt from disclosure rules, according to the suit. But the agency said it would issue a final decision after consulting manufacturers of the chemicals.

The EPA gave the groups a list of the ingredients in three of the pesticides the following December, but all inert chemicals were blacked out. Makers of the remaining three pesticides claimed blanket confidentiality for all ingredients, the agency said.

The groups were able to get some ingredients by making direct requests to the manufacturers.

Pesticide companies should not be allowed to keep any ingredients secret, Feldman said.

"Business interests are not what's being protected. The actual ingredients can be determined by reverse engineering," he said. "The only people who don't know is the public."

The Northwest Coalition for Alternatives to Pesticides, based in Eugene, Ore., has about 1,600 members. The Washington-based National Coalition Against the Misuse of Pesticides comprises 200 community groups across the nation.

This Associated Press story was printed in the June 1994 issue of GCSAA Government Relations Briefing. Reprinted from that publication with permission.

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Head-to head equipment competition is standard fare at the Expo.

PHOTOS BY ALMAR CHEMICAL CO

Seventh annual South Florida GCSA Expo raises nearly \$25,000 for research green

The South Florida chapter hosted its biggest fund raiser ever, and it wasn't even a golf tournament! For the seventh year in a row, the chapter has put together a

winning combination of equipment demonstrations, workshops, research reports and a mini turfgrass show that rivals any in the country for content and funds raised.

Total income for this year's event broke all records, just short of \$25,000. Most of the profits go to support the research green at the University of Florida



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A beautiful, sunny mid-spring day welcomed Expo attendees to a great day of education and fellowship. Equipment demonstrations, below, provided by the Expo gave helpful insights into the special features and abilities of the units present.





Participants review turf plots at the FGCSA-funded research greens

Fort Lauderdale Research and Education Center which was the sight of the Expo again this year.

Attendees numbered over 170 turfgrass professionals which does not even include the number of suppliers and equipment operators who put on the show.

The Expo is a wonderful opportunity for golf course superintendents to see the latest in turfgrass equipment in a head-to-head demonstration, all in one day!

The South Florida board of directors would like to thank Hector Turf, LESCO, Pifer Incorporated, and RSI Holdings of Florida. This year we had an additional demonstration from IPM Systems and Turf Specialties.

We would also like to thank the suppliers who put on the mini turfgrass show. Most of these booths (as well as all of the equipment companies) have been in on the Expo since the beginning, back in 1987.

Once again, this is the type of support that makes turfgrass business what it is today.

The FGCSA Research Green will get even more exposure this year as the Florida Turfgrass Association holds its annual Corn Boil on the grounds of the University of Florida Ft. Lauderdale campus in September.

In 1995, the Expo will again be combined with the annual U of F Field Day which is expected to bring attendance well over the 500 mark.

Congratulations to everyone involved on a very professional event!

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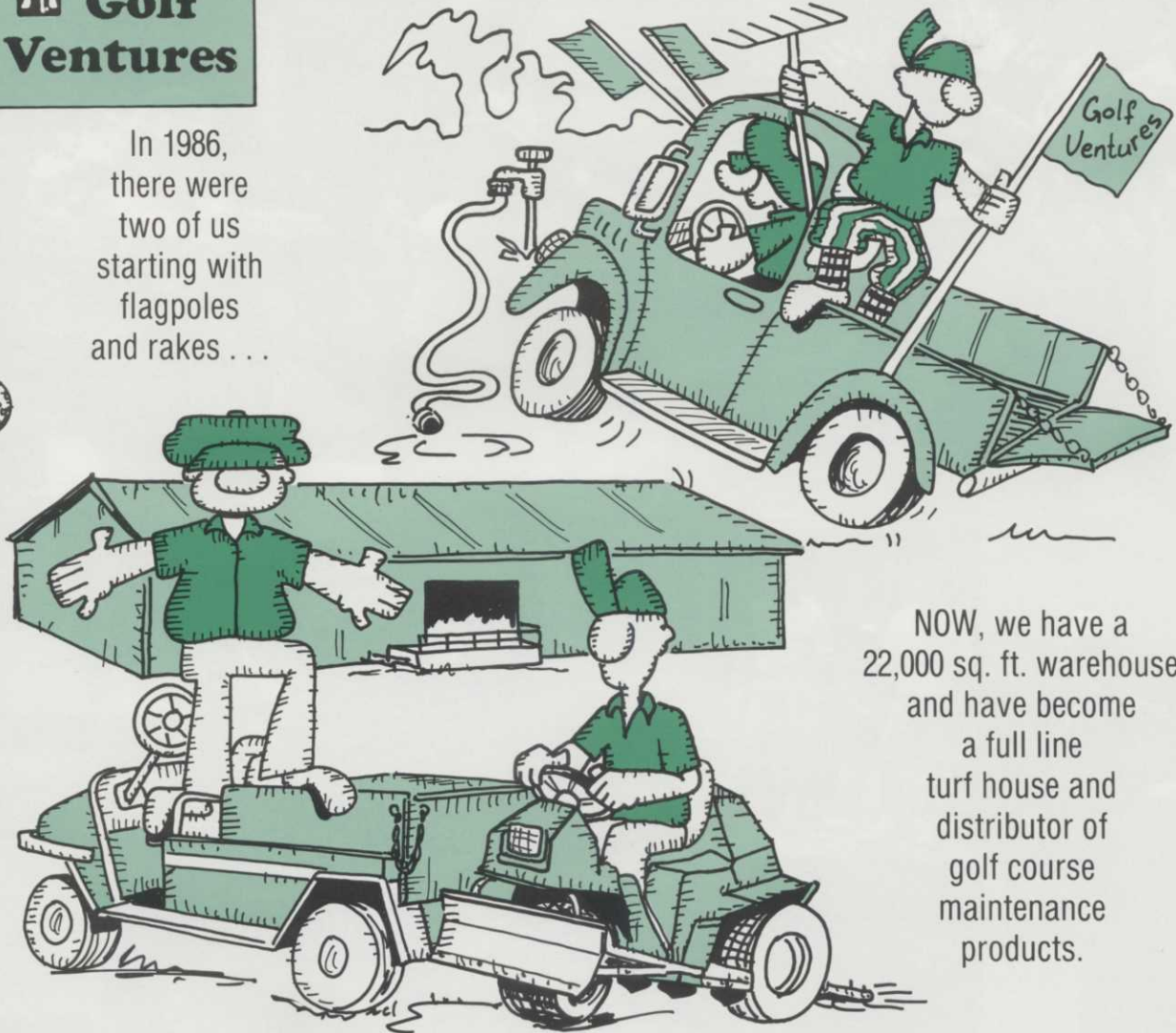




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Seven Rivers event raises \$22,500 for FTGA's Envirotron

April 18th marked the Seven Rivers Chapter's Second Annual FTGA Envirotron Golf Classic at the World Woods Golf Resort on the Pine Barrens and Rolling Oaks courses.

The purpose of the tournament was to raise contributions for the Envirotron, a state-of-the-art, environmental research facility at the University of Florida in Gainesville.

Last year the tournament resulted in an unprecedented amount of contributions with a grand total of \$22,500 to benefit turf research. This year's tournament goal was to raise contributions to purchase equipment for the facility.

The contributions raised topped last year's total with a \$30,500 and grossed \$44,000 specifically for the Envirotron Equipment Fund.

The tournament consisted of a four-man scramble and an individual tournament with a total of 232 players. The scramble winners: 21 under par - Mike Cook, Steve Anderson, Cliff Anderson and Glen Gabriel.

First place with 19.4375 under par - Glen Lakes Golf Club: Ralph Glover, Andy Padova, Rich Saddler and Dave Craighead.

Second place with 15.9375 under par - Pro Equipment, Inc.: Harold Casias, Howard Povey, Ray Arvello and Lou DeVos.

Third place with 15.875 under par - Barbaron, Inc.: Ron Kitchen, Jim Carmen, Rich Snell and Laurie Fruthy.

Fourth place with 15.6875 under par - Roger Hruby, Steve Lyerly, Larry Jeffreys and Tom Oeshlin.

The individual tournament winners were: first place and second place at 73 were Pat Fitzpatrick and Vick Conigliaro. First place handicap low-net at 62 was Mac Baugh and second place handicap low-net at 53 was Jim Leach.

The World Woods Golf Resort, owner Mr. Inoue generously donated the Pine

Continued on page 90

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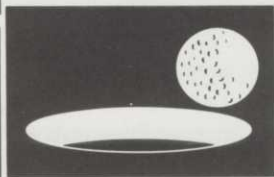
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Heavy rains, vandals fail to keep Futures golfers from their appointed rounds

BY JOHN GALLAGHER

The 13th annual Future of Golf Tournament was held at Emerald Dunes Golf Club June 11. The PBGCSA was able to host its major fund-raising event at the facility, even though the course had received over 13 inches of rain the previous seven days.

The golf field was filled with over 130 players from around south Florida. The guest of honor for the event was FGCSA/FTGA Tallahassee lobbyist Mike Goldie. Mike gave an update on the recently concluded legislative session in the state capital. Other notable guests were Palm Beach Post writer Ron Wiggins and Bob Nichols of Channel 12 News.

Chip Fowkes, golf course superintendent who has hosted the event for the last three years, did a magnificent job of preparing the course. However, the toughest job confronting him was not the daily deluge of rainfall but in dealing with the remains of a vandalism of the maintenance shop a week before the event.

Vandals had broken into his maintenance compound, hot-wired the large equipment and driven them into the nearby woods, rendering them useless. Chip hastily placed phone calls to the major equip-

ment suppliers in the area asking for their help. And he got it.

Loaners came rolling in from Pifer, John Deere, RSI, Hector and Lesco in time for Chip to get the course up to prime condition.

"That's what's so great about this profession: when the chips are down, (no pun intended,) you can count on your friends to come to your aid," Chip said.

The Futures tournament provides funding to such efforts as the FGCSA Research Green at the IFAS Research and Education Center in Fort Lauderdale. Other recipi-

The Futures tournament provides funding to such efforts as the FGCSA Research Green at the IFAS Research and Education Center in Fort Lauderdale. Other recipients of the money are scholarships for turf students and the USGA-sponsored 'Hook A Kid On Golf' program.

ents of the money are scholarships for turf students and the USGA-sponsored "Hook A Kid On Golf" program.

A record \$11,000 was raised this year through the hard work of the committee and particularly chairman Robin Goodell.

The event was the brainchild of four superintendents sitting around the maintenance shop of Atlantis Golf Club some 14 years ago. The idea was discussed as to how to support golf in general in Palm Beach County. On that historic meeting

Continued on page 90



Mike Goldie, FGCSA/FTGA lobbyist in Tallahassee is flanked by Dr. Tom Latta, left, FTGA Government Relations chairman, and John Gallagher. Goldie spoke following the Palm Beach GCSA's annual Futures of Golf tournament.



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FGCSA President Paul Crawford, center, accepts a \$22,000 check from Ciba Turf representatives Chuck Bluffington and Mickey Lovett as the first year's earnings under Ciba's rebate program

Florida superintendents earn \$22,000 for research from Ciba Turf program

Florida's Golf Course Superintendents have reason to be proud of themselves today as they have earned a record company rebate from the Ciba Geigy Corporation.

At the Spring Board meeting of the FGCSA, representatives from the Ciba Turf and Ornamental Division were on hand to make a presentation. A check in the amount of \$22,000 was presented to President Paul Crawford by state reps Mickey Lovett and Chuck Bluffington.

The check represented the amount of money generated by FGCSA members through the Ciba Geigy rebate program.

The program which was designed by Mickey and FGCSA fundraising chairmen Mark Jarrell and Greg Plotner had just concluded its first full year.

The program is designed around a \$25-per-case rebate to the FGCSA for

*The program is
designed around a
\$25-per-case rebate*

*If we can get the rest
of the FGCSA
membership signed
up for the program
we could probably
double this check
next year.*

- Mark Jarrell

every case of Ciba Geigy product sold to participating members.

Mark Jarrell speaking on the success of the program, "If we can get the rest of the FGCSA membership signed up for the program we could probably double this check next year."

So congratulations to all of the FGCSA members who participated this year and to those who didn't, please contact your local external vice president to get "with the program."

Futures

Continued from page 88

of the minds were Kevin Downing, Mark Jarrell, Jack Cunningham and Gary Grump.

Gary Grump hosted the first tournament at Eastpointe Country Club. In the past 14 years the tournament has raised in excess of \$100,000 for turf research and other worthy programs.

Congratulations go to all of the hosts, participants and sponsors for making this year's event the best ever. Keep the home fires burning and hope to see you next year.

A team representing the Breakers Hotel in Palm Beach won the tournament.

The Future of Golf prize winners:

Championship Flight — 1, Breakers Hotel: Billy Miller, Paul Leone, Richard Hayduk and Gerald Wygant, 58. 2, Environmental Waterway Management: Gary Wilhelm, Bob Jacks, Mr. Brady and Mr. Kanaiz, 59. 3, Jeff Klontz, CC of Florida; Peter Brooks, Everglades GC; Mark Henderson, Atlantis GC, and John Foy, USGA, 60.

First Flight — 1, Ibis CC: Matt Turner, Mike James, Dave Rozek and Dave Price, 63. 2, Almar: Stuart Cohen, Richard Greene, Mike Monroe and D. Green, 64. 3, Harrell's/Rhone Poulenc: Frank Kynkor, Terry Sauvage, Bill Rayside and Todd Miller, 64.

Envirotron

Continued from page 87

Barrens and Rolling Oaks courses for this event. Major sponsors for the tournament included Lesco, Vigoro, Helena Chemical, Tresca/Jacobsen and the Seven Rivers Golf Course Superintendents Association.

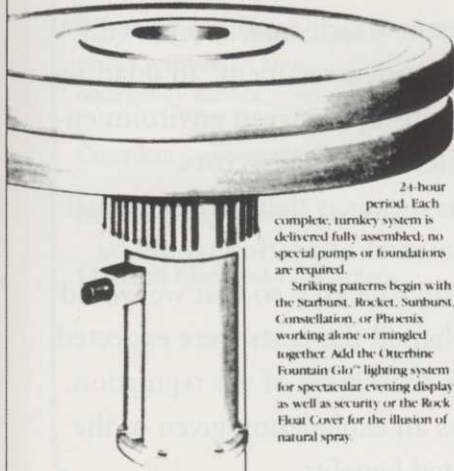
For more information on sponsoring the Envirotron facility and becoming a member of the Florida Turfgrass Association please write or call Jane Rea at the FTGA 302 S. Graham Ave., Orlando, Florida 32803 1-800-882-6721.

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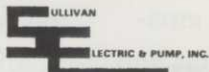
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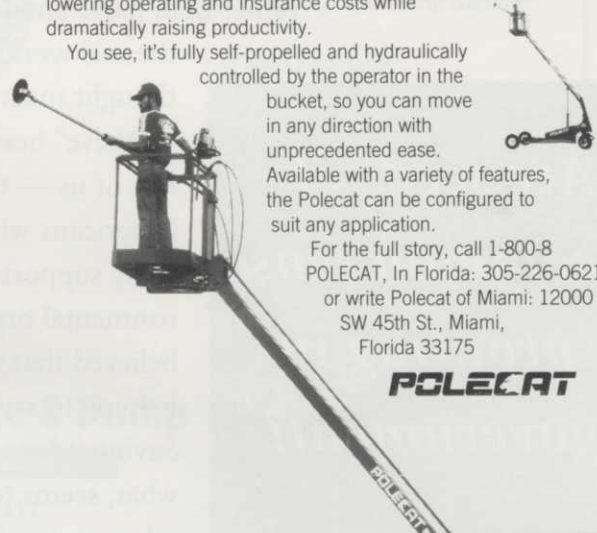
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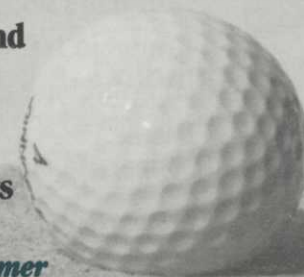
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The more I learn about the eco-radicals running what is now considered the “mainstream” environmental movement, the more diabolical and calculating they seem, rather than naive and ignorant about the real world as I once thought most of them to be.

“Naive” best describes the rest of us — the legions of Americans who have financially supported these environmental organizations and believed that we were really helping to save the planet. Saving it for whom, or for what, seems today’s most relevant question.

It was downright chilling to listen to Dr. Coffman’s tapes from a meeting of the Environmental Grantmaker’s Association and hear what low regard they have for people and their problems, and their utter disdain for “wise use” strategies.

As Dr. Coffman puts it, the “Unholy Trinity” to radical environmental leadership is risk analysis, unfunded mandates, and property rights. For those of you who missed Dr. Coffman’s seminar last May at the Poa Annua in Naples, I highly recommend you purchase his book, *Saviors of the Earth?*.

These people are the bad news, and they are not going to go away. They are persistent and well-funded, and hold positions of great power (one of them even got elected to the vice-presidency of the United States).

There is, however, some good news, which I would like to share with you.

First and foremost, some members of Congress seem to finally be getting the message that unnecessary environmental regulation is strangling this country’s economy.

Last year the Senate passed an amendment which would require EPA to utilize “risk assessment” to quantify the relationship between environmental risks and regulatory costs.

All this means is that each potential environmental regulation would be thoroughly analyzed so that we would know what all the costs were expected to be for enactment of the regulation, as well as an explanation given of the anticipated benefits.

Led by freshman Rep. John Mica of Florida, a similar amendment was presented to the House of Representatives in February, but was rejected by a vote of 227 to 191 on technical points and sent back to the Rules Committee.

EPA Director Carol Browner and Vice President Al Gore lobbied hard for its defeat, so it can be considered a small victory that the amendment still has a chance of getting passed. Though risk assessment seems like just plain old common sense and sound economics, it is opposed by the hard-core environmentalists who fear the American public just might reconsider their priorities if a legitimate price tag is assigned to their environmental conscience.

Continued on Page 96

Are seeds of common sense sprouting in government?

Mark My Words



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Take a little fictional imagination and mix it with a lot of factual science and...

NASA received this radio transmission from deep space last month. The decoded message is being released here in this column:

"Greetings from the planet

Envirotron, home of the Steinernema. My name is Java the Nut. I am a Nematode. I am the spokestode for the Steinernema. We have taken The Nematodic Oath to seek out and destroy mutant mole crickets that have spread across the Bermudan Galaxy. Sensor scans of your planet indicate that

the vile mole cricket is attempting to overrun your planet's turf areas.

"Quite frankly, we do not care for humans in general, but you Earthlings have developed a process that will benefit our quest to seek out and destroy our mortal enemy, the mole cricket, so we have agreed to tolerate you. We have drawn up a set of fairly rigid, but simple, parameters which you must follow if we are to cooperate with you to solve your mole cricket problem.

"First, you must not under any circumstances use nematicides in any area that you want us to attack. Nematicides are just as lethal to us as they are to our earthly descendants, the Sting, Lance, Ring, and Root Knot nematodes. Unfortunately, those

nematodes have chosen to join the mole crickets and also feed on your turf. So, you must make a management decision with regard to our services.

"Second, we have found the most beneficial time to attack is in the early spring and fall when the populations of adult mole crickets are at their highest levels. We are only capable of inhabiting and destroying the adult forms. By destroying the adults, we can reduce the populations of newly hatching nymphs, and thus reduce the amount of labor and pesticides formerly required to combat the mole crickets.

"Third, you must apply us at night when it is cool. Solar radiation is also deadly to our kind. You will need to provide some irrigation water to help us move down into the soil so we can find the mole crickets. We may be applied with your regular spraying equipment, but as a consideration, please be sure it has been cleaned out to get rid of any residues that may be harmful to us.

In return for observing these conditions, we will agree to do the following: We will look for adult mole crickets to destroy for nearly three of your Earth's lunar cycles, even if none are present when we first arrive. Once we have found and infected a mole cricket, he will die within one or two days. Our offspring will devour his remains and then search for others to destroy.

Continued on Page 96

The mole cricket chronicles

Green Side Up



Joel D. Jackson

Joel Jackson, CGCS

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Jarrell: Seeds of sense seem to be sprouting

Continued from Page 92

To quote Rep. Mica: "The Rules Committee is now scrambling to issue a new rule to bring the EPA bill to the floor. Beware. The power brokers are working behind the scenes to concoct substitute language for real risk and cost analysis. I hope the taxpayers — and my colleagues — see through these brazen attempts to misdirect reform."

It is extremely encouraging to read Rep. Mica's words, and we should open up a dialogue between his office and our association and encourage his efforts.

Another promising development is the nomination of Stephen Breyer to the Supreme Court. Judge Breyer has the reputation of being critical of government's mismanagement of risk. His confirmation may turn out to help balance some of President Clinton's other extreme green appointments.

We all have been concerned, and some even directly affected, in recent years, about individuals claiming "chemical sen-

Let's hope these optimistic developments spur us on to grander accomplishments on behalf of our industry.

sitivity."

With no clear medical guidelines, and plenty of extremists willing to use any means to halt pesticide use, this issue has had the potential of becoming a nightmare for all of us in the golf industry.

The good news here is that a blue ribbon panel of scientist recently concluded in Dallas that reproducible studies are needed to determine whether exposure to chemicals actually causes multiple chemical sensitivity (MCS), and many of those doctors don't even acknowledge the exist-

ence of MCS as a human ailment. Getting declared "chemically sensitive" should be a little harder than getting an excuse to miss a phys ed. class.

The rest of the good news is about our own industry organizations to bring golf's positive environmental story to the public. The USGA, the GCSAA, the FTGA, and our own FGCSA all have significant projects in progress that demonstrate our good stewardship. The level of support from manufacturers and distributors continues to grow.

And Tim Hiers has won the first-ever John James Audubon Steward Award from the New York Audubon Society! There is no more deserving individual, and all superintendents can take pride in Tim's accomplishment and the fact that a golf course superintendent has earned such a high honor. Congratulations Tim!

Let's hope these optimistic developments spur us on to grander accomplishments on behalf of our industry, rather than lull us into a false sense of security.

Joel Jackson: The mole cricket chronicles

Continued from Page 94

"We bring you the technology of Envirotron to help Earth live in harmony with the universe. Our presence on your planet will provide you with natural alternative pest management tools. You may

integrate us with selective chemical programs necessary to maintain levels of mole cricket activity acceptable to your species.

"We will gladly join forces with our cousins, the Red Eyed Flies of Antar and the Parasitic Wasps of Patagonia in a coalition of natural mole cricket deterrents that you

humans call bio-controls." . . . End of message.

Bio-controls are just one of many areas of scientific research funded by golf course superintendents and other allied groups that support the wise use and preservation of the earth's natural resources.

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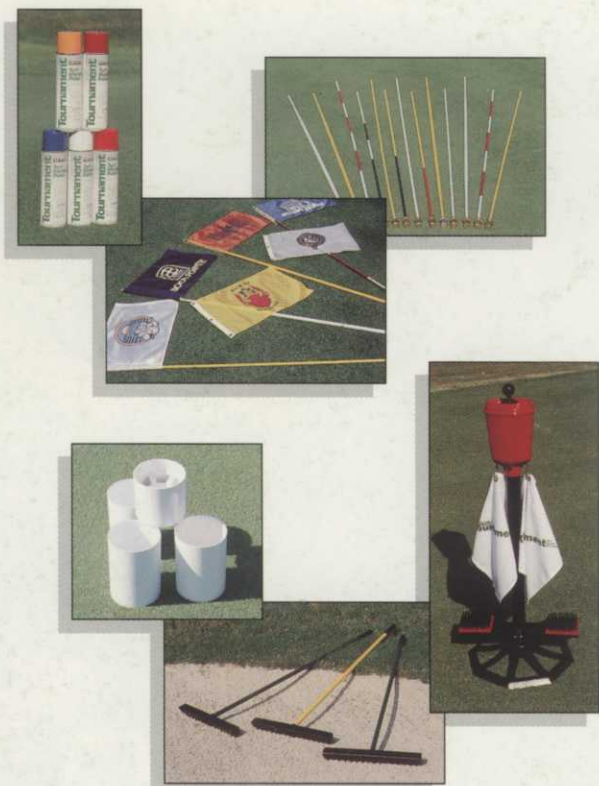
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